The HRB Mother & Baby Clinical Trials Network Ireland brings together leading Irish researchers with an international reputation, to address problems in women and infants’ health that will have a global impact.

The Clinical Trials Network (CTN) is composed of obstetricians, neonatologists, midwives and related health care professionals from seven of the largest maternity hospitals in Ireland, which together deliver over 55,000 babies every year.

Our mission is to improve standards of perinatal care through excellence in clinical research. Since our foundation in 2016, we have focused on four key areas of development:

1. Establishing a world-class Network of excellence in perinatal research;
2. Building an all-Ireland dedicated research capacity to conduct high-quality, patient-oriented clinical research for mothers and babies;
3. Translating research findings into clinical practice to improve the health of women and children; and,
4. Developing collaborative, cross-disciplinary programmes to generate a self-sustaining national and international research infrastructure.
History and Background

Our Network brings together complementary world-class expertise from across the island of Ireland. Every member of the Network brings added value, in terms of multidisciplinary medical and scientific expertise, experience in perinatal clinical trial management and governance, long term paediatric follow-up, regulatory affairs, patient advocacy, industry liaison and business development. With this in mind, our Network membership and key collaborative links continue to evolve to include key national and international stakeholders in the perinatal space.

Network Partners
Key Milestones

During our first four years (2016-2019), the Network has developed collaborative relationships with academic, clinical and industry partners and engaged with key stakeholders in order to extend and grow our reach, with a central focus on the following milestones:

• The establishment of an excellent record in conducting clinical trials. Our initial portfolio of studies are complete or nearing completion (PARROT, MINT Pilot, TEST Pilot and IRELAnD Pilot) with a suite of new HRB funded studies underway (IRELAnD Main, HIGHLow, MILO, REDUCE and the FBS/FSS Study). In addition to our core portfolio, we have supported a number of other non-Network funded studies that are closely aligned with our overall strategy and vision (NIMBUS/FIREFLy/T21 Cardiac Follow-up);

• The initiation of a variety of public outreach and engagement campaigns supported by both the HRB Knowledge Exchange and Dissemination Scheme (KEDS) and the HRB Conference and Education Scheme (CES). This public engagement has further extended the reach of our Network activities and has increased public awareness of perinatal research in Ireland, while placing patients at the very core of our work;

• The launch of a research stream in the area of Clinical Trials Methodology, alongside our colleagues in the HRB-Trials Methodology Research Network (HRB-TMRN) as well as a nationwide Neurodevelopmental Follow-up Programme for the children who participate in our Network’s trials; and,

• Increased collaboration between fellow researchers, clinicians and patient groups within the perinatal space both nationally and internationally and improved involvement of the wider community in our research and the dissemination of these research activities.
Seven of the largest maternity hospitals in Ireland:

- Belfast
- Galway
- Limerick
- Cork
- Dublin

delivering 55,000 babies per year

- 3000+ patients recruited in 4 core studies (PARROT, MINT Pilot, TEST Pilot & IRELAnD Pilot)
- 500+ patients recruited in other Network-supported studies
- 80+ Principal Investigators engaged in Network research studies
- 40+ staff engaged in Network training and education programmes
- 200+ publications from Network PIs in peer reviewed journals
- 25+ staff employed by the Network
- 200+ collaborative partnerships developed over five continents
The primary focus of our network activities in years 1-3 (since our launch in 2016) was in the areas of infrastructure, staff recruitment and programme development. This period saw the launch of phase 1 of our Core Network studies.
Phase 1: Core Network
Funded Studies
Preterm Preeclampsia

*It is a multisystem disorder (affects different organs).*

Characterised by:
- Mum: high blood pressure (hypertension);
- Mum: protein in the urine (proteinuria);
- Mum: oedema/swelling;
- Baby: growth problems.

We don't know what causes pre-eclampsia but we know that a key contributor is poor placental development.

We need to improve the diagnosis in order to potentially improve outcomes.

The diagnosis of PET (based on hypertension and dipstick proteinuria) may result in significant false positive and false negative results.

Parrot was the main definitive intervention study for Phase 1 of CTN funding. It was launched in June 2017. This trial examined whether the addition of a point-of-care Placental Growth Factor (PlGF) test to routine clinical care improved outcomes for women with signs or symptoms of preterm pre-eclampsia (PET) or placental dysfunction, and for their babies. It also aimed to assess if PlGF measurement enabled appropriate stratification of antenatal care.

