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What Information Should the Multiple Birth Family Receive Before, During and After the Birth?

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Abstract. Advances in the management of the multiple pregnancy and delivery must be accompanied by corresponding improvements in service access outside key centres and especially in the information families receive about what may happen during or after the pregnancy. A major review of birthing services in Victoria has focussed attention on four areas where the quality of information is often inadequate. 1) Prepregnancy and the standard of counselling about the incidence of multiples as a result of fertility drugs and in vitro fertilization procedures and about problems which may accompany a multiple birth. 2) Antenatal: At what stage of the pregnancy should parents be told of the multiple pregnancy and how should monitoring of the mother and procedures such as bedrest take into account what are often conflicting demands within the family? 3) Perinatal: Families are frequently illprepared for a cesarean delivery and for the procedures for premature multiples. The problem is often compounded by separation of the mother from one or both twins. While bereavement services are improving, much still needs to be learned about handling congenital abnormalities in one or more multiples. 4) Postnatal: Irrespective of the level of prenatal advice, families greatly underestimate the workload with multiples. The resulting stress contributes to the incidence of postnatal depression, child abuse and divorce now being reported from multiple birth families. Some suggestions are made from social psychology and genetic counselling about how families can best handle risk information to achieve the goal of neither under- nor overestimating the risks at these different stages of the multiple pregnancy.

Key words: Information, Multiple birth family, Family counselling

INTRODUCTION

> *"The Council has always emphasised the increased risks that result from multiple pregnancy, and our findings suggest that there has been no improvement in the end results over the last few years. Earnest consideration will have to be given to the best way of managing multiple pregnancy to achieve a more favourable outcome".*
> Victoria Consultative Council on Obstetric and Paediatric Mortality and Morbidity Annual Report, 1986.

The incidence of multiple births in Victoria declined until about 1980, but has since been rising with the more widespread use of fertility drugs and in vitro fertilization (IVF) procedures and with many career women delaying their families until they are at high risk for fraternal twins. Currently, one birth in 90 results in twins or higher multiples. While there is much current research effort to improve the medical management of the multiple pregnancy, there are key questions regarding how many women have access to the most appropriate services and how much help they have in understanding what is happening and what may happen. That is, how do families cope with the stresses which may result from the higher risks of complications during a multiple pregnancy and delivery and from the greater workload once the twins are home?

This paper draws upon the combined knowledge of the parents' organisation, the Australian Multiple Birth Association (AMBA) which has extensive experience in the education of families before and after the birth and of the LaTrobe Twin Study which has been following the development of Victorian twins over the last 12 years [12,13,24]. The emphasis will be on twins and not on higher multiples for two reasons. Firstly, triplets and quads are much rarer and often have such diverse outcomes particularly in terms of prematurity and birth complications that in our experience it is difficult to make any generalisations. Secondly, the nationwide survey by the British Department of Health (DHSS) of almost all recent higher multiples will produce a much larger body of data than could ever be obtained in Australia. By concentrating just on twins, we deal with a group whose problems are generally much less, but where their sheer incidence in the population makes the combination of lesser problems in more individuals a major health issue.

The catalyst for examining what services are needed came from two developments in Victoria. Couples entering IVF programs in this state are now required to receive compulsory counselling about the procedures and the likely eventualities, which for 20% of the successful couples is a multiple pregnancy. How should they be counselled to prepare for the multiples and the additional workload? On a broader perspective, in 1987 Australia created a national advocacy organisation, Maternity Alliance, based around some 40 self-help groups. The submission AMBA prepared for their Victorian Birthing Review targetted four areas. Apart from the expected antenatal, perinatal and postnatal needs, there was also an emphasis on prepregnancy and the standard of counselling about multiples in relation to maternal age [2] and not just fertility drugs and IVF procedures. The impact of multiples on

lifestyle and career options is an issue that has rarely been explored with couples. Cutting across these four areas in the issue of improved training of medical and other staff so that accurate information is given sensitively, while ensuring that families are neither under- nor overestimating the risks before, during or after the birth.

