

"Making a difference" for trauma patients at Baragwanath

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The Chris Hani Baragwanath Hospital's Trauma Unit in Soweto had a major upgrade on 2 February 2010 when they received a Lodox low radiation scanner, which is worth about R4-million. This scanner was made available through the "Making a Difference Campaign", as orchestrated by M-Net's Carte Blanche.

This scanner will save countless lives, as more than 11 000 patients per month are treated in the trauma ward. The hospital is the largest hospital in the southern hemisphere and serves a population of over 3-million residents in Soweto.

The scanner, which is able to perform a full-body scan of a trauma patient in 13 seconds, was sponsored by the Industrial Development Corporation (IDC) of South Africa. The technology behind the scanner was originally developed by Lodox Systems for the security sector, specifically for the detection of smuggled diamonds by workers in the mining industry in South Africa.

The scanner uses an ultra low dose (approximately 25% of the x-ray dose of one conventional chest x-ray to create the full body image), which makes it safe for children, pregnant women, all other types of patients and trauma personnel.

The scans can be viewed digitally on a LCD monitor, or processed as an X-ray plate within minutes. The quality of the image is similar to the best x-ray quality available from conventional digital x-ray

machines. However, it is unique in the sense that it can obtain a full body x-ray picture with only one scan by the machine, where conventional x-rays can only cover a single section of the body per scan. One would normally need at least 6-10 conventional x-rays to cover the whole body. The scanner can be used with patients in a sitting or lying position. There are two gurneys available to increase the turnaround time at the machine.

This x-ray picture is scalable and the medical personnel can look at the full body in one glance or zoom into specific detail should they need to. Also, due to the fact that the picture is digital, it can be distributed, printed and archived quite easily.

The Lodox scanner have minimal (insignificant) x-ray scatter – in other words the entire x-ray dose utilised is used for the x-ray. With conventional x-ray equipment, rooms need to be specifically prepared for placement of the machine and operators are obliged to operate the machine from a distance, protected by lead aprons and screens. The Lodox machine is unique in that it can be placed in any room and operating personnel are not exposed to scattered x-rays. Lodox Systems states on their website that:

- It is the only digital x-ray system that produces a full-body x-ray picture;
- It can complete an entire multi-view

x-ray examination in 3 - 4 minutes;

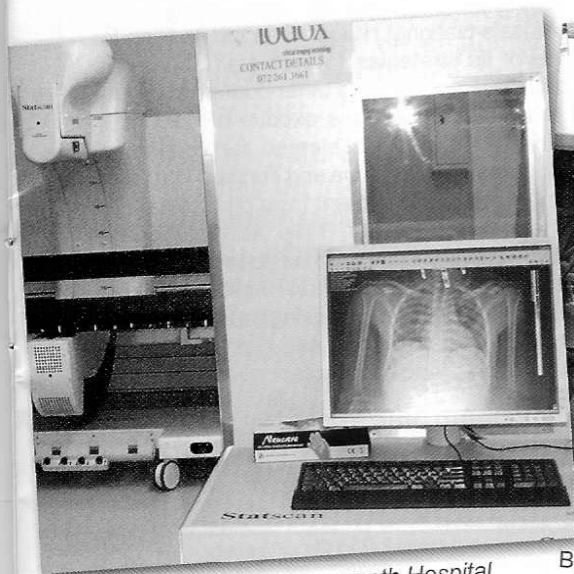
- It detects unsuspected injuries in unconscious patients that might otherwise be missed;
- It allows constant critical patient accessibility during the entire exam;
- It's low-dose technology is the safest x-ray system for healthcare personnel and patients;
- X-ray dose used is estimated to be about 25% of equivalent other techniques (75% less dose is typically required);
- Its technology produces minimal amounts of x-ray scatter, thereby further minimising radiation exposure of patients and healthcare personnel;
- Its x-ray exposures can be custom-tailored to meet the diagnostic needs of the paediatric patient;
- Its instantaneous x-ray exposure (scanning motion over the body) greatly reduces motion artefacts, thus the patient does not need to be completely still while scanning.

Baragwanath has also invested in new beds and ventilator systems for the trauma unit. Each Oxylog 3000 ventilator are connected to two LCD monitors – one next to the machine and one wall-mounted just above the bed.

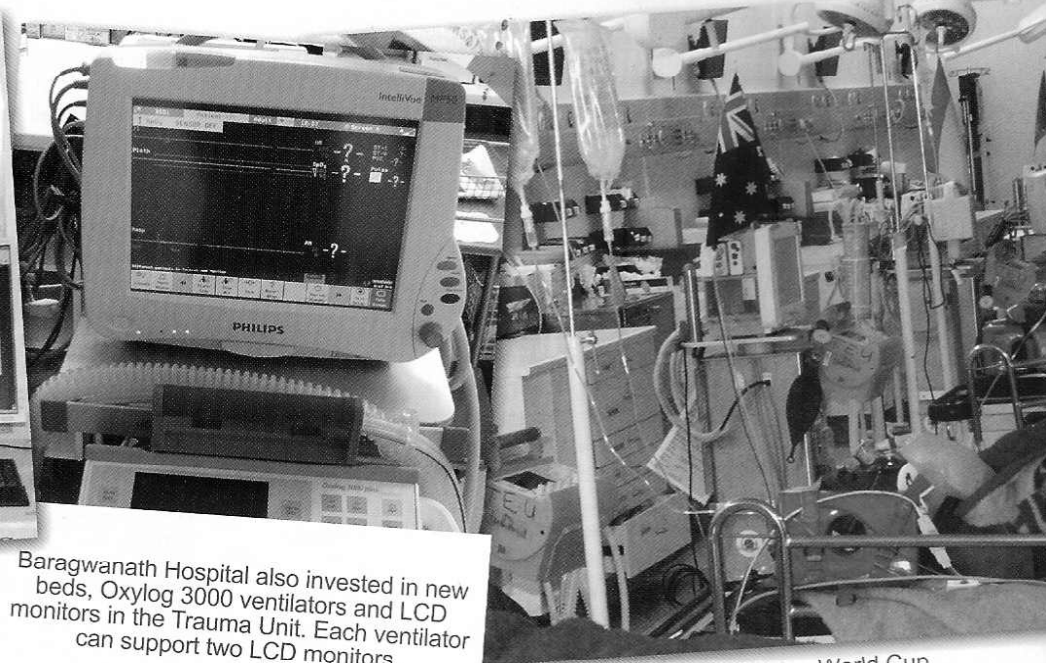
Sources:

www.lodox.com

www.publicityupdate.co.za



The Chris Hani Baragwanath Hospital is proud to introduce their Lodox X-ray machine, stationed in the Trauma Unit. The equipment was donated by the Carte Blanche "Making a Difference Campaign".



Baragwanath Hospital also invested in new beds, Oxylog 3000 ventilators and LCD monitors in the Trauma Unit. Each ventilator can support two LCD monitors.

In the spirit of the Soccer World Cup that kicked off on 11 June, each bed in the Trauma Unit sports an international flag.