Preterm Pre-eclampsia is a form of pre-eclampsia which occurs before 37 weeks of pregnancy.

Principal Investigator: Dr. Keelin O’Donoghue
Lead Researcher: Dr. Deirdre Hayes-Ryan
Sponsor: University College Cork
How can PARROT improve outcomes?

Low levels of Placental Growth Factor (PIGF) are indicative of placental dysfunction. Measuring PIGF in the maternal blood may allow for the stratification of women with suspected PET. In this way, those at highest risk would receive greater surveillance and a subsequent decrease in adverse outcomes while those with lower risk could continue to be managed without unnecessary admission or other interventions.

Participants’ point of view

I just felt that everyone was giving the best care and all of this research and all of this information was for my baby’s good so I thought it was a very positive thing.

Where we are so far:

The trial commenced on 29th June 2017 and continued until 26th April 2019. Final outcome data was collected in December 2019 and analysis is currently ongoing with results expected shortly.

Secondary analyses will examine further clinical outcomes as well as a health economic assessment of the cost of incorporating placental growth factor testing into routine clinical care.

Key publications:


IT CAN AFFECT

While in the womb, babies get oxygen from the mother.

For this reason, the blood vessels in babies’ lungs are tight.

Once the baby is born, blood vessels should widen to allow the blood to flow.

In PPHN, the blood vessels of the lungs don’t expand as they should after birth, preventing the blood from flowing.

Characterised by

Low level of oxygen in the baby’s blood.

MAIN ISSUE

2 in 5 babies do not respond to the iNO treatment.

The treatment for PPHN is the use of a gas called Nitric Oxide (NO) delivered through ventilation, which dilates the blood vessels in the lungs.

Persistent Pulmonary Hypertension of the Newborn

IT CAN AFFECT

- baby’s lungs in the long term;
- baby’s heart;
- baby’s brain.

Principal Investigator: Prof. Afif El-Khuffash
Lead Researcher: Dr. Colm Breatnach
Sponsor: Royal College of Surgeons in Ireland (RCSI)

MINT is a pilot study to assess the impact of Milrinone administration (a heart medication) on time spent on inhaled Nitric Oxide (iNO) in infants with Persistent Pulmonary Hypertension of the Newborn (PPHN).
To date, nine out of twenty babies have been recruited in Ireland.

How can Milrinone improve outcomes?

Milrinone is a medicine which has shown to support the action of inhaled Nitric Oxide (iNO) and to have a beneficial effect on the heart. The theory is that Milrinone, used in conjunction with iNO, will result in a reduction in the time spent on iNO, and it will lead to an improvement in heart function and in blood circulation.

Current recruitment sites:

This is a multicentre pilot study that will be carried out in the Neonatal Intensive Care Units in two centres in Ireland and one centre in the Netherlands.

Where we are so far:

To date, nine out of twenty babies have been recruited in Ireland. Additional participants will be recruited in the Netherlands.

Key publications:

It is possible to predict the risk of pre-eclampsia, but some tests are poor screening tools. It may be more efficacious to prescribe LDA universally.

Low-Dose Aspirin (LDA) used prior to 16 weeks’ gestation can reduce the incidence of pre-eclampsia in at-risk pregnancies.

Pre-eclampsia

Characterised by:
- mum: high blood pressure (hypertension)
- mum: protein in the urine (proteinuria)

which can cause eclampsia (seizures) and growth problems.

We should determine whether it is better to screen the low-risk population or prescribe LDA to all women.

However, the efficacy of LDA at preventing pre-eclampsia in low-risk pregnancies is unknown.

TEST was an Open-Label Pilot Randomised-Controlled Trial to assess the effectiveness of routine prescription of Low-Dose Aspirin (LDA) to low risk women in their first pregnancy versus women who were prescribed aspirin on the basis of a positive early pregnancy screening test for pre-eclampsia and fetal growth restriction. The primary objective was to test the feasibility and acceptability of the trial. Recruitment for the TEST study was completed in late 2015, with the subsequent laboratory analysis and the dissemination of this study funded by the CTN.
How can the TEST study improve outcomes?

