GP trainees' views on hospital obstetric vocational training

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Abstract

Objectives—To examine the content of hospital obstetric vocational training for general practice, the beliefs of general practitioner trainees about this training, and their perceived competence at practical obstetric procedures and the effect of training.

Design—Confidential postal questionnaire.

Subjects—A random one in four sample of all general practitioner trainees in the United Kingdom on vocational training schemes or in training practices in Autumn 1990.

Main outcome measures—Trainees' competence and beliefs on Likert scale, numbers of procedures witnessed and performed, type of maternity care trainees intended to provide.

Results—Of 1019 trainees sent questionnaires, 765 (75.1%) replied; 517 had done some hospital obstetric training. After six months as a senior house officer 232/367 (63%) believed they were competent to perform a normal delivery unaided, 228 (62%) to manage a severe postpartum haemorrhage, and 227 (62%) to resuscitate a newborn infant. 272 (35.6%) trainees intended to provide intrapartum care and 56 (7.5%) to book home deliveries in the future. Hospital training increased confidence in performing most obstetric procedures in all trainees. However, a greater proportion of trainees who intended to provide full care than shared care felt competent at performing a normal vaginal delivery (63% (170/272) full v 45% (215/473) shared), low forceps delivery (38% (103) v 17% (79)), manual removal of placenta (24% (65) v 17% (82)), and intubating a neonate (42% (114) v 34% (161)). Trainees who had done any obstetric training were less likely to think that training encouraged future provision of intrapartum care (113/509 (22%) training v 65/213 (31%) no training).

Conclusion—Hospital vocational obstetric training increases the perceived competence of trainees but fails to encourage them to use obstetric skills.

Introduction

Various studies have reported adversely on the amount, type, and relevance of teaching given to general practitioner trainees in hospital senior house officer posts,^{1,4} but none have specifically addressed obstetric training. Fewer general practitioners now provide complete obstetric care for their patients.⁵ The number of women delivering under the care of their general practitioner is falling, as is the number of isolated general practitioner units.^{6,7} Many general practitioners provide just antenatal and postnatal care.⁶

Various reasons have been suggested to account for this decreased activity of general practitioners in intrapartum care,⁸ including the possibility that their hospital obstetric training has contributed. This paper reports part of a larger study investigating the effects on general practitioner trainees of vocational obstetric training. I shall consider the content of hospital

training, the perceived competence at obstetric procedures of general practitioner trainees, and their beliefs about hospital obstetric training and shall relate their beliefs and perceived competence to their training.

Subjects and methods

The names and addresses of general practitioner trainees in the United Kingdom who were on vocational training schemes or in training practices were obtained from course organisers and regional advisers in general practice. A random one in four sample of these were sent a confidential postal questionnaire in the autumn of 1990. Information was sought about their obstetric training, their future intentions to provide maternity care, their views on their training, and their perceived competence at obstetric procedures. A seven point Likert scale was used to assess trainees' beliefs about aspects of their training and their perceived competence at several obstetric procedures. Not all trainees answered all questions; the number of non-responders to a specific question are not always shown.

The returned questionnaires were analysed with the statistical package for social sciences (SPSS-X). The effect of hospital obstetric training on trainees' beliefs about their training and perceived competence at obstetric procedures was analysed by using the Kruskal-Wallis test. Because of the large number of comparisons significance was set at $p < 0.01$.

Results

Of 1019 trainees sent questionnaires, 765 (75.1%) replied. In all, 517 (67.6%) had started or finished hospital obstetric training, of whom 101 had done less than six months of obstetrics or combined obstetrics and gynaecology, 49 had done more than six months, and 367 had done six months exactly at the time the questionnaire was completed. Of those who had done exactly six months, 275 had done a combined obstetrics and gynaecology post; 57, three months each of obstetrics and gynaecology; 10, six months of obstetrics only; 12, four months of obstetrics and two of gynaecology; and 13, other combinations of obstetrics and gynaecology. Of the 765 trainees, 410 (53.6%) said they definitely intended to enter general practice, 206 (26.9%) said they possibly intended to enter, 103 (13.5%) were undecided, and 45 (5.9%) did not intend to enter.

