

## **Addendum to Paediatric Care Policy - Manual Therapy Care For Infants**

**Adopted: March 2019**

*Who provides manual therapy care for infants and what for?*

In Australia and overseas, chiropractors, medical practitioners, osteopaths, physical therapists and other practitioners have used manual therapy as *part of their care* for unsettled, distressed and excessively crying infants. Musculoskeletal disorders, diet, feeding and digestive problems are some issues that may underlie unsettled infant behaviour. Chiropractors most commonly use manual therapy and have conducted much of the research that informs society's understanding of safety and efficacy of manual therapy in infants. It should be noted that the evidence base is sparse at this time and health providers must proceed with a critical mind [1]. Furthermore, infants are unable to express pain in the same way adults do, so instead, measures of unsettledness such as crying time, and sleep time have commonly been used as outcomes rather than infant pain scores such as facial grimace scales (commonly used in Paracetamol trials in infants [2]).

*Is manual therapy safe for infants?*

The risk of reporting an adverse event following manual therapy in healthy unsettled infants is low. In a recent analysis of data from 1308 infants exposed to manual therapy, zero serious adverse events and seven non-serious adverse events were reported [3]. Infants not exposed to manual therapy also experienced minor adverse events. The rate of non-serious adverse events was 7 per 1000 infants exposed to manual therapy and 110 per 1000 infants not exposed to manual therapy. Case reports of serious adverse events are exceedingly rare [4]. A recent review found since the 1960s in total fifteen cases of serious adverse events have been reported in the health literature; providers linked to major adverse events were chiropractors (7), medical doctor (1), osteopaths (2), physical therapists (2) and others (3). Underlying and unidentified pre-existing pathology was identified in 8 of the 15 cases. This level of risk associated with manual therapy warrants registration for service providers, but not knee-jerk reactions, hyperbole or interprofessional calls for scope of practice restriction.

*Is manual therapy for infants effective and what is the level of evidence?*

A recent study assessed the effectiveness of manual therapy interventions for healthy but unsettled, distressed and excessively crying infants [3]. In a meta-analysis that included 4 randomised controlled trials (all at low risk of bias), infants in the manual therapy interventions group had a greater reduction in crying time when compared to control groups. The size of the difference was 1.27 hours per day (95% CI 2.19 to 0.36) in favour of the manual therapy groups. This was considered by the review authors to be only a small-effect size; however, its meaningfulness to parents remains unclear. Other study outcomes in the review could not be synthesised due to methodological differences or shortcomings, these were changes in sleep (inconclusive), parent-child relations (inconclusive) and global improvement (no effects).

The authors found moderate strength evidence. This means “available evidence from at least one higher quality RCT or two or more lower quality RCTs but constrained by: number, size, quality, inconsistency in findings and limited generalisability to clinical practice. The conclusions are likely to be affected by future studies.”

*How much force is used in manual therapy techniques for infants and children?*

Chiropractors have studied the forces associated with manual therapy techniques. For infant and child safety, adaptations to maximum loading and technique are recommended [5]. Recommendations for manual therapy state: for infants <3-months forces should not exceed 20N, for infants >3-months and <23-months forces should not exceed 50N. A recent review found chiropractors treating infants typically modify techniques so that force and speed is suited to the age and development of the child [6]. When modified and applied by chiropractors or other manual therapists, spinal manipulation techniques (SMT) such as ‘touch and hold’ and ‘spinal mobilisation’ techniques (i.e. those applied by hand) are reported to fall within these recommended force limits for infant and child safety.

## References

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