

10 April 2011

Committee Secretary  
Standing Committee on Health and Ageing  
House of Representatives  
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Dear Committee Secretary

### **Inquiry into Foetal Alcohol Spectrum Disorder**

I am writing to make a brief submission to this Inquiry, to bring to the attention of the Committee the work that The Benevolent Society is undertaking through our Shaping Brains project.

The Benevolent Society, Australia's first charity, is a secular non-profit organisation with over 1,700 staff and volunteers at the forefront of tackling disadvantage and poverty in New South Wales and Queensland. In 2011 we spent \$78m supporting more than 41,000 vulnerable and disadvantaged individuals, families and communities. Our goal is to help people overcome barriers preventing them from participating fully in society, and in so doing, to help create caring and inclusive communities and a just society. Our vision is that every person is healthy, safe, connected and has a meaningful and productive role in their community.

Much of our work is with disadvantaged children and their families during the early years, mostly families with children under eight years. Our services range from universal long day care and preschool, through to more targeted support programs to families where children are at risk of abuse and neglect, to intensive family support where abuse or neglect has already occurred. We also provide out-of-home care for children unable to remain in their home.

The Shaping Brains project is a recent initiative, currently operating as a pilot project in south east Queensland. It is funded through the generosity of The Margaret Pemberton Foundation.

Shaping Brains draws on the latest research into neuroplasticity during early childhood in order to help children overcome learning difficulties and negative early life experiences. I enclose a Research Snapshot that gives an overview of the research behind the project, conducted in 2009/10, and some of the particular neuroscience-based programs involved.

Shaping Brains aims to change the life trajectory of disadvantaged children by:

- strengthening the cognitive, behavioural and emotional skills of disadvantaged and vulnerable children prior to school entry
- assisting children who are experiencing learning difficulties within the school system to overcome these difficulties by developing stronger foundational skills which underlie academic learning; these include attention, good working memory and the skills necessary for fluent reading and mastery of literacy.

As we experiment with different programs, we are identifying those which seem to work best in different environments, and with the resources available. We are currently developing a set of intensive, targeted and mainstream interventions and we can see the potential of programs such as Cogmed, the Changing Brains Playgroup, and MindUP to work with very vulnerable children and families, including children with a foetal alcohol spectrum disorder.

We believe that the Shaping Brains approach has considerable potential to assist children with a foetal alcohol spectrum disorder. While we have not yet fully explored this potential, we give a case study below of successfully using one of the programs, Cogmed, with two boys aged 5 suspected of having foetal alcohol syndrome.

## Case Study

Cogmed is a computer based on-line training program that uses games and activities to increase the working memory skills of pre-school aged children. Children engage with the program for 15 minutes a day, 5 days a week for 5 weeks. A qualified Cogmed Coach provides children with feedback after each daily session. The next day's program is based on performance from the previous day. This ensures children are constantly working at a level of challenge that extends their ability.

### Measurement of change

Working memory capacity is expressed as a 'Training Index' that is calculated continuously as the child performs selected exercises in the training program throughout the training period. Improvement in the child's working memory ('Index Improvement') is calculated by comparing the index that was calculated at the beginning of the training period ('Start Index') with the highest index achieved during the training period ('Max Index').

The average index improvement of children aged 7-17 who complete Cogmed Working Memory Training is 27 units, but the distribution is wide and a normal improvement rate lies between 15 and 39 index units.

It is important to keep in mind that the Training Index is a tool to measure working memory and does not always correspond to the immediate training effects on working memory in daily life.

### An example

In 2011, twin boys aged 5 suspected of having foetal alcohol syndrome completed the initial 25 lessons in Cogmed. They are indigenous children in kinship care who live with their grandmother. They completed the Cogmed lessons at home with their grandmother. The Benevolent Society's coordinator guided her on how to use the program with the boys and monitored their use of program and their progress.

After the 25 lessons the boys had improved by 25 and 26 index points respectively. At our suggestion, the children completed an additional 100 lessons and their training index continued to improve eventually by 30 and 32 index points.

By completing the Cogmed exercises, the capacity of these children's working memory and attention improved and they were able to successfully complete pre-school in 2011.

We would be pleased to provide Committee members with more information about Shaping Brains and its potential to assist children with a foetal alcohol spectrum disorder.

Please do not hesitate to contact us if we can be of assistance.

Yours sincerely

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