This paper summarises some of the information collected on the psychological needs of families at these stages. As discussed previously [13], it is important to consider not just the immediate consequences of such events as one twin being kept in hospital after the other [17], but also the long-term implications of such events and how they influence perceptions of the children throughout their development. One difficulty has been that so much of the information is little more than anecdotal such as the advice for families who have lost one twin [3]. Of particular relevance here is the empirical work on the perceptions of what are likely to be the major stressors [14] on the experiences of the couple following the birth [13], on the effects on the older child [18] and, as discussed below, the impact of family stresses on perceptions of the twins.

The ultimate goal must be to have a set of guidelines for behavioural intervention, analogous to those proposed for the specific obstetric management of the multiple pregnancy [25]. Just as for the obstetric guidelines, there is the important proviso described in Crawford [6] that the diversity of situations is such that a rigid set of recommendations may be inappropriate.

The one program which has concerned the needs of the family is that in Paris, which involves an extensive policy of maternity leave and at least partial bedrest, as well as frequent support from midwives in a psychological rather than just a paramedical role [26,31]. While this program is expensive both in terms of care as well as lost income, it is much more cost effective than the extra perinatal support and the financial impact of permanently disabled twins which would have resulted without this support. But such a program is confined to the last trimester and there is surprisingly little information on what to do earlier in pregnancy, far less before conception when multiples are one of the issues to be considered in the growing area of prepregnancy counselling [4].

The limited information available on postnatal intervention is summarised in Showers and McCleery [30], while some of the practical implications are discussed from the experiences of the Californian Twinline program in Malmstrom et al [22]. Of special importance is the emotional stress on the family [10] and the related high incidence of child abuse in multiple birth families, often directed to the older sibling rather than to the twins [11]. Similarly, in Victoria, the child abuse program has found it necessary to record whether the family has multiples, emphasising the point that the multiple birth family is as much a high-risk situation as those groups normally considered in this category [15].

THE PREPREGNANCY AND ANTENATAL PERIODS

These two periods are combined because they share a common problem: how to

give those at risk of twins or diagnosed as expecting twins a realistic awareness of potential medical and social complications? A survey of 262 mothers [14] indicated that, while many were concerned about the extra work that multiples would bring (41.2% of the sample) and about potential problems with the health status of the twins (39.2%), there were 22.9% not worried at all about the work and 28.8% similarly not concerned about the twins' health. Given the higher rates of toxemia and other complications of pregnancy [2] and the fact that in Victoria 30-40% of multiples will be delivered by cesarean would suggest such optimism should be tempered. The benefits have been well demonstrated in a multiple pregnancy [26,31] of routine and regular screening particularly in the third trimester for toxemia (especially in the primiparous mother), for polyhydramnios and for fetal growth retardation, especially where there is the possibility of arteriovenous anastomoses in monochorionic MZ twins. At the same time, some reduction of activity [26,31] and training to recognise the first signs of labour [22] can help to prolong the pregnancy.

Handling the presentation of such information and the accompanying procedures need not cause additional concern to the prospective parents. To draw an analogy with amniocentesis and alpha-fetoprotein screening [23], such testing can initially raise anxiety but is associated subsequently with a lower anxiety and a more positive attitude towards the pregnancy and the fetus. On the other hand, bedrest in hospital or even at home was reported by 62% of the mothers who had it as a stressful experience: despite feeling healthy, they were prohibited from participating in normal activities. While the ongoing randomised control trials are demonstrating that routine bedrest is of little benefit to mothers expecting multiples when the pregnancy is uneventful, a group of mothers will remain where this procedure is essential to prolong the pregnancy. The value of bedrest vs some less severe diminution of activity [26,31] must be considered in the light of family as well as medical contraints.

The clearest example of such conflicting demands arises where there is an older sibling. Depression in the last trimester was reported by 30% of those LaTrobe Twin Study mothers who already had a child, compared with 6% of those where it was the first pregnancy. The disruption to older children resulting from the birth of twins and the extra demands they place upon the family has recently been examined in families matched for the arrival of twins or singletons [18]. On the parental form of the Connor's Rating Scales and using a score two standard deviations from the mean to define a problem child, difficulties were three time as common among families with newborn twins as with singletons. Such problems do not go away. The study was replicated with families where the subsequent child or children were now 3-4 years of age and here problems were six times as common in the older sibling of twins than of singletons.

