ON TRACK NETWORK
BETTER HEALTH FOR MOTHERS AND BABIES
Te Awhi Rito

ON TRACK

Welcome to our August ON TRACK Network newsletter

Kia ora. Welcome to the August edition of ON TRACK news. This month we look at the ICARIS trial in Update Your Practice, we feature the DIAMOND trial, and provide an update on the 2020 Trial Development Workshop. We also provide the latest Save the Date and Clinical Trials News.

Have an idea for a clinical trial? Or, want to learn more about development of quality clinical trials?

Believe it or not it's time to start preparing for our next ON TRACK Network Trial Development Workshop.

SAVE THE DATE

25th and 26th February 2021

Call for concept submissions will be coming soon.

Feedback from our 2020 workshop:

"*The workshop was welcoming, collaborative, relevant, interesting, informative and fun*."

"*Friendly collaborative atmosphere. Excellent organisation. Interesting speakers and sessions*."

"*It was very interesting seeing the development and transformation of the clinical trial concepts. The discussion between the facilitators and people who attended the workshop, and learning the opinions and perspectives of people from different professional backgrounds was really informative. I learnt a lot about the logistics of developing a clinical trial and the considerations that go into that*."

Trial Development Workshop 2020 Concept update

Rebecca Hay, research midwife, brought her clinical trial concept "**RAPID: Rapid Antibiotic Prophylaxis Informed Decision-making**" to the 2020 ON TRACK Network Trial Development Workshop, which took place in February. Rebecca provided the following feedback on her workshop experience.

Rebecca (second from right) & A/Professor Jo Said (front centre) who facilitated the group that selected Rebecca's concept to help develop during workshop breakout sessions

"I am relatively new to research, and while looking towards PhD study, I am very aware of the need for careful planning and preparation. The ON TRACK Network Trial Development Workshop gave me the opportunity to workshop my project idea with a team of experts, practitioners, consumers and experienced researchers. These wonderful people donated their time to listen and provide their suggestions and guidance over a focused two-day workshop, and it is such a privilege to be the recipient of their valuable expertise."

"During the workshop I presented my developing ideas to the entire audience at regular intervals and received feedback every time. This was constructive, and even when critical, was given kindly and with the intention of improving the project. During the breakout sessions, a small team helped work through topics such as project structure and practicalities, ethical issues, statistical power and how to go about obtaining funding. I was also delighted to receive offers for collaborators throughout the process, and suggestions for potential sites, as well as ideas for possible supervisors. "

"I was amazed by the input given to me and my project during the workshop. My workshop team was very enthusiastic about the project and at times it was a little overwhelming with everything going through my mind! I had the benefit of having Laura Mackay as a wonderful note-taker, and she was invaluable and gave me copious notes of all of the decision points that were covered. When I read through the notes now, I can see there was a flow to the workshop and conversations, and I must also acknowledge the contribution of my Facilitator, Associate Professor Jo Said, who took the time to understand my project and very skilfully guided the conversations with care and great focus. COVID-19 has delayed my plans a little, however I retain those excellent notes, and thanks to the workshop have a very good understanding of how I plan to progress my project and achieve my research goals in the near future."

Different feeding strategies in moderate to late preterm infants on body composition, feed tolerance and developmental outcome

Although breast milk is best for babies, preterm babies often having difficulty feeding need some help to make sure they get the right nutrition until breastfeeding is established. The **DIAMOND trial** is a multi-centre, randomised, controlled trial designed to investigate different ways of giving this nutrition to preterm babies to find out how it affects their fat stores and brain development.

It is currently unknown how the nutritional support provided to preterm babies affects their growth and development. If we can improve the way we feed preterm babies and stop them losing too much weight, it may potentially stop them developing extra fat mass that can lead to obesity later in life. DIAMOND is the first randomised controlled trial to investigate this.

Two of the feeding methods being investigated in the DIAMOND trial are already used to provide nutrition to preterm babies. The third method is a new idea to give babies a smell and taste of milk before they are fed through a tube into their stomach.

Babies born between 32^{+0} and 35^{+6} weeks' gestation receiving intravenous fluids and whose mothers intend to breastfeed are being randomised to one of eight combinations of the following three interventions:

⇒ **Intravenous amino acid solution versus intravenous dextrose solution**
⇒ **Milk supplement versus exclusive breastmilk**
⇒ **Taste/smell before tube feeds versus no taste/smell**

The **primary outcome** for the trial is: for parenteral nutrition and milk supplement interventions, body composition at 4 months' corrected age; for taste/smell intervention, time to full enteral feeds defined as 150 $ml.kg^{-1}.day^{-1}$ or exclusive breastfeeding.