Before determining whether all low-risk women should either be routinely prescribed Low-Dose Aspirin or undergo a comprehensive screening test, we first need to understand if women would be open to taking aspirin during pregnancy, and if the comprehensive screening test would be realistic in a routine examination setting. Therefore, a feasibility study is important before a definitive study in order to answer the question “Can this study be done?”.

Objectives

The primary focus was the FEASIBILITY and ACCEPTABILITY of the study, measuring:

1. The number of eligible women who agreed to participate in the study;
2. The acceptability of undergoing a screening test or of taking aspirin in the first pregnancy;
3. How well the study protocol was followed; and,
4. other parameters to test the effectiveness.

Where we are so far:

Women were recruited between the 8th May 2014 and 23rd September 2015. The results were published in 2018:

557 women were successfully recruited.

Low-risk women at their first pregnancy are open to taking aspirin in pregnancy, adherent to the protocol and willing to take it in a subsequent pregnancy.

An appropriately powered randomised controlled trial is now required.

Key publications:


Later in life, they are prone to health problems including increased risk of cardiovascular diseases and neurodevelopmental disorders.

FGR

Fetal growth restriction refers to poor growth of the baby while in the mother’s womb.

Caused by several factors, including:
- poor placental development;
- exposure to smoking;
- gestational diabetes;
- pre-eclampsia;
- genetic factors.

These fetuses are at increased risk of stillbirth, fetal compromise, early neonatal death and neonatal morbidity.

Main issue

Researchers recorded different outcomes. This makes it difficult to evaluate and compare information from different studies.

But

Many studies have been done into FGR, in both perinatal and neonatal fields.

COSGROVE
Core Outcome Set for the prevention and treatment of fetal GROwth restriction: deVeloping Endpoints.

Principal Investigator: Prof. Declan Devane
Lead Researcher: Dr. Patricia Healy
Host Institution: National University of Ireland, Galway (NUIG)

This work package focused on the important area of Trial Methodology. This project developed an agreed standardised set of outcomes, known as a ‘Core Outcome Sets’ (COS) for the prevention and treatment of Fetal Growth Restriction (FGR). This will enable future trials to measure similar, meaningful outcomes, minimising the difference between trials and allowing a meaningful comparison of trials.
The key question we wanted to answer is “what is the minimum set of outcomes people would like to collect in studies of FGR?” The development of this set of outcomes to be measured (Core Outcome Set) for use in studies on FGR, will enable future trials to measure similar meaningful outcomes and ensure that findings from different studies can be compared and combined. This will help to improve the treatments mothers and babies receive.

COSGROVE identified a large number of potentially relevant outcomes and then reached consensus on those factors that, as a minimum, should be measured and reported in all future studies of prevention or treatment of fetal growth restriction.

What we wanted to know was not so much of what researchers wanted, or what clinicians wanted, or parents wanted, but what everybody felt relevant, collectively, in order to represent the needs of all stakeholders, and not one particular predominant group.

COSGROVE is part of a series of studies which aim to improve the way we conduct studies across many different research areas. It was carried out alongside our colleagues in the HRB-TMRN.

The mission is to strengthen the methodology and reporting of trials in health and social care in Ireland so that they become more relevant, accessible and influential for patients and other service users, practitioners, policy makers and the public.

Key publications:


Neurodevelopmental Follow-up Programme

Principal Investigator: Prof. Eugene Dempsey / Prof. Geraldine Boylan
Lead Researcher: Ms. Leanna Fogarty
Host Institution: University College Cork (UCC)

We recognise the importance of long-term paediatric follow up, it is central to the success of our Network. Neurodevelopmental follow-up is an important component for the evaluation of the neurological development of high-risk newborns. However, there is no agreed, standardised practice throughout the CTN sites in Ireland. Our aim is to develop a standardised follow-up for all high-risk children enrolled in clinical trials in all HRB sites. That we aim to ensure that all high-risk babies enrolled in RCT’s are followed up using well-designed cohort studies to evaluate the long-term impact of interventions. Long term follow-up into adolescence is also needed.
How can the Follow-up Programme improve outcomes?

The aim is to gain information on present practice, what is and has actually occurred in each site, and to compare this to current neurodevelopmental follow-up best practice recommendations. The final aim is to design and implement a standardised neurodevelopmental programme and policy across all sites.

Where we are so far

A ‘Mapping Exercise’ was completed to identify dedicated units in all HRB sites. An enormous variability from region to region and from hospital to hospital was observed.