Such results are important for two reasons. Firstly, it is clear that preparation of the older children for the disruption twins can bring to their life must begin before the twins arrive, when there is still time to spend with the singletons. Bedrest reduces the opportunities for this. Secondly, few mothers anticipate the effects on the older child. Of the 262 LaTrobe Twin Study mothers first surveyed, only

31.2% of those with an older child were concerned during the pregnancy that the twins may be a strain on this child. Yet, 63.8% of all the mothers [14] reported experiencing significant problems with the older child.

It is not only the effects on the older child that mothers fail to anticipate. Only 13.5% were concerned during pregnancy about the emotional stress twins may place upon their relationship with their partner. Yet, 91% of them were unable to get out alone as a couple during the first three months which is a crude index of the lack of "quality" time together. The effects of a multiple birth on the relationship is explored further below.

The most contentious area of advice in the prenatal period must concern the potential loss of one or both twins at birth [8] or through such problems as Sudden Infant Death Syndrome [9]. At a time when perinatal and infant death are no longer the routine part of life they were a century ago, the question is whether there is anything to be gained from even raising such issues with families and increasing their expectations that the same may happen to them. On the other hand, if couples expecting twins are attending a multiple birth group, they may well encounter families who have experienced loss, making it appropriate to give some accurate and recent information on just what the risks may be.

The "vanishing twin" syndrome [2] is a particular aspect of this issue where the risk of loss of one twin is so high that it must be discussed with couples whose twins are diagnosed in the first trimester. AMBA goes further and prefers couples not to be involved in its activities until at least 16 weeks gestation. Both telling and withholding information from couples at early diagnosis have merits. In communities where routine ultrasound screening is practiced, one way round the problem would be to delay this until at least 16 weeks. This would leave more resources for more adequate counselling of those couples where earlier ultrasound was indicated.

PERINATAL NEEDS

A clear controversy exists between the current emphasis on choice in childbearing [21] and the complications which may ensue in a multiple delivery [3]. The two most likely interventions are a cesarean delivery for one or both of the twins and some of the consequences of prematurity, such as time in neonatal intensive care. Preparation of families for multiples must include some discussion of these possibilities and not just so that they are aware of what medical procedures may be involved.

It is becoming obvious that psychological intervention for the adults at the time of these procedures has major implications for the long-term outcome of the children, as well as for the couple. Thus, a major survey [7] has confirmed the relation of cesarean section to maternal depression and mother-infant interaction, and has extended the effects to the relationship between the partners. So much is mediated through parental perceptions that remediation must focus on the parents as well as on improving the status of high-risk infants. In the Vermont program [28] for premature singletons (deliberately excluding multiples), the development of the

child and its relation to the mother is explored in a structured series of meetings over the first few months and appears to be remarkably successful in improving the long-term prognosis for the children.

The question remains whether the same can be done for multiples and whether the longterm outcome will be as positive. While the conventional view has been that the speech and language delays common in twins are a consequence of their specific social environment [16], more recent work [19] is identifying closely related problems in fine motor coordination which are more difficult to explain on anything other than a biological basis and which are indeed best predicted in a multiple regression by birth stresses and prematurity (manuscript in preparation). The ability to keep alive ever more premature and sometimes disabled twins raises many issues [1], including the impact of a long-term disabled twin on the behavioural development of a healthier cotwin. There is currently a lack of twin-specific data on the long-term behavioural and neurological prognosis for such premature twins with which to provide parents with accurate information.

THE POSTNATAL PERIOD

The one thing which characterises mothers who cope well in that first hectic year after the arrival of twins is that they have a good and secure relationship with their partner. Much recent research has indicated the arrival of children decreases marital satisfaction, especially where there are fewer/more children than desired/expected, as would generally be the case with multiples. Not everyone has problems and it is those who had difficulties earlier in their relationship who are most likely to have serious problems after the children arrive [20].

