ICTS AND PROXIMITY WORKS TO REDUCE CHILD MORTALITY IN MALI

**Summary:** In Mali, the French NGO Pesinet has deployed an innovative health service to drive prevention, detection and early treatment of benign diseases, thanks to regular home visits, the use of mobile phones and a web application, medical insurance, minimum prices and partnerships with local stakeholders.

**AUTHOR(S)**
Lucie De Clerk
Development Manager, Pesinet
contact @djantoli.org

**PROGRAMME**
**Start date** : 2009
**Implementation site** : Mali
**Budget** : N/C
**Source and specificity of funding** : N/C

**ORGANISATION(S)**
Djantoli
204 rue de Crimée
75019 Mali
http://www.djantoli.org/

**Employees** : N/C
**Volunteers** : N/C

**REVIEW COMMITTEE**
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**BACKGROUND OF THE PROGRAMME**
Mali has one of the highest child mortality rates (178‰ in 2010). The main causes (Cf, Appendix) are benign infectious diseases: malaria, pneumonia and diarrheal diseases account for 59% of deaths of children under 5. Those diseases could easily have been avoided with good hygiene and sanitation practices. Malnutrition is directly or indirectly responsible for 50% of deaths of young children. Less than 50% of people resort to medical care when sick because of financial constraints, cultural habits, and lack of trust in medical supply.

**GOALS OF THE PROGRAMME**
Pesinet is a French NGO whose main objective is to sustainably reduce child mortality in Mali. Its approach is to promote access to existing healthcare systems by designing and deploying proximity health services for women and their children. Specific objectives are to improve the use of existing healthcare structures, to reduce the delay in resorting to healthcare, to improve education on prevention and key health practices, and to reduce the need for emergency treatments. The first site, Bamako Coura, was launched late 2009, and the service was extended to Dravela an Ouolofobougou on January 2012.

**IMPLEMENTED ACTIONS**
- Several times per month, Pesinet agents visit the children at home and collect simple health data entered into a mobile phone and sent to one CSCOM’s doctor (Community Healthcare Centres). The doctor reviews the data via a web interface and summons children at risk. The agent alerts families who benefit from medical insurance at the CSCOM
- Creation of technological tools to record and transfer information (agents to doctor). 1) The “JAVA” mobile application (easy to download, install and use) can send and receive data via transmission through the GPRS (General Packet Radio Service) network. 2) A web application to pre-sort abnormal cases
- The centre’s equipment (computer, internet connection, small medical equipment) and initial training for medical teams
- Innovative reimbursement conditions and remuneration of centres on a monthly-fee basis per subscribing child
- 2011, a community mobilization plan, comprised of monthly group meetings for subscribers to sensitize beneficiaries on health issues and prevention, to educate them on effective use and value of the service, and to solicit feedback
- An impact assessment study (from August 2010 to February 2011, in Bamako Coura) under the supervision of an external and international expert in evaluation of e-health projects and community healthcare, to verify the actual impact of Pesinet’s approach after 2 years of experimentation, before expanding activities

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To quote from a document published by RESOLIS : De Clerk, « ICTS AND PROXIMITY WORKS TO REDUCE CHILD MORTALITY IN MALI », **Journal RESOLIS** (2014)
QUANTITATIVE AND QUALITATIVE RESULTS FROM THE IMPLEMENTED ACTIONS

- 522 subscribing children per month between August and December 2010 (12.7% new subscribers per month)
- In total, 720 medical examinations, 438 doctors or agents summons due to disease presumption
- 8 members of Pesinet staff trained on Behaviour Change Communication (BCC) and Essential Family Practices (EFP)
- 5 employees of the partner health centre trained on BCC, EFP and Training methods
- 80% of families say they subscribed to the service because of the cheap price, 85% are satisfied with the speed of disease detection, 94% are satisfied with the service and 98% are happy with the home-based visits

ORIGENAL CHARACTERISTICS

The use of Information and Communication Technologies (ITCs) and the self-sustaining economic model based on health insurance, and the use of proximity work in rural areas.