TEACHING

Table I shows the formal and informal teaching received by trainees while they held obstetric senior house officer posts. The more teaching they had received the more relevant they thought obstetric training was to their future needs (formal teaching: $H = 28.47$, $p < 0.0001$; informal teaching: $H = 33.07$, $p < 0.0001$).

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TABLE 1—Amount of teaching received each week by trainee general practitioners while obstetric senior house officers and perceived relevance of training in post. (Relevance rated on Likert scale from 1=relevant to 7=irrelevant)

Weekly teaching	No (%) of trainees	No (%) who thought training relevant	Median (interquartile range) score for relevance
Formal (n=509):			
None	125 (25)	65 (53)*	3 (2 to 5)
1 h	220 (43)	160 (73)	3 (2 to 4)
2 h	121 (24)	99 (82)	3 (2 to 3)
>2 h	43 (8)	35 (81)	2 (1 to 3)†
Informal (n=487):			
None	82 (17)	37 (46)*	4 (2 to 5)
1 h	147 (30)	102 (69)	3 (2 to 4)
2 h	131 (27)	97 (74)	2 (2 to 4)
>2 h	127 (26)	107 (84)	2 (2 to 3)‡

*Two trainees gave no opinion on relevance.
†H=28.5, p<0.0001. ‡H=33.1, p<0.0001.

TABLE II—Median (interquartile range) score of general practitioner trainees when asked to rate effect of hospital obstetric training as a senior house officer on likelihood of them providing intrapartum care as a principal in practice and their self confidence to do so using Likert scale

	Started or completed obstetric post	Yet to start obstetric post	Significance
Likelihood of providing intrapartum care (n=722)*	5 (4 to 6)	4 (3 to 6)	H=26.40 p<0.0001
Affects self confidence (n=722)†	4 (2 to 5)	5 (4 to 6)	H=32.1 p<0.0001

*1=Post encouraging, 7=discouraging.
†1=Decreases confidence, 7=increases confidence.

Of 745 trainees, 586 (79.6%) thought that hospital obstetric training should be more oriented towards the trainee's future needs as a principal in general practice providing obstetric services; 124 (16.9%) thought that its orientation should remain the same, and 25 (3.5%) thought that it should be less oriented.

Of 416 eligible trainees, 134 (32%) had the diploma of the Royal College of Obstetricians and Gynaecologists. In all, 449 (71.2%) of 631 trainees stated that they intended to sit the examination. The commonest reasons for doing so were to obtain a partnership in general practice (190, 42%), to encourage them to

study obstetrics (108, 24%), or to show competence in obstetrics and gynaecology (80, 18%).

FUTURE OBSTETRIC CARE

Of the 765 trainees, 473 (61.8%) intended to provide only shared maternity care as principals in general practice, 190 (24.8%) intended to provide complete maternity care in an integrated general practitioner unit, and 82 (10.7%) complete care in an isolated or alongside unit; 56 (7.5%) stated that they would like to provide care for home confinement.

Those who had done any part of their hospital obstetric senior house officer post were more likely to believe that such a post discouraged general practitioner trainees from providing intrapartum care for their patients when they become principals (table II; p<0.0001). Of 509 trainees who had done some part of their hospital obstetric post, 113 (22%) felt that it encouraged future provision of intrapartum care as a general practitioner, whereas 65 (31%) of 213 who had not started such a post believed this to be true. When asked if such a post affected the self confidence of trainees with regard to intrapartum care 213 (42%) of 508 trainees who had done any part of such a post believed that it reduced self confidence compared with 43 (20%) of 214 of trainees who had not started their hospital obstetric post.

EXPERIENCE AND COMPETENCE

Trainees were asked to indicate how many procedures they had witnessed and performed while an obstetric senior house officer (table III). Of those who had completed exactly six months as a hospital senior house officer, 11 (3%) stated that they had witnessed no normal vaginal deliveries; 57 (16%), one to nine deliveries; 91 (25%), 10-19; and 192 (52%), 20 or more. The corresponding numbers (percentages) for those who had performed normal vaginal deliveries were: 105 (29), none; 181 (49), one to nine; 43 (12), 10-19; and 24 (7), 20 or more.