The research group also completed an extensive exploration of developmental assessments creating a bibliography of developmental/cognitive assessments, screeners, etc.

The research group completed an extensive literature review on developmental follow-up best practice, policies and recommendations.

A questionnaire was completed by each PI of the Network in September 2017.

A review survey - Neurodevelopmental Follow-up Questionnaire’ will be sent to all HRB PI’s again in March 2020.

The group will analyse present results of the second questionnaire, and compare to agreed best practice recommendations.

The final aim is to create a multi-professional committee for the design and implementation of the national guidelines, which will try to take into account every aspect of the baby’s development.
Network Activities 2019-2020

Years 4 and 5 of our Network programme (2019-2020) focused on the development and growth of the following key areas, as well as the launch of phase 2 of our Network-supported clinical studies.

- Launch of phase 2 of Network trials - IRELAnD main, HIGHLOW, MILO, FBS/FSS Study
- Re-evaluation of Network Governance Model
- Development of Sustainability Model
- Acquisition of funding for new trials*
- Establishment of External Scientific Advisory Board
- Research Strategy Development
- Patient and Public Involvement

*exchequer, non-exchequer, industry and philanthropic
Phase 2: Network Supported Studies
1 in 5 women with pre-gestational diabetes has pre-eclampsia, which places the pregnancy at heightened risk for more serious complications.

Pre-gestational diabetes occurs when you have type 1 or type 2 diabetes before becoming pregnant.

Diabetes puts women at a higher risk of many pregnancy complications.

Common complications
- Poorly functioning placenta;
- high blood pressure related complications.

1 in 5 women with pre-gestational diabetes has pre-eclampsia, which places the pregnancy at heightened risk for more serious complications.

These complications may relate to the effect that diabetes has on tiny blood vessels in the placenta.

Any therapy that offers the potential to help the placenta to work better in this group deserves close attention.

IRELAnD began its journey as a pilot study, in phase 1 of CTN funding. It was subsequently awarded additional funding through the HRB DIFA programme in 2017, for the main randomised controlled trial. IRELAnD is a study aimed at investigating whether low-dose aspirin therapy, started early in pregnancy and continued until close to delivery, may reduce pregnancy complications in women with pre-gestational type 1 or type 2 diabetes.

IRELAnD
Investigating the Role of Early Low-dose Aspirin in Diabetes in pregnancy

Principal Investigator: Prof. Fionnuala Breathnach
Lead Researcher: Dr. Catherine Finnegan
Sponsor: The Rotunda Hospital
How can Low-Dose Aspirin improve outcomes?

Poorly functioning placenta is a key contributor to pre-eclampsia onset. Low-Dose Aspirin may be able to restore the balance between important molecules in the developing placenta. In this way, the placenta may be able to work better, preventing PET onset. IRELAnD will investigate the effect of this therapy, initiated in the first trimester of pregnancy, on signs of placental dysfunction.

"We are trying to ensure that if aspirin benefits pregnant women with diabetes, they receive it early in pregnancy."

Prof. Fionnuala Breathnach, Principal Investigator

IRELAnD is recruiting from seven maternity units in the HRB Mother & Baby CTN, all over Ireland, and aims to include 600 women.

Where we are so far:

The trial was launched on the 14th November 2019, World Diabetes Day.

Currently recruiting in four out of seven sites.

We have recruited 12 patients to the study to date.

Key publications:

Pregnant women have a higher risk of VTE because of the physiological changes during pregnancy.

A BLOOD CLOT is a thick mass of platelets, red blood cells and fibrin which can form in a vessel, preventing the blood from flowing. It is a healthy response to an injured vessel, but can be harmful if it forms in healthy ones.

Venous Thromboembolism (VTE) is a condition in which a blood clot forms, usually in the deep veins of the leg, pelvis, arm (known as deep vein thrombosis DVT), there, they block the flow of blood back to the heart. They can break off and travel to the lungs (known as pulmonary embolism, PE).

Together, DVT and PE are known as VTE - a dangerous medical condition.

Low-molecular-weight heparin to prevent recurrent VTE in pregnancy: a randomised controlled trial of two doses

HIGHLow was awarded funding via the HRB DIFA programme in 2017 to expand to Irish sites. HIGHLow is a study using heparin (blood thinner) to prevent venous thromboembolism (blood clots) in pregnancy. In this trial, doctors in Ireland and in other countries will join together to perform a large study comparing the two doses of heparin recommended by guidelines for pregnant women who have had a previously diagnosed blood clot. We will determine which dose is most effective (in terms of prevention of blood clots) and safest (in terms of side effects such as bleeding).

