



THE UNIVERSITY
OF QUEENSLAND

Triple-P Positive Parenting Program

**Submission for Technology Appraisal
by
the National Institute for Clinical Excellence
and the Social Care Institute for Excellence**

**Prepared by
Parenting and Family Support Centre,
The University of Queensland**

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Contribution of Authors

Dr Karen Turner (The University of Queensland) completed the background and clinical effectiveness summary.

Cathy Mihalopoulos (University of Melbourne) completed the economic analysis.

Majella Murphy-Brennan (Triple P International) reviewed the wider implications of the technology.

Professor Matthew Sanders (The University of Queensland) completed the discussion and conclusion.

Conflict of Interest

The affiliations of the authors of this submission are provided to clarify any potential perceived conflict of interest. While Dr Karen Turner and Professor Matthew Sanders are research academics at The University of Queensland and are also among the authors of Triple P resource publications, their expertise in the content and research evidence for the Triple P – Positive Parenting Program was considered important in compiling this submission. Many other researchers at The University of Queensland have been involved in the evaluation of Triple P interventions and, more recently, independent community trials have been conducted or commenced. Cathy Mihalopoulos was contracted by The University of Queensland to complete the cost effectiveness analysis included in this submission. Majella Murphy-Brennan is the Director of Training at Triple P International, which is licensed by The University of Queensland to publish and disseminate Triple P resources and interventions. Her expertise was drawn on to provide information about Triple P uptake and current commitments for training in the United Kingdom.

Declaration

This submission contains all the relevant evidence in the possession of the Parenting and Family Support Centre at The University of Queensland related to the appraisal of the Triple P – Positive Parenting Program.

Acknowledgments

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Description of proposed service

The service evaluated in this report is the Triple P – Positive Parenting Program a family intervention system designed for the treatment and prevention of conduct disorders in children.

Background

Conduct disorders are among the more enduring childhood and adolescent problems and represent a substantial cost to individuals and communities whereby antisocial behaviour can be considered one of the most costly mental health problems. British research has shown that by 28 years of age, cumulative public services costs for individuals with conduct disorder are 3.5 times higher than for those with less severe behaviour problems, and 10 times higher than for those with no problems. Costs in childhood fall on families, and on health, education and social services, with a significant impact on mental health agencies where conduct problems are most commonly treated.

Numerous reviews have concluded that improving parenting skills is one of the most practical and effective ways of improving the well-being and health status of children, and reducing the incidence of conduct problems. Several recent comprehensive reviews have documented the efficacy of behavioural family intervention (BFI) as an approach to helping children and their families, particularly children with oppositional defiant disorder (ODD) and conduct disorder (CD). Treatment outcome studies often report large effect sizes, with good maintenance of treatment gains. Treatment effects have been shown to generalise to school settings and to various community settings. Furthermore, parents participating in these programmes are generally satisfied consumers. The Triple P – Positive Parenting Program is a particularly innovative example of a BFI that offers these benefits.

Objective

This submission reviews the clinical effectiveness, cost effectiveness, and dissemination implications of Triple P. Clinical effectiveness is evaluated from randomised controlled trials of various levels of Triple P intervention where presenting child behaviour problems meet DSM-IV diagnostic criteria for oppositional defiant disorder or conduct disorder, or are clinically elevated as assessed by standardised assessment measures. Additional research that establishes the efficacy and effectiveness of Triple P in reducing children's conduct problems is also briefly reviewed. An independent economic analysis of cost implications and cost savings associated with the implementation of Triple P is presented. Finally, budgetary and service delivery impacts are assessed by examining current data on adoption rates internationally and within the UK.

Method

Clinical Effectiveness

Five recent randomised controlled trials (RCTs) were examined in detail. The comparator in these trials is typically a no treatment (waitlist) control condition or alternative Triple P interventions with varying levels of intensity or delivery formats. Other non-randomised trials and community implementation evaluations are included in appendices.

Cost Effectiveness

An economic evaluation of Triple P was carried out allowing two questions to be answered. The first is how many cases of conduct disorder need to be averted before the programme pays for itself, and the second assesses the incremental cost-effectiveness of Triple P in terms of number of cases of conduct disorder averted. The comparator condition is no intervention, and a prevalence and incidence approach to economic modelling is undertaken. A limited cost-benefit study is conducted where benefits are simply defined in terms of cost-offsets. No attempt to monetarise other associated benefits of the intervention is made. As an adjunct to this analysis, an incremental cost-effectiveness analysis is also undertaken, where the measurement of effectiveness is number of cases of conduct disorder averted.

Evidence of Effectiveness

Clinical Effectiveness

Study 1 showed that 3 different variants of Triple P (Standard, Self-Directed and Enhanced) were effective in reducing disruptive child behaviour in comparison to a waitlist control group, but that the two practitioner assisted conditions were the most effective. Study 2 showed that Standard and Enhanced Triple P were both effective in reducing disruptive child behaviour and parental depression for clinically depressed parents of children with ODD/CD. Study 3 showed that Standard and Enhanced Triple P were effective in reducing disruptive behaviour and attentional/hyperactive difficulties in a subset of children with conduct problems and elevated ADHD symptomatology. Study 4 showed that Group and an Enhanced Group format of Triple P were effective in reducing child disruptive behaviour for parents at risk for child maltreatment and/or with significant anger management problems. Study 5 showed that Primary Care Triple P delivered by child health nurses in a typical work setting was effective in reducing targeted child behaviour problems.

