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# The MAI Digital X-Ray System

The Solution in Low Resource Environments



**Medical Aid  
International**

Supporting Healthcare in Low Resource Environments



# Making a difference

**Thousands of superb surgical healthcare facilities operate in low resource environments, from small rural clinics, to large urban hospitals, centres for complex specialties to holistic community medicine.**

Medical Aid International works to improve healthcare across all low resource environments through supplying medical equipment, both new and recycled, training and BioMedical Engineering Support that is context-appropriate, fit for purpose and tailored to the individual project.

## **We have three main goals:**

- > To supply high-quality goods and services to raise the standard of healthcare in low resource environments
- > To enhance practise through this supply and support process
- > To maximise value for money for our clients so that funds go as far as possible

Supporting healthcare in these environments has many challenges. Sourcing the correct equipment and maintaining it in working order can be very difficult. Imported equipment may be prohibitively expensive, and local equipment supply chains may be non-existent. Equipment donated as charity from the developed world is frequently faulty or unsuitable for the local environments. Trained BioMedical Engineers are rarely available and poorly equipped, so broken equipment goes unrepaired and healthcare professionals may lack the training and expertise to use equipment to its full capability. Here at Medical Aid International we provide personalised solutions to these issues, each tailored to the individual project. This process often acts as a catalyst to enhance medical practice.

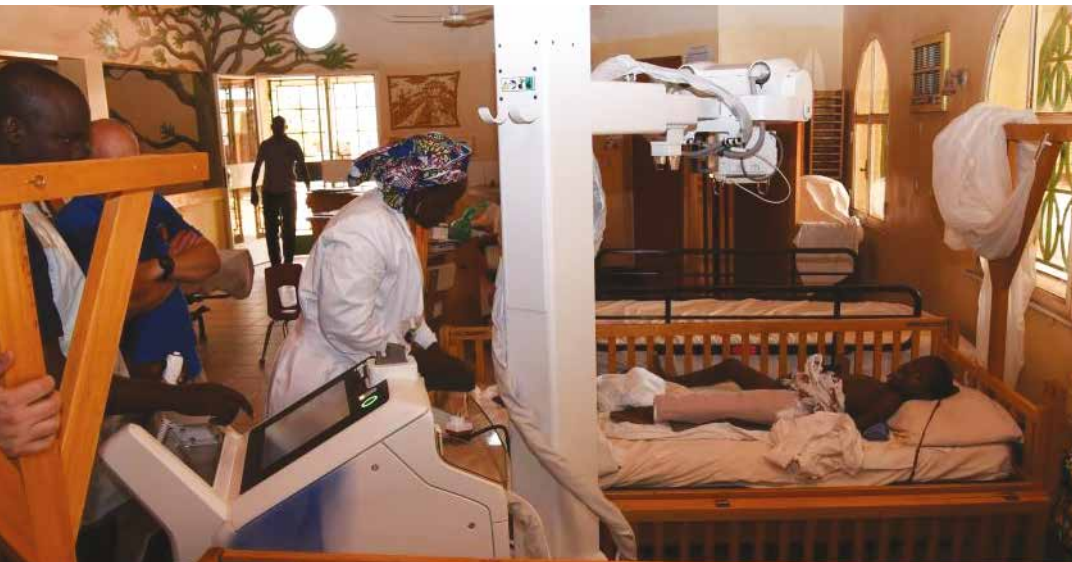
# Digital X-Ray

## A Long Term Cost Effective Solution

At Medical Aid International we specialise in clinical solutions for low resource environments, taking into account the specific challenges each location presents.

Digital X-Ray transforms the diagnostic process. X-Rays are taken as normal, with the digital plate in a (supplied) cassette, no change of X-Ray machine is required. Once the X-Ray is taken, the cassette is then placed in the scanner and 45 seconds following this the image is on the screen. It is viewed utilising a comprehensive software package with the full range of options available. These include the ability to join images, measure lengths and angles, zoom in, and alter contrast. The software is very user friendly and has full patient data record capability. The image can be immediately seen on other networked computers and other users can log in from anywhere in the world. The image has cost nothing to take and can be printed for the patients notes.

Digital X-Ray is also ideal for intra operative fracture treatment with the surgeon receiving images less than a minute after exposure. Often image intensifiers are not available so this is a perfect solution.



## X-Ray machines

Our normal solution if asked to provide X-Ray machines is to supply mobile machines which operate with batteries. These require no installation and whilst normally staying in outpatients they can be moved to the ward if patients cannot be moved. They are low cost to transport.

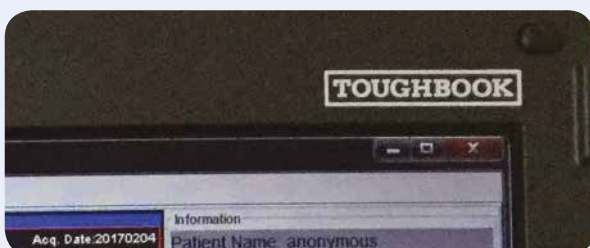
## We can supply a digital X-Ray system specific to any situation

### Typical options available:

- > A simple laptop based configuration for a smaller hospital
- > A larger intranet based system
- > A fully networked system into an existing server system

All workstations are connected to Panasonic Toughbook laptops which are ideal for the low resource environments they are used in. We can commission or supply as a plug and play.

- > The scanner carries a 5 year warranty
- > Images are exportable in a variety of formats
- > A digital plate lasts for 30,000 images. *Available in various sizes: 35x43cm, 25x30cm, 20x25cm*
- > Full secure back up of data is considered and our solution will be based around your requirements





# X-Ray

## The Challenges in Low Resource Environments

Any substantial healthcare facility needs reliable X-Ray. Yet in low resource environments most clinics and hospitals are presented with many challenges in this area which directly can affect the quality of care given.

The key problem areas are:

- > Lack of supply of X-Ray films due to availability and cost
- > Lack of supply of X-Ray developing chemicals and associated cost
- > Inadequate developing machines
- > Difficulty in obtaining a second opinion
- > Storage of X-Rays
- > Poor quality, old, unreliable X-Ray machines



## Who we work with

Medical Aid International has worked across Africa, South America and Asia in a range of healthcare settings, from major urban hospitals to rural clinics, from specialist surgical centres to neonatal, paediatric and adult intensive care units. We work with major international NGOs, healthcare charities, faith-based organisations and private funders.



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