Inclusion criteria:

⇒ Infants born between 32^{+0} and 35^{+6} weeks' gestation
⇒ Mother intends to breastfeed
⇒ Admitted to NICU/SCBU
⇒ Require insertion of IV line for clinical reasons

To date 344 out of a target recruitment of 528 babies have been recruited from **Auckland City, North Shore, Waitakere, Middlemore and Palmerston North hospitals.**

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ON TRACK Network Educational Site Visits - We are on the road again!

Following lifting of the COVID-19 lockdown and domestic travel restrictions we are delighted to be out and about delivering more ON TRACK Network educational site visits. Site visits aim to provide the latest in evidence-based best practice in maternal and neonatal care on topics selected by sites and talk about the value of clinical trials research and getting involved with the ON TRACK Network.

Arrangements are currently being made for visits to **Rotorua** (11th September) and **Palmerston North** (19th October). If your site has not yet participated in a site visit we really encourage you to speak with your Site Network Leader or to contact us directly to arrange one; the feedback we have had from seven sites visited so far has been great. We really look forward to meeting more multidisciplinary teams across New Zealand!

"Key message for me is the importance of clinical trials for improving health outcomes, reducing harm and reducing variation in practice" ..... ***"The concept that every mother and baby is entitled to participate in a clinical trial is a big shift in thinking for me"*** ..... ***"Great presentations, very interesting"***

Update Your Practice: The ICARIS Trial. Caesarean delivery rates and analgesia effectiveness following injections of sterile water for back pain in labour: A multicentre, randomised placebo controlled trial https://doi.org/10.1016/j.eclinm.2020.100447

Background: Severe back pain during labour affects approximately one third of women. Small volumes of intracutaneous sterile water injected into the lumbar region is used to relieve this pain. The somatic stimulation provided at the injection is believed to act via the gating theory of pain, overwhelming the referred pain from the lumbosacral nerve plexus and viscera. Labour related lower back pain is linked to occipito-posterior position and labour dystocia, both of which are associated with higher caesarean section (CS) rates. A meta-analysis of trials comparing sterile water injections to either a placebo or other forms of care reported reduced back pain and lower rates of CS for women receiving sterile water injections. A Cochrane Review also reported similar findings but highlighted methodological issues and potential bias in the included studies. Both reviews called for a large randomised trial to assess the impact of water injections on back pain and CS rates. The ICARIS Trial, Impact on Caesarean sections following Injections of Sterile Water, evaluated the impact of sterile water injections on birth outcomes and pain.

Methods: This multicentre, double-blind, randomised, controlled trial took place in 15 Australian and one UK hospital between 2012 and 2017. Women were eligible if they were ≥18 years of age with a singleton cephalic fetus between 37^{+0} and 41^{+6} weeks gestation in either spontaneous, induced or augmented labour. Women experiencing back pain in labour self-assessed as being ≥ 7 on a verbal (1–10) pain scale were offered information about the trial. Those women who consented to participate were randomly assigned (1:1) to injections of sterile water or saline placebo. Saline is isotonic in nature and results in rapid painless absorption and hence unlikely to have the same somatic stimulation provided by water.

Women were administered 0.1-0.3 ml of either sterile water or normal saline intracutaneously into four defined points surrounding the Michaelis Rhomboid (an area over the lower spine) using a standardised technique. All additional care was provided as standard at each site, with access to pharmacological and non-pharmacological pain relief consistent across sites.

The **primary outcome was rate of CS. Secondary outcomes included at least 30% or 50% reduction in self-reported pain scores at 30, 60 and 90 minutes after treatment**.

Results: 580 women in the sterile water group and 567 in the placebo group were included in the analysis. The rate of CS was 17·1% (82/580) in the sterile water group and 14·8% (82/567) in the placebo group (RR 1·16, 95% CI 0·88–1.51; p = 0·293). At 30 minutes post treatment 60·8% (330/543) of women in the sterile water group reported a 30% reduction in self-reported pain compared to 31·4% (163/520) in the placebo group (RR 1·94, 95% CI 1·68–2·24; p=<0·001); and 43·3% (235/534) of women in the sterile water group reported a 50% reduction versus 18·1% (94/520) in the placebo group (RR 2·39, 95% CI 1·95–2·94; p=<0·001). The analgesic effect of sterile water injection compared to placebo remained significant at 60 and 90 minutes post-treatment. There were no significant differences in other maternal or neonatal outcomes.