Except for siting a peripheral intravenous infusion in a newborn infant, practical experience of procedures during hospital obstetric training had a highly significant positive effect on perceived competence (tables IV and V). For most procedures trainees who intended to

TABLE III—Number (percentage) of general practitioner trainees who had witnessed or performed obstetric procedures among 367 trainees who had completed exactly six months in obstetrics and gynaecology or obstetrics as a hospital senior house officer. Some respondents did not complete all questions

	No of procedures witnessed			No of procedures performed		
	0	1-5	≥6	0	1-5	≥6
Artificial rupture of the membranes	4 (1)	159 (43)	174 (47)	17 (5)	90 (25)	256 (70)
Oxytocin augmentation of labour	19 (5)	77 (21)	232 (63)	4 (1)	17 (5)	344 (94)
Episiotomy	7 (2)	99 (27)	230 (63)	61 (17)	87 (24)	213 (58)
Perineal repair	10 (3)	160 (44)	159 (43)	25 (7)	35 (10)	303 (83)
Pudendal block	26 (7)	189 (51)	127 (35)	162 (44)	126 (34)	71 (19)
Low forceps liftout	3 (1)	118 (32)	223 (61)	94 (26)	187 (49)	88 (24)
Manual removal of placenta	27 (7)	258 (70)	57 (16)	163 (44)	178 (49)	20 (5)
Management of prolapsed cord	141 (38)	203 (55)	3 (1)	266 (73)	86 (23)	2 (1)
Vaginal breech delivery	13 (4)	278 (76)	60 (16)	241 (66)	106 (29)	3 (1)
Vaginal twin delivery	29 (8)	292 (80)	33 (9)	269 (73)	73 (20)	1 (<1)
Manage pre-eclampsia	10 (3)	138 (38)	178 (49)	14 (4)	148 (40)	199 (54)
Manage severe postpartum bleed	52 (14)	241 (66)	32 (9)	60 (16)	269 (73)	33 (9)
General resuscitation*	10 (3)	144 (39)	185 (50)	87 (22)	80 (22)	197 (54)
Endotracheal intubation*	23 (6)	195 (53)	122 (33)	139 (38)	96 (26)	119 (32)
External cardiac massage*	97 (26)	194 (53)	49 (13)	170 (46)	142 (39)	41 (11)
Set up peripheral line*	78 (21)	131 (36)	128 (35)	139 (38)	40 (11)	177 (48)
Cannulation of umbilical vein*	129 (35)	173 (47)	45 (12)	240 (65)	86 (23)	24 (7)

*These procedures could have been witnessed or performed on the newborn infant as either an obstetric or paediatric senior house officer.

TABLE IV—Median score (interquartile range) of general practitioner trainees stated perceived competence for different procedures (on Likert scale from 1=very competent to 7=not competent at all) classified by time completed as hospital obstetric senior house officer