Models of how the events accompanying a multiple birth can impinge upon the perceptions of the children and upon the dynamics of the family are provided in Hay and O'Brien [13] and O'Brien and Hay [24], respectively. In the only really detailed study of mothers after the birth of multiples, Goshen-Gottstein [10] made this sobering comment about the Israeli mothers with whom she worked "To some extent she must fail. It is impossible for one mother to meet two or more infants' needs at once". Others have gone further [30] and claimed that the current emphasis on individuality for multiples puts even more pressure on parents-as the parents try to meet the demands of multiples with different schedules, different demands and different levels of development, their limited resources can get stretched to breaking point or beyond. No one knows, as yet, if the extra demands of multiples are just more disruptive or are really more destructive to their parents and one current research project at LaTrobe on separated/divorced mothers of twins and singletons is identifying whether having twins can generally make a significant contribution to marital breakdown.

Our most extensive work on the effects of twins on the mother grew out of the observation [4] of the very high rates of anxiety and depression reported by mothers when comparing their experiences of a singleton and a multiple birth. That they felt much more frantic, exhausted, etc, after the multiples was not surprising, but

it was not anticipated that 42.6% would report high anxiety (three times the rate after singletons) and 29.7% extreme depression (five times the rate after singletons). To examine perinatal psychological status in more detail, four groups of ten women (expecting singletons or twins, or having had singletons or twins in the last threee months) were compared on the Middlesex Health Questionnaire (MHQ) and on various measures of memory and spatial ability where mothers of newborns frequently indicate they feel their abilities are affected. The mothers of twins had the most extreme scores on the Anxiety and Depression scales of the MHQ: five of the ten mothers of newborn twins had anxiety scores of 8 or more which is above the mean of the psychiatric outpatients studied in developing the MHQ. The mothers with such high scores could be predicted from the disruption which the birth had brought to the family. A checklist of such common problems as financial concerns, marital problems, lack of space in the house, the need for a larger car to carry twin bassinets, etc, correlated +0.41 with the MHQ anxiety score and +0.44 with the depression score. It even correlated −0.57 with a subjective memory scale, indicating that mothers who had experienced more extreme disruption felt their memory was particularly affected after the childbirth. A similar pattern emerged in mothers of singletons, except that far fewer had experienced such disruption. The key distinction is not simply whether the couple have had twins or singletons but rather the effects of the children on the household, with effects generally being much greater with twins.

To focus more specifically on postnatal depression, a comparison was made between 20 mothers of twins and 20 mothers of singletons 6-12 weeks after delivery. The main measures were the 12-item General Health Questionnaire (GHQ) and the Edinburgh Postnatal Depression Inventory [5] which correlated highly ($r = 0.70$, $df = 38$, $p < 0.001$). Mothers of twins had significantly higher GHQ scores ($t = 2.04$, $df = 39$, $p < 0.05$) and these scores were predicted predominantly by whether the children came home from hospital at the same time as the mother ($r = +0.40$, $p < 0.05$). A second set of measures, more generally related to the mother's attitude towards the birth, predicted the Postnatal Depression score even more highly ($r = +0.51$, $p < 0.01$).

But such effects are fairly immediate after the birth and the question arises of whether they have longer-term effects on the children and how they are perceived. Table 1 compares 41 sets of twins with the normative data from the Australian Temperament Study [27]. These are maternal reports on the children using the Australian version of the Toddler Temperament Scale. Significantly more older twins than singletons ($\chi^2_3 = 9.10$, $p < 0.005$) were classed as difficult, in terms of being more withdrawn, less adaptable, more intense in their reactions and more negative in their mood. But which twins are rated as difficult may have less to do with their temperament and the customary influences upon it and more to do with the rater and their feelings.

The first part of Table 2 lists nine questions from one of the LaTrobe Twin Study questionnaires. (For clarity, they are all altered here to be in the negative form, whereas in the questionnaire they are five-point Likert scales, some presented positive to negative and others the reverse). It is obvious that many mothers are

Table 1 - Distribution of twin and singleton toddlers by temperament categories

	Temperament categories							
	Intermediate		Easy		Difficult		Slow-to-warm-up	
	N	%	N	%	N	%	N	%
Twins								
Young (N = 50)	22	44	16	32	8	16	4	8
Old (N = 32)	16	50	5	15.6	10	31.2	1	3.1
Singletons								
Young (N = 135)	66	48.9	48	35.6	14	10.4	7	5.2
Old (N = 262)	114	43.5	99	37.8	30	11.5	19	7.3

The singleton data are from the Australian Temperament Study [27]. "Young" refers to children aged 12-23 months and "old" to those aged 24-39 months.