In summary, the findings show that children with clinically elevated levels of conduct problems were significantly less likely to experience conduct problems after their parents participated in a Triple P intervention than children whose parents did not receive intervention. These reductions were stable and the effects either maintained or improved further over the follow up periods of 6 months to 3 years. Moderate to large effect sizes were reported (Mean $d=0.62$ at post assessment, and 0.88 at follow-up). Of those children who were initially in the clinically elevated range, 53.7% moved to the normal range (56.1% at follow-up) and were considered responders to intervention. Given the complex multi-determined nature of conduct problems, the strength of Triple P in altering children's developmental trajectories is impressive.

Cost Effectiveness

Results are presented in Australian 2002/2003 present values (as well as UK pounds sterling). The costs and benefits of Triple P as well as the costs of conduct disorder were derived from the published literature and supplemented by information from the creators of the programme. Conservative assumptions with respect to costs and benefits have been made. The results of the threshold analysis show that Triple P has the potential to avert at least 26% of cases of conduct disorder. At this level of prevalence reduction, Triple P saves many more resources than it consumes (incidence based costs of Triple P are \$9.6 million (£4.6million) and cost savings are \$40.6 million (£19.5 million). In fact, the programme only begins to incur a positive cost if reduction in prevalence falls to 6%. The incremental cost-effectiveness analysis also shows that the intervention starts to incur large cost-effectiveness ratios when the reduction in prevalence falls to about 3%. Sensitivity testing did not significantly alter any of these results. In order to pay for itself Triple P would only need to avert less than 1.5% of cases of conduct disorder. With greater levels of effectiveness, Triple P becomes dominant in that it costs less than the amount it saves. The current analysis suggests that Triple P has very strong economic credentials for widespread implementation.

Wider Implications of the Technology for the NHS

The Triple P system is designed to maximise efficiency and avoid over-servicing by providing the minimum assistance required to effect change at the earliest point of contact. The multidisciplinary nature of the system aims to promote optimal use of the existing professional workforce in promoting competent parenting and to facilitate a range of opportunities for parents to access support across a variety of settings. A multidisciplinary approach toward training and dissemination of the programme has been adopted, offering professional training in a broad range of disciplines across the health, education and welfare sectors. In addition to psychologists and social workers, Triple P is used widely within the child health and health visitor professions, school-based nursing, teaching, childcare, the voluntary sector, and within both private and hospital based medical practices. Modification of training resources and the translation of some parent resources (e.g., into different languages, Braille, and closed captioning for the hearing impaired) has helped meet the needs of different ethnic and minority groups.

The University of Queensland's technology transfer company UniQuest has granted an exclusive worldwide licence to Triple P International Pty Ltd (TPI) for the development of all Triple P related activities including publishing and training. TPI has been highly successful in meeting all training requests within the UK, while

at the same time servicing the needs of other international clients. It has a long history of managing large overseas training contracts including multiple contracts within the UK.

Discussion

The review of the clinical and economic benefits of the Triple P system of parenting intervention has shown that strengthening the confidence, skills and knowledge of parents is a clinically viable and highly cost effective intervention for the prevention, early intervention and clinical management of children with conduct problems. Several features of Triple P make it a distinctive and particularly useful intervention from an NHS public health perspective. These are:

- The replicability of the main findings in diverse contexts.
- The provision of the minimally sufficient level of support parents require to be effective.
- The provision for considerable clinical flexibility in how the programme is delivered while maintaining the core essential programme elements (different levels of the programme of varying intensity).
- Delivery in a variety of formats, including individual face-to-face, group, telephone-assisted or self-directed programmes, or a combination.
- The provision of parenting support in different contexts that are part of the everyday lives of parents (e.g. primary health care services, mental health services, child care, school and work settings).
- Parent and practitioner materials are accessible and developmentally sensitive to the changing needs and competencies of children as they mature from birth through to adolescence.
- Proven cultural acceptability following successful implementation within various cultural groups including Indigenous Australian, African American, German, Swiss, Austrian, Turkish, Chinese, Vietnamese, Japanese, Arabic, Maori and other Polynesians.

The present analyses of the economic impact of Triple P have necessarily used archival data plus information derived from estimates of current costs of delivering the programme. Research is under way to collect prospective data on costs to enable a more comprehensive economic analysis of Triple P.

Conclusions

- The Triple P model of parenting intervention comprises a flexible, multi-level, evidence-based intervention that is suitable for parents of preadolescent children with conduct problems.
- The majority of children with conduct problems have benefited from their parents' participation in the programme and this benefit has been clinically meaningful.
- In 5 RCTs, over 50% of children in the clinically elevated range prior to intervention had their conduct problem scores normalised at post assessment and at follow up, compared to around 25% of controls.
- Evaluation of implementation in usual practice circumstances supports the effectiveness of Triple P interventions without the need to use other interventions (e.g., drugs, school-based intervention).
- Triple P has the potential to avert at least 26% of cases of conduct disorder making cost savings of \$40.6 million (£19.5 million).
- The programme only begins to incur a positive cost if reduction in prevalence falls to 6%, and the incremental cost-effectiveness analysis also shows that the intervention starts to incur large cost-effectiveness ratios when the reduction in prevalence falls to about 3%.
- Training utilises existing services by up-skilling large numbers of existing staff to adopt a consistent evidence-based approach to working with parents.
- Triple P has high levels of consumer satisfaction, from parents and professionals.
- Triple P is now addressing problems in other groups of children (e.g., children with challenging behaviour and a developmental disability, teenage children with conduct problems).
- Triple P is strongly supported by a programme of ongoing international research and evaluation that contributes to the further refinement of the programme and disseminates findings to trained and accredited providers through a well-established practitioner network.
- The current analysis suggests that Triple P has very strong clinical and economic credentials for widespread implementation, though further research is warranted to validate the economic modelling assumptions.