Medical breakthrough

New sterilising technique devised by operating theatre technician

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An operating theatre technician at Gosford District Hospital has made a world breakthrough in sterilising equipment.

The new technique will serve patients by minimising the amount of cross-infection and slash sterilising time a thousand fold.

The man who did it, Mr. Frank Bryant, works in the Central Sterile Supply Department of Gosford Hospital.

His first breakthrough came when he steam-sterilised plastic tubes and valves used in respirators.

It takes about 40 minutes.

Before Mr. Bryant steam sterilised the plastic it took big hospitals two days to sterilise the tubes and valves and the danger of cross infection, because of technique of either soaking them or gassing, was high.

Hospital sterilise a lot of things with steam. Why hadn't anybody thought of it before?

DELUSSION

Mr. Bryant: "For many years people have been under the delusion that you could not do it. They used other techniques because the manufacturers said that the plastic parts could not be autoclaved (steam sterilised).

"I don't think like that.

He doesn't.

In a report in the last issue of "Hospital Journal of Australia", Mr. Bryant explains the technique:

"Fairly obviously, autoclaving (steam sterilising) at temperatures and pressures normally associated with modern sterilisers was out of the question because of the heat — sensitivity of the polycarbonates the equipment is made from.

He tried lower pressures and modified some of the equipment. Instead of 30 pounds per square inch (psig) he kept it at 11.5.

The temperature was set at 110°C and slowly inched up to 119.5°C. Mr. Bryant found that the gradual temperature rise did not cause the plastic parts to buckle, twist or break down. And, he found, repeated steam sterilising did not cause the plastic to deteriorate. He put one complete set through 40 consecutive sterilising processes.

UNFOUNDED

He said that the early fears of deterioration were completely unfounded.

To test how effective the process was in sterilising, the pathology department of Gosford Hospital put strips of germ cultures in inaccessible parts of the tubing and valves.

After sterilising, they waited three days before any tests. All the cultures were dead.

After a three months trial period, the technique has been in routine use at Gosford Hospital for the last six months.

Everybody has praised the system, particularly in connection with the equipment being sterilised and available so quickly.

Enquiries are flooding in from other hospitals.

The medical superintendent of the hospital, Dr. E. Freeman, said: "The technique will reduce the amount of cross-infection in patients with respiratory diseases.

"It has been well tested at Gosford District Hospital since early 1973 and with very good results.

"Mr. Bryant has shown great initiative and ingenuity in providing a new approach to a very serious problem."

And Mr. Bryant? "Well, we have these machines here that we have to send away to get sterilised. It is not very satisfactory.

"I am working on something to allow us to sterilise them here quickly and more efficiently."