Table 2 - Maternal attitudes and the temperament of their twins

(a) List of negative attitudes[a]

1. I am unhappy about having twins (9.8%)
2. The twins have put great stress on our marriage (37.5%)
3. Having twins is "double trouble" (20%)
4. The twins have restricted our activities (17.1%)
5. The twins are a physical burden (46.3%)
6. The twins are an emotional strain (34.4%)
7. The twins are a great financial burden (22.0%)
8. I would not want my own children to have twins (24.4%)
9. I cannot manage to give each twin individual attention (19.5%)

(b) Relation between temperament categories and maternal attitudes

No. of families	Temperament categories of each twin[b]	No. of negative attitudes	
		Mean	SD
3	D-D	3.6	0.58
9	D-I	3.4	2.8
1	D-S	5.0	—
2	D-E	1.5	0.71
6	I-I	3.0	2.5
13	I-E	1.4	1.2
4	I-S	1.5	0.58
3	E-E	0.66	1.1

[a] In parentheses is the percentage of the 41 mothers of twins whose attitute was neither neutral nor positive to that item.

[b] D = difficult; I = intermediate; E = easy; S = slow-to-warm-up

concerned about the stress on their marriage and about the physical and emotional burden of the children. The lower part of the Table indicates that the mothers with more negative attitudes about the twins were more likely to rate one or both twins as

difficult. The children were rated at the same time by an independent psychologist on the Infant Behavior Record from the Bayley Scales of Infant Development and these only showed a modest ($r = +0.25$) correlation with the mothers' ratings. Thus, the relation in the Table of negative attitudes and negative temperament ratings is not necessarily because the twins are really so difficult and cause stress to the other family members, but rather that where they are seen to cause stress, they are rated as difficult.

CONCLUSIONS

The most consistent conclusion from this survey of work with families before and aften the birth of twins is that they are ill-prepared in the prenatal period when they often do not have realistic expectations of how the birth of twins will affect the family. The couple, any older siblings and the twins themselves would all benefit from more preparation at this time, the one opportunity there is for advance planning. With its video "More than One" and its literature, AMBA has tried to alert prospective couples to what having twins involves. Other organisations such as Twinline [22] have gone further, helping couples to prepare a broader network of friends, relatives and those support agencies with whom they could and should be involved. A particular issue in Australia is the provision of home help which is being increasingly directed away from families with children to geriatric care, to the extent that services for the family with new born multiples are much less readily available than they were a decade ago.

But the incentive for such advance preparation is often not there in that couples underestimate the effect the twins will have on their life. There is much experience in social psychology and in genetic counselling of how people choose to hear what they want in information they are given. Phenomena such as denial, rationalisation and mishearing the message are all common and translate directly to the twin situation. One obvious example would be after early diagnosis where the couple only hear they are expecting twins and not the caveats about the risk of fetal loss. It is useful to conceptualise the whole situation as one of the role transitions which accompany the change to parenthood [20]. So many of the models of marital stability and the likelihood of divorce have factors such as the ease of role transition, psychological health, expectations of parenthood, conditions of birth and parental satisfaction which may differ negatively between the twin and singleton situations. The difficulty is in getting across to couples the way in which changes may occur across a whole range of dimensions, many of which they may not have anticipated.

It is such typical reactions that give some clue as to the success of the Paris program [26,31]. Regular visits by a professional to the home allow the reinforcing of messages in way impossible with the more usual involvement in multiple birth support groups or even the Twin Clinics now being established especially in the UK. Apart from the cost of such a home visiting program, even the other more basic services are often restricted by financial or geographical reasons, especially in countries the size of Australia. Implementation of the most basic information

services outside major centres remain a problem though videos such as AMBA's "More than One" help in this respect.

No one would deny couples the joy which twins can bring. But the paradox is that, for this to happen, they must be made more aware of the less positive aspects and plan ahead accordingly. The message which they get must not only be realistic, but must also be consistent across services providers which means better education for the many professionals a couple with multiples will encounter. Changing the long-held views of some professionals about the management of a multiple pregnancy and delivery may be even more difficult than helping the couple develop their expectations.

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