	No of months as obstetric senior house officer				Significance
	None	1-5	6	≥7	
Abdominal examination antenatally to ascertain lie and presentation (n=761)	4 (3 to 5)	2 (2 to 3)	2 (2 to 2)	2 (1 to 2)	H=243 p<0.0001
Vaginal examination in labour to determine descent and dilatation (n=761)	6 (4 to 6)	3 (2 to 4)	2 (2 to 3)	2 (1 to 2)	H=333 p<0.0001
Artificial rupture of the membranes to accelerate labour (n=761)	7 (6 to 7)	3 (2 to 5)	2 (2 to 3)	2 (1 to 2)	H=38.1 p<0.001
Normal vaginal delivery unaided (n=761)	5 (4 to 6)	3 (2 to 5)	3 (2 to 4)	2 (2 to 3)	H=141 p<0.0001
Interpretation of intrapartum cardiotocograph (n=762)	5 (4 to 6)	3 (2 to 3)	2 (2 to 3)	2 (2 to 3)	H=337 p<0.0001
Augmentation of labour with oxytocin infusion (n=762)	6 (5 to 7)	2 (2 to 3)	2 (2 to 3)	2 (2 to 2)	H=405 p<0.0001
Management of induction of labour for postmaturity (n=761)	7 (6 to 7)	2 (2 to 4)	3 (2 to 3)	2 (2 to 3)	H=417 p<0.0001
Low forceps liftout for delay in the second stage of labour (n=762)	7 (7 to 7)	6 (5 to 7)	4 (3 to 6)	3 (2 to 3)	H=328 p<0.0001
Manual removal of the placenta (n=760)	7 (7 to 7)	6 (4 to 7)	5 (3 to 7)	3 (2 to 4)	H=212 p<0.0001
Management of severe postpartum haemorrhage (n=762)	6 (5 to 7)	3 (2 to 5)	3 (2 to 4)	3 (2 to 3)	H=282 p<0.0001
General resuscitation of the newborn infant with poor Apgar score (n=760)	5 (3 to 7)	4 (2 to 6)	3 (2 to 5)	3 (2 to 4)	H=65.6 p<0.0001
Endotracheal intubation of the newborn infant (n=762)	6 (3 to 7)	6 (3 to 7)	4 (2 to 6)	3 (2 to 6)	H=45.3 p<0.0001
Siting peripheral intravenous infusion in the newborn (n=757)	3 (1 to 6)	4 (2 to 7)	3 (2 to 5)	3 (2 to 5)	H=9.4 NS

TABLE V—Number (percentage) of trainees who stated that they felt competent with procedures according to whether they have done none or six months exactly as a hospital obstetric senior house officer and whether they intended to provide shared or full obstetric care as general practitioner principals*

	Months as obstetric house officer		Future maternity care	
	None (n=248)	Six (n=367)	Shared (n=473)	Full (n=272)
Abdominal examination antenatally to ascertain lie and presentation	118 (48)	349 (95)	368 (78)	228 (84)
Vaginal examination in labour to determine descent and dilatation	39 (16)	311 (85)	273 (58)	188 (69)
Artificial rupture of the membranes to accelerate labour	19 (8)	310 (84)	247 (52)	174 (64)
Normal vaginal delivery unaided	60 (24)	232 (63)	215 (46)	170 (63)
Interpretation of intrapartum cardiotocograph	41 (17)	313 (85)	287 (61)	181 (67)
Augmentation of labour with oxytocin infusion	25 (10)	322 (88)	281 (59)	184 (68)
Management of induction of labour for postmaturity	12 (5)	294 (80)	248 (52)	162 (60)
Low forceps liftout for delay in the second stage of labour	0 (0)	135 (37)	79 (17)	103 (38)
Manual removal of the placenta	5 (2)	105 (29)	82 (17)	65 (24)
Management of severe postpartum haemorrhage	21 (9)	228 (62)	202 (43)	134 (49)
General resuscitation of the newborn infant with poor Apgar score	76 (31)	227 (62)	224 (47)	150 (55)
Endotracheal intubation of the newborn	64 (26)	166 (45)	161 (34)	114 (42)
Siting peripheral intravenous infusion in the newborn	134 (55)	215 (59)	255 (54)	160 (59)

TABLE VI—Median (interquartile range) score of general practitioner trainees' perceived competence for obstetric procedures (on Likert scale from 1=very competent to 7=not competent at all) classified by the type of maternity care they intended to provide

	Shared care	Full care		Significance
		Integrated unit	Isolated unit	
Normal vaginal delivery unaided (n=743)	4 (3 to 5)	3 (2 to 4)	3 (2 to 4)	H=27.2 p<0.0001
Low forceps liftout for delay in the second stage of labour (n=744)	6 (4 to 7)	5 (3 to 7)	4 (3 to 7)	H=30.3 p<0.0001
Manual removal of the placenta (n=742)	7 (4 to 7)	5 (4 to 7)	5 (4 to 7)	H=17.7 p<0.0002
Endotracheal intubation of the newborn infant (n=744)	5 (3 to 7)	4 (2 to 6)	4 (2 to 6)	H=11.1 p<0.005

provide full obstetric care in hospital in the future felt as competent as those who were intending to provide only shared care (table V). But for four procedures those trainees wishing to provide only shared care stated that they felt less competent than those intending to provide full care: normal delivery unaided ($p<0.001$), low forceps liftout for delay in second stage ($p<0.001$), manual removal of retained placenta ($p<0.0002$), and endotracheal intubation of the newborn infant ($p<0.005$) (table VI). The actual numbers of trainees stating that they felt competent with these procedures are shown in table V.