Interpretation: Compared to placebo, injections of sterile water did not reduce rates of CS. For the main secondary outcome of pain relief the intervention did result in significantly more women reporting at least 30% and 50% reduction in pain for up to 90 minutes. Water injections had no effect on birth outcomes, however they are an effective treatment option for the relief of labour-related back pain.

What do these results mean for New Zealand clinical practice? Sterile water injections for lower back pain during labour are used in New Zealand, although not frequently. The ICARIS Trial has shown that although this intervention does not reduce the need for CS, it is a safe alternative analgesic. It seems a very valid option for use in units where regional anaesthesia is not available and for women who wish to avoid an epidural.

New Zealand Trials		New Zealand recruits
DIAMOND	DIfferent Approaches to MOderate & late preterm Nutrition	344
FIIX Trial	The Fertility, IVF and Intrauterine Insemination trial in couples with uneXplained infertility	114
LATTE Dosage	The most effective and best tolerated dose of caffeine to reduce intermittent hypoxaemia	111
Little Eye Drop	Microdrop Administration of Phenylephrine and Cyclopentolate Eye Drops in Neonates	54
NeoGluco	Neonatal Glucose Care Optimisation Study (I)	11
OBLIGE	Comparing two methods of starting an induction of labour in pregnant women (balloon at home versus hormone gel in hospital) to assess chance of vaginal birth	818
PAEAN	Preventing Adverse Outcomes of Neonatal Hypoxic Ischaemic Encephalopathy with Erythropoietin	59
PIPPA	Paracetamol and Ibuprofen in Primary Prevention of Asthma	1658
PLUSS	Preventing Chronic Lung Disease in Extremely Preterm Infants Using Surfactant + Steroid	60
PROTECT	IV pentoxifylline as adjunct therapy to improve long-term disability in preterm infants	29
Recruitment completed - follow up to primary outcome ongoing		
C*STEROID Feasibility	C*STEROID Feasibility: Corticosteroids before planned CS form 35^{+0} to 39^{+6} weeks	
ECOBABe	The ECOBABe study (Early Colonisation with Bacteria After Birth)	
GEMS	Gestational Diabetes Mellitus Trial of Diagnostic Detection Threshold	
MAGENTA	Magnesium Sulphate at 30 to 34 weeks' gestational age: Neuroprotection Trial	
PROVIDE	Higher IV protein intake for extremely low birthweight babies in the first week after birth on survival free from neurodevelopmental disability at 2 years' corrected age	
Childhood outcome studies		
hPOD@2YR Follow-up Study	Hypoglycaemia Prevention in newborns with Oral Dextrose	
STRIDER NZAus Childhood Outcome Study	Sildenafil TheRapy In Dismal prognosis Early onset fetal growth Restriction (2-3 years)	
TARGET Follow up Study	Optimal glycaemic targets for women with gestational diabetes: the randomised trial	

It starts with babies: An evening with Dame Jane Harding

This was the latest in a series of public lectures exploring interventions for pregnancy complications and preterm birth. World-leading neonatologist Distinguished Professor Dame Jane Harding spoke about her career and what continues to motivate her to carry out clinical trials research to improve outcomes for newborn babies and their whānau. If you did not have the opportunity to attend this very special talk recently, you can still access the event here.

Save the date Nga Maia National Hui/AGM 2020 - Waikato - 30th Nov-2nd Dec 2020

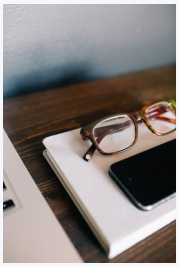
Society for Maternal Fetal Medicine 41st Annual Pregnancy Meeting 2021 - Las Vegas - 25-30 Jan 2021

PSANZ Annual Congress (2020 postponement) Sydney - 10-13 Feb 2021

RANZCOG 2021 ASM Hobart 14-17 Feb 2021

ON TRACK Network Trial Development Workshop - Auckland—25/26 Feb 2021

RANZCOG 2020 NZ Annual Scientific Meeting (2020 postponement) Wellington - 16 - 18 Jun 2021

New Zealand College of Midwives 16th Biennial National Conference - Christchurch - 2-4 Sept 2021

PSNZ 72nd Annual Scientific Meeting 2021 - Rotorua - 2-5 Nov 2021