OTARC Research Theme – Dr Josie Barbaro

It really important to identify autism very early because it has been found that early intervention can actually help children with autism later in life. So that early intervention really does maximise developmental outcomes for children. So it's vital that we identify what the early markers are, what potential biological markers there might be, so that we can implement those during developmental surveillance and identify them very early.

Currently, there are no consistent biological markers for autism so we have had to rely on behavioural manifestations and they can be, you know, subjective, so biological markers actually provide a more objective means of diagnosing autism so it's really important to try and find whether or not there are biological markers of autism so we can pair this with the surveillance of the behavioural markers and then try and use these in combination to identify autism early.

So along with Cheryl Dissanayake we undertook a very large community based study that was a longitudinal study to identify the very early signs of autism. And so what we actually did is we implemented developmental surveillance for the early signs of autism in the maternal and child health system and we monitored over 22,000 infants and toddlers for the early signs of autism, so that we could identify them at the earliest possible opportunity. And we did this over the first two years of life at their routine consultations.

What the social attention and communication study showed us is that developmental surveillance is a more effective way of identifying children with autism than a screening method because currently there are screening tools for autism but they either over-identify children without autism, or they under-identify children with autism. So that screening tools will screen for a child at only one age point but developmental surveillance tracks children's development from birth to two, three years of age and over. So it's really a much more effective way of identifying children with autism.

Over the coming years we do hope to find some more concrete biological markers so that we can use these in combination for behavioural markers and we do hope to try and reduce the age at which we do diagnose autism. So currently using the early markers of autism, we can accurately detect children by about 18 months of age but we would like to try and diagnose autism reliably by 18 months of age and younger so that parents don't have to go through that really stressful process of being hand-balled from one health care professional to another, and not being told what exactly is the issue with their child's development. So it's really important that we make a standardised protocol to identify these children using early behavioural markers and biological markers, and then to implement this important research into the community.