

which the infant environment is an important determinant of adult disease, even if our data generate rather than test a hypothesis and need to be confirmed by further research.

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## Labour and birth in water in England and Wales

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In 1992 the House of Commons Health Committee's report on the maternity services recommended that all hospitals should provide women with "the option of a birthing pool where this is practicable."<sup>1</sup> The lack of relevant research on labour and birth in water<sup>2</sup> prompted the Department of Health to fund this survey.

### Methods and results

All 219 identified heads of midwifery, or equivalent, in NHS provider units in England and Wales were sent a short postal questionnaire in October 1993. All questionnaires were returned, and telephone interviews were subsequently carried out with a nominated respondent from each provider unit. Three units were omitted in error as a result of the difficulty of identifying these units at a time of organisational change in the NHS.

Labour or birth in water, or both, had occurred in all provider units (in hospital and community practice) at some time, either in purpose made birthing pools (195;89%) or in conventional baths. Most units could provide figures (table) for the numbers of women labouring or giving birth in water from records (54% of the units which used birthing pools) or "good estimates"—figures taken from records, although the records were known not to be complete (37% of the 93 units which provided hospital pools). These sources yielded a total of 8255 women who had laboured in a birthing pool but got out for birth, and 4494 women who gave birth in water, in 1992 and 1993. Rough estimates were not included in this total. Women who laboured but did not give birth in conventional baths were not included in the figures for labour only, as so much of this use was informal and unrecorded. Births in conventional baths were included.

Only 17 provider units reported carrying out 50 or

more births in water in 1993, with only four reporting 100 or more. A total of 179 units reported fewer than 20 births in water in 1993.

We asked about problems that had occurred when women had laboured or given birth in water, irrespective of whether or not water was thought to have contributed to the outcome. Because of the retrospective nature of this survey, these data should be treated with caution. Twelve babies who died after their mothers laboured or gave birth in water, or both, in 1992 and 1993 were reported. None of these cases was reported to be directly related to labour or birth in water. There were 51 reports of morbidity in babies, including respiratory problems and infections. Thirty three women experienced serious problems, including postpartum haemorrhage and severe perineal trauma. In seven cases, staff were reported to have suffered back problems.

A total of 168 respondents indicated that they would be interested in participating in a randomised controlled trial of labour and birth in water.

### Comment

Although labour and birth in water is widely available throughout the NHS, the number of births in water in each provider unit was generally low, so the experience of most health professionals providing this form of care is likely to be limited. None of the 12 stillbirths and neonatal deaths reported after labour or birth in water was directly attributed by respondents to the use of water, although the retrospective nature of this survey limits interpretation of these data. We are collaborating with other researchers to monitor adverse outcomes in babies through the British Paediatric Association Surveillance Unit.

Information about labour and birth in water (including the use of conventional baths) should be collected routinely as part of local audit. The development of a national data set, perhaps as part of the maternity hospital episode system, would add considerably to this process.

There is no evidence from this survey to suggest that labour and birth in water should not continue to be offered as an option to women in England and Wales. Questions remain, however, about the possible benefits and hazards, the conditions of clinical practice, and resource use. A randomised controlled trial could address some of these issues.

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Numbers of women reported to have laboured in a birthing pool and reported to have given birth in water, 1992-3, by quality of the data source

Quality of data source	1992	1993	Total
Labour in birthing pool (getting out for birth):			
Audit or written records	962	2025	2987
Good estimates	2297	2971	5268
Rough estimates	792	806	1598
Giving birth in water (including conventional baths):			
Audit or written records	994	1846	2840
Good estimates	711	943	1654
Rough estimates	103	96	199