



research

## Usage of complementary medicine among children

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**OBJECTIVE** To determine the prevalence of and parental attitudes toward the usage of complementary medicine among the paediatric population of a large regional public hospital in Victoria. Relationships between complementary medicine usage and sociological or medical data of the surveyed families are explored.

**DESIGN** One hundred and twenty surveys were handed out and returned from parents of nonsurgical inpatients of the children's ward of the Bendigo Base Hospital. Survey data was supplemented by information available from the hospital medical record.

**RESULTS** Thirty-three percent of respondents indicated they used complementary medicine for their inpatient child, and 41% for at least one of their children. Vitamins were more popular and acupuncture less popular than complementary medicine modalities used by their parents. Complementary medicine use was not correlated with: the patient's age; presenting complaint; duration of inpatient stay; or number of previous admissions. Families with children using complementary medicine were more likely to have skilled or professional parents who also used complementary medicine. There was a correlation between children using complementary medicine and inadequate vaccination.

**CONCLUSION** A significant proportion of children are exposed to complementary medicine. Parent, rather than child, characteristics were most strongly correlated with complementary usage.

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The use of complementary medicine is known to be widespread in Australia among people 15 years and older.<sup>1</sup> This study aimed to determine the prevalence of usage of various complementary medicine modalities among the paediatric inpatient population of a large regional public hospital (Bendigo), and explore why complementary medicine was used.

### Method

Questionnaires were issued by one of the researchers to parents, usually the mother, of paediatric nonsurgical inpatients in the children's ward of the Bendigo Base Hospital during two and a half months in late 1999 and early 2000. Children with overnight admissions, whose parents were not available when the researcher was free to distribute forms and those admitted to the special

care nursery (less than two months old), were not offered a survey.

The structured questionnaire asked open ended questions about patient and parent characteristics and closed ended, multiple option questions about alternative medicine use. When closed ended questions were asked, space was given under 'other' for the parent to provide an open ended response. Except for three cases the parents filled in the survey unsupervised. The survey enquired about:

- biofeedback
- hypnosis
- imagery
- relaxation
- diet
- vitamins
- bioelectromagnetics
- acupuncture/moxibustion
- herbs

- naturopathy
- homeopathy
- chiropractic
- massage
- therapeutic touch, and
- Reiki.<sup>2</sup>

The parents who used complementary medicine for their children were asked why they chose complementary medicine, what conditions they were treating, whether they discussed complementary medicine usage with their doctor and how effective they thought complementary medicine was. The information provided via the survey was supplemented by information recorded in the hospital admission notes and previous admissions.

Data were analysed by R/Linux. Proportions were compared using the Chi-squared test with one degree of freedom, or Fisher's exact test if an

**Table 1. Frequency of complementary medicine use**

Alternative medicine modality	n (%)		
	Index patient	All children in family	Parents
Massage	20 (17)	24 (20)	48 (30)
Chiropractic/physical therapy/reflexology	14 (12)	21 (18)	38 (32)
Vitamins (prescribed)	11 (9)	14 (12)	19 (16)
Aromatherapy	10 (8)	12 (10)	33 (28)
Herbal medicine	9 (8)	14 (12)	25 (21)
Relaxation/meditation/yoga/hypnosis	3 (3)	5 (4)	26 (22)
Naturopathy	3 (3)	3 (3)	5 (4)
Biofield/therapeutic touch	3 (3)	3 (3)	5 (4)
Homeopathy	1	1	2
Other (barley green, spiritual)	1	1	2
Acupuncture	0	0	10 (8)
None	80 (67)	71 (59)	32 (27)

**Table 2. Conditions for which 44 parents used complementary medicine**

Conditions treated	n (%)
General health (nonspecific)	19 (43)
Allergy	16 (36)
Skin disorder	15 (34)
Musculoskeletal	11 (25)
Behaviour	10 (23)
Gastrointestinal	7 (16)
Respiratory	7 (16)
Ear/nose/throat	5 (11)
Other	5 (11)
- colic	2
- cerebral palsy (coordination)	1
- cancer	1
- pregnancy (of the mother)	1

**Table 3. Complementary medicine practitioners consulted by 48 parents**

Practitioners consulted	n (%)
Naturopath	22 (46)
Chiropractor	14 (29)
Herbalist	5 (10)
Aromatherapist	4 (8)
Homeopath	3 (6)
Reflexologist	2 (4)
Acupuncturist, iridologist, osteopath	1 each
Others	7 (15)
- masseur	3 (6)
- physiotherapist, Reiki, tactile therapist, Bowen therapist	1 each
None	10 (21)

Bendigo Hospital does not offer complementary therapies.

## Results

Out of 136 potential survey participants, 120 surveys were returned. Fifty-five of the patients were girls. The median age was three years. Most children had been admitted with gastroenteritis, lower respiratory tract infections (including bronchiolitis) or asthma.