Of 750 trainees, 212 (28.3%) believed that less than six months' training as a hospital obstetric senior house officer was required for a future general practitioner who wished to provide only antenatal and postnatal care; 511 (68.1%) believed that six months was correct, and 27 (3.7%) that more than six months was required. However, of 749 trainees, 31 (4.1%) believed that less than six months' training as a hospital obstetric senior house officer was required for a future general practitioner who wished to provide intrapartum care, 78 (10.4%) believed that six months was correct, and 555 (74.1%) that more than six months was required.

Discussion

My findings are representative of general practitioner trainees in the United Kingdom and of the next cohort of general practitioners. Trainees believe that they are competent to perform many obstetric procedures that are needed as a hospital obstetric senior house officer, and training in such a post significantly improves their perceived competence. But at the end of the usual six months' training in obstetrics and gynaecology, which most general practitioner trainees receive, only two thirds felt that they were competent to perform a normal delivery unaided, manage a severe postpartum haemorrhage, or resuscitate a newborn infant; less than half felt competent to intubate a neonate, and less than 40% believed they were competent to perform a low liftout forceps delivery.

These skills are ones which general practitioner obstetricians—that is, practitioners who provide intrapartum as well as antenatal and postnatal care—need to possess. However, most practitioners providing only shared antenatal and postnatal care would not need these skills. Trainees intending to provide shared care felt less competent than those intending to provide full care in only normal vaginal delivery, low forceps delivery, manual removal of the placenta, and neonatal intubation.

Only one quarter of trainees believed that a six month obstetric post encouraged them to provide full obstetric care in the future, and a similar fraction believed that it reduced their self confidence to do so. Furthermore, despite increasing the perceived competence of trainees, trainees who had started an obstetrics post believed more strongly that it reduced self confidence and failed to encourage future provision of intrapartum care.

Low levels of teaching, both formal and informal, were recorded by trainees. This has been found for vocational training in hospital posts in other specialties.¹⁴ However, the more teaching trainees received, the more relevant to future needs as a principal they believed their hospital obstetric training to have been.

REAPPRAISAL OF TRAINING

The content and orientation of hospital obstetric vocational training for general practice needs to be reappraised. Over one third of trainees stated that they intended to provide intrapartum care as principals in practice. But the number of general practitioners who so do is less than this.⁵ Hospital training discourages general practitioners from practising intrapartum obstetrics; most trainees believe that their hospital training should be more oriented to general practice and discern that a different duration of training is required for those who wish to provide full obstetric care.

The underlying problem with vocational obstetric training is that the aim of training is unclear. The educational aims need to be properly defined to trainees and their trainers before changes in training are decided on. Although the evidence from this paper does not support a specific way forward, one possibility is that trainees who want to provide only shared care are trained by general practitioners and community midwives. Trainees who want to provide intrapartum care might be trained jointly by experienced general practitioner obstetricians and community midwives and in hospital obstetric posts by interested obstetricians and midwives. The competence of doctors who wish to provide full care could be validated by a modified diploma examination jointly set by the Royal College of Obstetricians and Gynaecologists and Royal College of General Practitioners.

Such a scheme would ensure that general practitioner trainees would receive training and assessment appropriate to their future needs and uninterested trainees will not be required to do unnecessary hospital obstetric posts. In addition midwives can extend their role and maintain their professional status,¹¹⁻¹⁵ and pregnant women will receive improved care from general practitioners.

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Co-amoxiclav in recurrent acute otitis media: placebo controlled study

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Abstract

Objective—To determine the efficacy of co-amoxiclav in children aged 6 months to 12 years with recurrent acute otitis media.

Design—A randomised double blind placebo controlled clinical trial.

Setting—General practice in the Netherlands.

