Early Intervention for children with Autism Spectrum Disorder

A rural hub and spokes model and the National Disability Insurance Scheme
Autism Specific Early Learning and Care Centres (ASELCC’s)

Early Intervention within a long day-care setting

- Early Intervention (SCERTS, TEACHH, PECS etc.) based upon specialist multidisciplinary assessments and planning
- Long day care provided in a supportive environment
- Education provided to families, health pros, educators
- Transition support for other services, school
- Research into model and effectiveness of service delivery, family wellbeing and hub and spoke model
- Social and wellbeing support for families (e.g. Social worker, wellbeing assessments)
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FACULTY OF HEALTH
The North West Tasmanian ASELCC
A rural and regional service

Points of difference:
Located in a rural and regional area
Accepts children with ASD like symptoms prior to a diagnosis
Flexible hours (no set hours)
Hub and spoke model
Early Intervention within a long day-care setting (Hub)

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- Research into model and effectiveness of service delivery, family wellbeing and hub and spoke model
- Social and wellbeing support for families (e.g. Social worker, wellbeing assessments)
- Spoke Services
  - Same assessment and intervention planning
  - Local staff trained for implementation
  - Fortnightly visits supplemented with teleconference support
- Transition support for other services, school
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## Barriers to rural service provision

<table>
<thead>
<tr>
<th>Barriers often found in rural areas</th>
<th>Addressed in the hub and spoke model</th>
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<tbody>
<tr>
<td>Access to local services (travel and transport) early intervention</td>
<td>Services provided at the local child care centre</td>
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<td>Inclusive childcare</td>
<td>Staff are training and supported</td>
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<td>Specialist services (rural recruitment issues, integration of care providers)</td>
<td>Hub staff are specialists, trained and supported in the hub service and offer consultative expertise to childcare centres and other service providers</td>
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<td>Flexible services</td>
<td>In part - Families may be offered flexible care according to family capacity and child needs e.g spend time at both hub and spoke if hub accessible, allows parent to take child out at holiday time to spend time with siblings, and not lose place/charged (as opposed to mainstream childcare)</td>
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<td>IT services to provide access to support</td>
<td>Increasing access to better internet connections has enhanced capacity to provide videoconferencing support (e.g. Smithton NBN)</td>
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How effective is an Australian early intervention service within a long day care setting?

Research from other Australian ASELCC’s has found:

- Significant gains in cognitive, verbal/preverbal skills, fine motor and visual-motor imitation, motor skills and social reciprocity as well as receptive and expressive language
- Significant decreases in maladaptive behaviours
- Significant decreases in autism symptoms

(Paynter et al, 2012; Eapen et al, 2013; Fulton et al, 2014)
Effectiveness of an ASELCC in a rural and regional area

Preliminary (in manuscript) outcomes of the NWTas ASELCC have found similar results to other ASELCC’s:

- Statistically significant decreases from baseline to follow up in ASD specific features (SCQ).
- Improvements in areas of language (receptive and expressive), visual reception and fine motor skills (MSEL).
- Improvements in domains of communication and socialisation (VABS).

Hub vs Spoke: Early indications suggest no difference in outcomes between hub vs spokes. However low numbers and possible influence of staff recommending which service might suit the child best.
What parents think:

Qualitative research with parents/carers (in manuscript) found four themes:

1. **Outcomes for child** (Communication, Socialisation, Coping, Preparation for mainstream school)

2. **Outcomes for parents** (Acceptance, Reassurance, Self Worth, Confidence, Less isolation, Hope for the future)

3. **Qualities of the ASELCC** (Non-judgemental, Reliable, Consistent, Understanding, Provide information and education, Extensive expertise, Multi-disciplinary, Flexible, Facilitate integration into community)

4. **Difficulties parenting a child with ASD** (Stigma, Difficulties fitting into mainstream services without support, Travel to access services, Attending multiple specialist appointments, Limits to employment, home duties, leisure, family activities, and self-care, Worry about the future)
# Transition to the National Disability Insurance Scheme

<table>
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<tr>
<th>Intentions of the NDIS</th>
<th>How this hub and spoke model addresses these</th>
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| Flexible service delivery | • Hub vs spoke care offers options for less remote families  
  • Remote families, children and providers receive a level of care through visiting services, phone and video set ups  
  • The input of specialised multi-disciplinary team offers individualised tailored care |
| Early Intervention should: increase functional capacity, reduce the impact of disability, help maintain independence, increase opportunity for social, economic and community participation, utilise evidence based interventions | • Outcomes from other ASELCC’s and preliminary from NWTas indicate that interventions decrease ASD symptoms and increase functionality significantly  
  • Capacity building activities enhance participation  
  • Current federal funding of ASELCC’s ensures the use of evidence based interventions |
| Strengthen informal supports | • Role as a “Centre for excellence” in the region enables community capacity building activities  
  • Support and education provided to families |
| Be cost effective | |
## Transition to the NDIS

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<th>Concerns regarding transition and implementation in rural areas</th>
<th>How this Hub and Spoke model address these</th>
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<tr>
<td>Flexibility and choices for families</td>
<td>Support provided to the local childcare service and tailored to the individual needs of the child to enhance options and accessibility</td>
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<td>Registration difficulties and competency issues for individual practitioners</td>
<td>The “centre of excellence” ensures specialist services and “manages” registration for practitioners</td>
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<td>Protection for clients to ensure quality services</td>
<td>Specialist teams through a Hub model enable this but dependent on funding arrangement</td>
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<td>Financial sustainability in a market driven model in rural areas</td>
<td>Expensive service to operate as a hub. Outreach services are expensive</td>
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<td>Reduced capacity for collaboration in a fee for service environment</td>
<td>Centre of excellence model provides collaboration funding dependent</td>
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Early results from investigations hint that ASELCC’s may have merit as a Centre of Excellence with provision of outreach services in a Hub and Spoke model
Further research is required in order to:

continue to evaluate the effectiveness of this hub and spoke model of early intervention

• with greater numbers

• in regards to whether degree of disability affects effectiveness in hub or spoke

• to examine the mechanisms of supporting mainstream child care centres to provide effective services to children and families, and

• consideration of wider applicability of this model)

Evaluation of cost effectiveness and modelling of service provision is required
The crisis of our time relates not to technical competence, but to a loss of the social and historical perspective, to the disastrous divorce of competence from conscience (Boyer, 1990)
Research Team

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