

# Dramatic impacts and amazing turnarounds for mothers and their babies

It's a world-class service which helps save the lives of countless unborn babies and their mothers every year. But not many in the community have heard its name, though many local and regional hospitals regularly seek its help.

It's the Maternal Fetal Medicine unit. Working within the Royal's Department of Obstetrics, it is unassuming in stature, but its work is astronomical, and mostly dramatic, in its impact.

This cohesive team includes fetal medicine practitioners, midwives, social workers, a genetic counsellor and geneticists. They also have on-hand access to neonatologists, neonatal surgeons and other practitioners who either work at the Royal or at the Sydney Children's Hospital, right next door. The team sees patients from initial consultation through until the birth of the child and, often, beyond.

Just what exactly makes this unit so unique? Well, its reputation for excellence in care and technical skills means it receives referrals for a wide range of pregnancy related complications. But it's much more than that.

It's the multi-disciplinary team of specialists who work so closely together on every case. When parents come for an appointment, they meet all of the specialists, over a few visits, who'll have significant input throughout the pregnancy. In this way, all the puzzle pieces are put together, "they get every little bit of information needed to prepare them for whatever happens," says Alec Welsh, Professor in Maternal Fetal Medicine.

The work they do is literally mind blowing and covers many areas. The first is supporting the health of the soon to be mother who may be experiencing a complex pregnancy, from either an existing disease, such kidney disease, heart disease or lupus; or from a pregnancy related complication, such as severe pre-eclampsia or diabetes.

The second, and perhaps more extreme in nature, is helping to save the life of an unborn baby due to abnormalities with the fetus. This service, the focus of this article, is known as the Fetal Therapy Service and looks after a range of problems. These include those arising from multiple pregnancies – twins, triplets or quads – to other complications such as babies requiring blood transfusions in utero, to inserting shunts to drain abnormal collections of fluid within babies, to enable them to grow normally or save their life.

Undoubtedly, one of the most renowned area of specialty is the laser service performed for twin-twin transfusion syndrome – where the blood flow between



identical twins becomes unbalanced, threatening the life of both babies. This very complex service is the only one functioning in NSW. Left untreated, the mortality rate is 85%, but with treatment, the single twin survival rate is just over 90% and the dual survival rate just over 60%. "This is an incredibly dramatic change and it's the only therapy that works. The turnaround and influence on survival can be unbelievable," says Alec. What's more, the outcome numbers match those achieved internationally, so they're as good as anyone in the world has managed.

However, it's not all smooth sailing. For as many positive outcomes the team achieves, there are some devastatingly upsetting ones. "I always say we make people cry every day in fetal medicine. You have to talk about incredibly intense issues and give intensive counselling. It can be brilliant, but at the same time it can be very upsetting," Alec says.

As its demand and reputation increase one of the unit's biggest challenges is to expand the existing service with more staff, equipment and infrastructure. Right now, the funds won't stretch that far. But, they're working on it by trying to establish a fundraising committee with Penelope Hess, Chief Executive of the Royal Hospital for Women Foundation.

On top of his normal clinical responsibilities, Alec aims to increase the academic profile of obstetrics by getting the unit involved in five clinical trials this year and creating an environment where research becomes part of everyday conversation. Setting up a laboratory space within the unit is all part of this goal.

If the work of the Maternal Fetal Medicine Team sounds very hectic, requiring much coordination, co-operative teamwork and emotional counselling, you're not wrong. But it's the healthy babies and mothers that make it all worthwhile. "What we do is an astonishing privilege. The extreme nature of each situation, the parents' experience and the degree to which you can influence that is astounding," says Alec.