



Solar fever:

Solar refrigerators offer relief to families in Jigawa

The high rate of maternal and child deaths across Jigawa State may soon be a thing of the past. New partnerships for health are increasing community demand for antenatal care and routine immunization services – and expanding coverage to remote health facilities by introducing solar refrigerators and freezers.

These health partnerships between communities, government, and external development partners are supporting community engagement activities that have already been successful in raising awareness about using routine immunization and antenatal care services and in particular the importance of vaccinations.

With health facilities introducing specific dates for routine immunization services and increasing their frequency, state officials are now looking at how to enhance and sustain the fast expanding services and ensure there is coverage right across the state.

One problem has been how to store vaccines and drugs in the more remote parts of the state. This is now being addressed through a collaboration between state and local governments and the Partnership for Reviving Routine Immunization in Northern Nigeria and the Maternal, Newborn and Child Health initiative (PRRINN-MNCH), which is procuring, installing and maintaining solar refrigerators and freezers in health facilities across Jigawa.

“These new refrigerators are giving a new lease of life to vaccine supply and distribution for routine immunization and antenatal care activities”, says Nasir Bala, a local engagement consultant for Jahun Gunduma Health System Council. “They are one of the best things in driving the health partnership efforts at expanding state coverage of these services.”

Solar fever

Solar powered refrigerators are already being employed successfully in other parts of Africa. They are energy efficient and do not require a conventional electricity supply, electrical compressor or kerosene or gas to run. Instead they are powered by energy from the sun – of which there is an abundant supply in Jigawa.

The refrigerators use photovoltaic or PV cells to convert sunlight into electricity. Sunlight strikes a PV cell and heats it up, causing electrons to knock loose, and these electrons are converted into a stream of electricity, or electrical current.

Bala says, “The provision of solar refrigerators in health facilities enables them to ensure a timely supply and distribution of vaccines and other necessary drugs to hard-to-reach areas.”

Before the creation of the health partnerships, health staff and managers were already advocating for the use of solar refrigerators, and PRRINN-MNCH has assisted the government to respond to this need. Backed by the partnership, state and local governments have also stepped up efforts to repair and maintain existing solar refrigerators in public health facilities. These include facilities in Gangwa, Gunka, Harbo Sabuwa and Sansani wards in Jahun and Miga Local Government Areas (LGAs).



Partnership for Reviving Routine Immunization in Northern Nigeria; Maternal, Newborn and Child Health Initiative

Abirakyau and Hantsu wards have already seen positive results. “The local health partnership has purchased and installed new solar panels and modules to replace stolen ones and it has helped train staff to maintain the solar-powered sets,” reports Magaji Wada, Officer-in-Charge at Abirakyau health centre in Jahun LGA.

In the past, vandalism and theft of solar equipment has been an issue. Now, as Mallam Hassan Kwalam, Jigawa State Immunization Officer, explains, “The health partnerships are strengthening the relationship between health facility staff and the communities they serve.” These activities are increasing community ownership of the programme and reducing the incidence of vandalism and theft.

Strengthening the cold chain

The acquisition and repair of solar refrigerators and freezers is complementing other activities initiated by the health partnerships to strengthen the cold chain (see box) and so improve the supply, distribution and availability of vaccines in programme communities.

A **cold chain** is a temperature-controlled supply chain. An unbroken cold chain is an uninterrupted series of storage and distribution activities which maintain a given temperature range. It is used to help extend and ensure the shelf life of products such as pharmaceutical drugs and vaccines.

Backed by PRRINN-MNCH, state and local governments have also stepped up efforts to repair and maintain existing solar refrigerating sets in various facilities. These include facilities in Gangwa, Gunka, Harbo Sabuwa and Sansani wards in Jahun and Miga LGAs.

Magaji Wada, Officer-in-Charge at Abirakyau health centre in Jahun LGA, says “Solar panels and modules have been purchased and installed to replace the stolen ones and the health partnership has assisted in training staff to maintain the solar-powered sets.”

The State Cold Store within Jahun Gunduma Health System Council premises is always a beehive of activity and staff there are regularly trained on the expanded community engagement programme. With the introduction of solar refrigerators, more health partnerships now get government permission for their members to collect the vaccines from the state capital on their way back from work. This has further strengthened efforts at monitoring vaccine supply and ensuring adequate stock and effective distribution at state, LGA, ward and health facility level.

“These are positive developments that have moved Jigawa poles away from the days of poorly-funded Ministry of Health services with a poor transport system and non-functional vehicles”, asserts Abdullahi Kudli, a national consultant working on community engagement. “The work done so far is a good starting point for the programme”, agrees Dr Solomon Mengiste, Jigawa State Team Manager for PRRINN-MNCH.

Having witnessed success stories in the form of improved immunization for women and children in pilot LGAs, other local authorities are already coming on board. This increases government efforts to reach Millennium Development Goals 4 and 5 – to reduce child mortality and improve maternal health.

By Cobham Nsa