Patients—121 children with recurrent acute otitis media, defined by onset of otalgia and otoscopic signs of middle ear infection within four to 52 weeks after the previous attack. Confirmation of diagnosis and randomisation was done by otolaryngologists.

Intervention—Oral co-amoxiclav or placebo in weight related doses for seven days.

Main outcome measure—An irregular clinical course defined as the presence of otalgia or a body temperature $\geq 38^{\circ}\text{C}$, or both, after three days.

Results—Eleven (16%; 95% confidence interval 9% to 28%) children had an irregular course in the co-amoxiclav group and 10 (19%; 9% to 31%) in the placebo group (difference not significant). Age, dichotomised at 2 years, was the only significant prognostic factor for irregular course of the disease (odds ratio 5.9; 1.8 to 19.1). Among children aged below 2 years, 28% (4/14) in the co-amoxiclav group and 58% (7/12) in the placebo group had irregular courses. For children 2 years and older these percentages were 13% (7/52) and 7% (3/41).

Conclusion—Children with recurrent acute otitis media are at greater risk of an irregular clinical course of the disease than children with a first episode of acute otitis media. Co-amoxiclav has no significant benefit over placebo in treating children over 2 years with acute otitis media.

Introduction

Acute otitis media is common among children. Cumulative incidences have been reported at 65-93% in children up to the age of 7 years.^{1,2} Several therapeutic strategies have been used to prevent complications and enhance recovery, including tympanocentesis, antibiotics, antihistamines, and decongestants. Though placebo controlled trials have not shown a relevant difference in clinical outcome between placebo and antibiotics in children aged 2 years and older,³ antibiotics are the first choice in medical management in most countries.⁴ Without antibiotics an irregular course occurs in less than 5% of patients.⁵

The current policy in the Netherlands is to prescribe oral analgesics and decongestant nose drops for otherwise healthy children aged 2 years and older. Antibiotics are prescribed only when no clinical improvement has occurred after three days. It is questionable, however, whether watchful waiting is acceptable in children with recurrent acute otitis media, in whom a complicated course and sequelae can

be expected to be more common.⁶ The objective of this study was to establish the efficacy of co-amoxiclav among children aged 6 months to 12 years with recurrent acute otitis media. We included patients younger than 2 years as little research has been conducted in this age group.

Patients and methods

Children were recruited from an urban primary care setting by their general practitioners. They were enrolled if they had a recurrence of acute otitis media characterised by a (sub)acute onset, otalgia, and otoscopic signs of middle ear infection, within four weeks to 12 months of the previous attack. A previous attack of acute otitis media was considered to have occurred if it had been assessed by a doctor and written down in the medical record. Children had to be older than 6 months and younger than 12 years.

Children were excluded if they had taken an antibiotic during the past four weeks; had previously participated in this study; were allergic to penicillin; or had a serious concurrent disease that necessitated treatment with an antibiotic. Informed parental consent was obtained by the general practitioner. The child was referred to one of the otolaryngologists at the three participating hospitals, who repeated the history and examination. He evaluated the diagnosis and checked that all the criteria were met. Thus the reliability of the diagnosis was also checked.

STUDY DESIGN AND TREATMENT

A randomised placebo controlled double blind trial was carried out from September 1986 to April 1990. The protocol was approved by the ethics committee of the University Hospital of Utrecht. Random allocation to treatment was achieved by opening in numerical order a sealed envelope that contained the treatment code. The codes had been linked at random to the envelope numbers by a computer program. Treatment was allocated by the otolaryngologist to ensure that both the child and the general practitioner were blind to treatment. Drugs and placebo were supplied by the specialist and were started immediately after the diagnosis was confirmed. Every child was given paracetamol orally as long as earache was present and oxymetazoline nose drops for one week. The child was given either co-amoxiclav orally or placebo in a weight related dose for seven days (table I). Compliance was determined by inquiry after three and 14 days.

ASSESSMENTS

A history was taken by the general practitioner at the first visit. With regard to potential confounding, attention was paid to raised body temperature, the laterality of the acute otitis media, the onset of the episode, the dates of recurrences of the acute otitis

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