Lead Principal Investigator for Irish sites: Prof. Fionnuala Ní Áinle
Sponsor: Academic Medical Centre (AMC), Amsterdam
How can HIGHLOW improve outcomes?

This type of research is lacking in pregnant women. As a consequence, doctors make decisions on the health of some of their highest risk pregnant patients using evidence that is of poor quality or that is extrapolated from patients that are not pregnant. The Highlow study is the first large randomised controlled trial in pregnancy that will provide high-quality evidence on the optimal dose of LMWH.

Current recruitment sites:

- Denmark
- Russia
- Ireland (Rotunda, Coombe, NMH and University Hospital Limerick)

Where we are so far:

- Our target enrolment is 1200 patients*. 974 have been enrolled since April 2013. The Rotunda is one of the top recruiting sites.

Key publications:

MILO received HRB DIFA funding in 2019. The MILO study is a feasibility study to inform the optimal design of a future definitive randomised trial which will evaluate the effectiveness (including optimal timing and frequency) of membrane sweeping in case of post-term pregnancy.
How can MILO improve outcomes?

MILO includes a “pilot study”, a version of the main study that is run in miniature to test whether the components of the main study can work together. The primary aim of the MILO study is to assess the feasibility of conducting a definitive randomised controlled trial to evaluate effectiveness, optimal timing and frequency of membrane sweeping. Post-term pregnancy is by far the most common reason for induction of labour and membrane sweeping offers a potentially low risk method to reduce this.

The MILO study consists of four work packages:

1. A pilot study assessing the feasibility of conducting the definitive trial.
2. A qualitative study exploring the acceptability of the trial for women and clinicians.
3. Health economic analysis examining the cost-effectiveness of membrane sweeping.
4. A SWAT (Study within a Trial) assessing when women should be asked to participate, to understand if it affects the number of women recruited to and retained in the trial.

Where we are so far:

MILO will commence recruiting in Q2 2020, in two hospitals, University Maternity Hospital Limerick and the Coombe Women & Infants University Hospital, Dublin.
MRI is a widely used tool in the assessment of NE providing information about the nature, location, timing and severity of the injury, and guiding clinical decision-making. This condition occurs in babies born over 35 weeks of gestational age. It is characterised by a disturbed neurological function. It affects 2-6 of every 1000 live births. For these reasons, new therapies to reduce brain injury are urgently needed. Cooling therapy is the only established treatment. Newborns who are severely affected also have problems with: heart; lungs; liver; and kidney function. Moreover, inflammation is increased in these babies. MRI is a widely used tool in the assessment of NE providing information about the nature, location, timing and severity of the injury, and guiding clinical decision-making. NIMBUS and FIREFLY are funded via other HRB project award funding but are closely aligned to the HRB Mother & Baby Network and community. The NIMBUS study aims at finding biomarkers (indicators) to detect brain injury in newborns prior to MRI assessment. FIREFLY is a HRB grant funded to follow-up with these babies at 2 years and look at inflammation and multiorgan function. By understanding inflammation in these babies, we can target new treatments to add to cooling therapy to protect their brain and improve outcomes.
How can NIMBUS and FIREFLY improve outcomes?

Inflammation is increased in babies with NE, and is related to the severity of brain injury. This may be a possible target for future interventions as well as a good early marker to predict their outcome. By understanding inflammation in these babies, it will be possible to target new treatments to add to cooling therapy, in order to protect their brain and improve outcomes. This research may allow us to recognise brain injury prior to MRI (Day 5-7) so that these new therapies can be initiated as soon as possible after birth.

Key publications:


Outreach Programme

The HRB Mother & Baby Clinical Trials Network Ireland is dedicated to ensuring dissemination of its research findings, to sharing expertise within the community and the wider public, and to promoting impact of health research on everyday life, providing clear, accurate and evidence-based information. Our outreach programme is primarily funded through the HRB Knowledge Exchange and Dissemination Scheme (KEDS) and the HRB Conference and Education Scheme (CES).