### Patient complementary medicine usage

Thirty-three per cent (95% CI 0.25-0.42) of children in hospital had used complementary medicine (Table 1). The proportion was greater for other children, or the adults in the family. The relative popularity of each modality was similar between adults and children, except for vitamins and acupuncture. Twenty-three of the 40 patients who had used complementary medicine had used more than one modality. More patients who had a reported past history before admission of headaches or convulsions were complementary medicine users (7 of 8) ( $p=0.002$ ,  $OR=16.4$ ). Otherwise, both presenting diagnoses and previous diagnoses were not significantly associated with altered complementary medicine use.

The proportion of male and female patients who had used complementary medicine was similar ( $p=0.80$ ), as was the median age ( $p=0.29$ ), median duration of stay ( $p=0.36$ ) and number of previous admissions to the Bendigo Base Hospital.

### Complementary medicine usage by all children in a family

Usage of complementary medicine by a family's children was more common among children who had at least one parent with a skilled/tertiary/managerial occupation (31 of 60) than those without (16 of 57) ( $p=0.009$ ,  $OR=2.7$ ) and more common in families whose parents used complementary medicine (43 of 88) than those who did not (6 of 32) ( $p=0.003$ ,  $OR=4.1$ ). The mean

expected value was less than 5. Non-normally distributed values were compared using a Mann-Whitney U test; normally distributed values were compared using the *t*-test.

Bendigo is a large regional town in central Victoria with a predominantly Caucasian population. In 1996 the city of

Greater Bendigo had a population of 81 338 and a median weekly household income of AU\$500-699.<sup>3</sup> Greater Bendigo, per head of population, has a number and range of alternative medical practitioners that is comparable to a local government area with similar median income in suburban Melbourne.<sup>4</sup>

age of parents whose children used complementary medicine (33.1 years) was slightly more than those of children who did not (30.5 years) ( $p=0.007$ ). Children who used complementary medicine were less likely to be vaccinated appropriately for age ( $p<0.05$ ,  $OR=4.2$ ).

### Reasons complementary medicines were used

Parents used complementary medicine to treat a wide range of conditions in their children (Table 2). The most common reasons were:

- because conventional medicine was not effective enough (46%)
- complementary medicine was more natural (29%) and
- conventional medicine had too many side effects (21%).

The most common information sources were friends (82%), pharmacists (23%) and health food stores (14%).

Few (3 of 42) parents reported complementary medicine ineffective or harmful; more (18 of 42) had experienced complementary medicine to be very or totally effective. Most respondents (26 of 33) thought complementary medicine was as effective, or better than conventional medicine.

### Discussion with doctors and other health professionals

Many parents who had used complementary medicine for their children had consulted naturopaths, chiropractors, or no complementary medicine practitioners at all (Table 3).

Fifteen out of 42 parents (37%) had discussed the use of complementary medicine with one or more doctor(s). Eleven reported that the doctor had either suggested or been supportive of complementary medicine usage. Of the 27 who did not discuss the use of complementary medicine with a doctor, 20 thought the issue was irrelevant. Eight were afraid the doctor would be mocking or offended.

## Discussion

### Study limitations

The survey was conducted in a paediatric inpatient ward, and thus may not reflect a general practice population. However, most of the surveyed inpatients were admitted with acute illnesses which are also a common cause of paediatric presentations to general practice. Also, the prevalence of complementary medicine

usage among siblings of admitted patients in two child families (33%) was similar to the usage prevalence found for inpatients.

We found a similar prevalence to a New Zealand children's hospital study (29%),<sup>5</sup> more than one in Canada<sup>6</sup> but less than a study among older children with chronic illnesses.<sup>7</sup> We also found acupuncture is less popular with children, compared to adults.<sup>8</sup> Parents anxious about the health of their child are more



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likely to seek additional forms of treatment,<sup>9</sup> as we found with children with a previous history of convulsions or headaches. Parental factors were more important than child factors in predicting complementary medicine use.

We found complementary medicine being used to treat a very diverse range of conditions, including general health. Another study (among adults) showed use mainly for musculoskeletal condi-

tions.<sup>10</sup> Naturopaths and manual healing therapists were the most frequently consulted alternative medicine practitioners, followed by herbalists, similar to the findings of the National Health Survey.<sup>11</sup> Many had not consulted any complementary medicine practitioners.<sup>12</sup>

Most parents had not discussed the use of complementary medicine with their doctor, confirming other data in adults<sup>2,8</sup> and despite widespread acceptance of

complementary medicine by some Australian general practitioners.<sup>13</sup>

Lower vaccination rates among families using complementary medicine might represent the use of complementary medicine instead of conventional medicine, even though there is little primary reliance on complementary medicine.<sup>14</sup>

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