PARTNERSHIP(S) DEVELOPED IN THE CONTEXT OF THE PROGRAMME

CSCOMs, local and national health authorities, the National Federation of Community Health Associations, the Malian Ministry of Health, Marie-Pierre Gagnon (Professor at the Faculty of Nursing Sciences, University of Laval, Quebec)

FEEDBACK

Difficulties and/or obstacles encountered during the programme’s implementation:
- To maintain stable relationships with CSCOMs
- To build a model that can be fully transferred to the local partners
- Some families were unhappy with the way they were welcomed at the health facility
- Only a third of families actually go to the doctor (for their child or themselves), and 30% defaulted on payment
- Some mothers explained that they would like Pesinet mobile health agents to provide nutrition advice
- The list of medication covered by the insurance scheme should be expanded

Solutions used to overcome the difficulties and/or obstacles:
- Work with the National Federation of Community Health Associations to facilitate buy-in of the affiliated CSCOMs
- To help CSCOMs to improve their revenues and the quality of care that they can provide. To reinforce the capacity of the CSCOMs management through training and continuous monitoring on key indicators. Before each new partnership: an evaluation to measure the situation of the healthcare centre and identify areas where improvement is needed
- Strengthen the economic model (to be complemented by local founding sources), transfer the financial and technical management of the service, increase technical capacities in maintaining the technological infrastructure before it can be fully managed by the National Health Administration
- Training module (CSCOMs' staff and managing committees) to develop a culture of empathy and patient service
- Awareness raising efforts must be pursued and reinforced. In addition, doctors are now asked to indicate the reason why they summon children so that agents can relay information about complication risks if the parents do not seek care
- To educate subscribers on the benefits of mutual insurance systems and on the importance of paying on time
- Training programme to continuously build mothers’ capacity on child health and nutrition issues
- A list was extended in cooperation with the medical teams of the health centre. Monitoring tools were put in place to follow up on medication shortages at the health facility pharmacy

Suggestions for future improvement:
To complement the self-financing of the service: cross-subsidization through development of a health service targeting higher segments; partnerships with mutual and insurance companies; financial implication of public authorities.

Summary of factors responsible for the programme’s success:
- Pesinet leverages existing human resources of the partnering healthcare centres (medical teams, pharmacy manager)
- Centres’ engagement in the promotion of the service and to avoid unnecessary consultations (to anticipate and better manage cash flows). And the service brings benefits to all actors involves in the health system
- The programs are in line with the country’s strategy for healthcare policy
- Increased insight into Malian cultural habits, understanding of decision-making processes and identification of barriers to the concept of prevention and insurance led Pesinet to reinforce its sensitization and communication efforts
- The lower cost of healthcare via Pesinet encourages families to seek care more often
- UNDP referenced the programme as a promising market-based solution for reaching the Millennium Development Goals

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BIBLIOGRAPHIC REFERENCES

De Clerk, L., Roos-Weil, A., Carpentier, P., De Clerk, A. « Combining local resources and mobile telephony to increase resort to care and reduce child mortality in Mali » FACTS Reports (2013) in press

TO KNOW MORE

The Community Healthcare Centres (in French, Centres de Santé Communautaire – CSCOM): CSCOMs are healthcare structures addressing small catchment areas that encompass 5000 – 10 000 inhabitants, in a radius of approximately 15 km. They are private entities that fulfill a public service mission, with financial and technical support from public authorities. They are managed by Community Health Associations (in French Associations de Santé Communautaire - ASACO) elected by the local population. Though non-profit, they have an objective of financial balance and cost recovery. They have to provide a minimum healthcare package of curative, preventive and promotional services, at a price fixed by the community. Thanks to a proactive government policy, almost all catchment areas are equipped with a CSCOM. 87% of the population lives less than 15 km from a CSCOM, and 51 % less than 5 km (National Institute of Statistics of Mali, 2006).