Scan this QR code and discover more on our website: hrb-mbctni.ie/outreach
CREATE - The Art of Pregnancy, Birth and Beyond was a free art exhibition that showcased common pregnancy and new-born health issues and celebrated the impact of perinatal research on mothers and babies in Ireland and internationally. The project aimed to engage mums, dads, visual artists, clinicians, researchers, graphic designers, statisticians, photographers, midwives, and everyone in between, to create an exhibition with a diverse field of voices, experiences, topics and artistic media.

CREATE received over 80 submissions during the Open Call. Thirteen pieces were chosen, touching on topics ranging from perinatal mental health to bereavement and pregnancy loss, IVF, labour, birth experiences, and breastfeeding, as well as exploring how health research helps women and newborns.

CREATE was showcased in a number of cultural and clinical spaces, in Cork, Galway and Dublin throughout 2018 and 2019.
Real Talk with Real Mums is a ten-episode podcast series, hosted by Louise McSharry, discussing the issues of everyday pregnancy with medical professionals and the real women who have gone through the pregnancy journey. Each episode tackles a different topic, from exercise in pregnancy with a physiotherapist to mental health issues in pregnancy with a mental health midwife. The podcast offers mothers, mothers-to-be, and the general public practical, realistic snapshots of the pregnancy journey, tempered by professional insight. Real Talk with Real Mums taps into a new medium of dissemination for research findings and aims to leave current and future parents feeling better prepared.

@realmumspodcast
The Breakfast Club’ is the story of diabetes in pregnancy in Ireland. In a weekly, serialised, online graphic novelette, you will follow the lives of real women who have gone through the pregnancy journey with diabetes. They will share their experiences, from doing the Glucose tolerance test, to meeting other women in the Breakfast Club, to figuring out how to use a glucometer, to trials and tribulations with diet and exercise, to taking part in a research study. You will get to know the whole experience, from the trivial to the serious, with their apprehensions, their hopes, their frustrations and joy. The Breakfast Club comic is illustrated by the Artist Fiona Carey.
The ‘Curious Parents’ initiative is a public outreach campaign designed around a series of short animated films, created to highlight maternal and newborn health issues. The overarching aim of the ‘Curious Parents’ campaign was to provide clear, reliable information on a range of maternal and newborn health issues, in a fun and engaging manner in order to educate the wider public and contextualize our research programme. We produced three videos on topics related to the Network’s research – Persistent Pulmonary Hypertension of the Newborn, Gestational Diabetes, and Pre-eclampsia, and framed them as accessible questions, like “How Do A Newborn’s Lungs Work?”. The inviting animation style, along with clear and concise content helped bring parents along to learn more about pregnancy and neonatal life and the research that impacts these journeys.
‘Debunking the Myths - The Science behind women’s health’ is a workshop series for teenagers focused on women’s health. In today’s climate of ‘fake news’, it can be difficult for teenagers to find reliable sources of information about sexual and reproductive health. Many teenagers are learning about their bodies and these health issues from film, television and social media. In 2019, we hosted four workshops at the Rotunda Hospital, with over 200 secondary school students from the local community, to discuss and debunk a number of myths associated with HPV vaccine, periods, the vagina and contraception. ‘Debunking the Myths’ offers a safe space for teenagers to ask qualified professionals about topics related to women’s health. In 2020, we plan to extend the program, hosting additional workshops, making them accessible to students throughout the country.
Looking to the Future

With the first five years of the HRB Mother & Baby Clinical Trials Network Ireland drawing to a close, we are excited about the potential for the future development of obstetric, midwifery and neonatal research in Ireland.

We have successfully put together a team of experts across all academic sites in Ireland and across all relevant disciplines, which have demonstrated significant success in implementing large scale clinical trials.

We would like to take this opportunity to thank all the staff who have worked so tirelessly to make the network such a success. The Network is well on its way to becoming a financially self-sustaining system and we look forward to its next five years of producing world-class, patient-focused research results.

We would also like to thank our funders, the HRB for investing in Ireland’s first clinical trial network dedicated solely to maternal and newborn health. We are confident that our outputs will change clinical practice and healthcare of mothers and babies for the better, for many years to come.

And finally, we would especially like to thank all the families who have participated in our trials to date. It is your contribution that has led to the success of the HRB Mother & Baby Clinical Trials Network Ireland.

Thank you,

Prof. Eugene Dempsey
Network co-chair

Prof. Fergal Malone
Network co-chair
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