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SHORT REPORT

Interprofessional education in maternity services: Is there evidence to support policy?

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Key Words: Maternity, Obstetrics, interprofessional education, systematic review

Interprofessional Education in Maternity Services: Is there evidence to support policy?

Abstract

Against a backdrop of poor maternity and obstetric care, identified in the Morecambe Bay Inquiry, the UK government has recently called for improvements and heralded investment in training. Given the complex mix of professionals working closely together in maternity services addressing the lack of joined up continuing professional development (CPD) is necessary. This led us to ask whether there is evidence of IPE in maternity services. As part of a wider systematic review of IPE we searched for studies related to CPD in maternity services between May 2005 and June 2014. 206 papers were identified with 24 papers included after initial screening. Further review revealed only eight papers related to maternity care none of which met the inclusion criteria for the main systematic review. The main reasons for non-inclusion included weak evaluation, a focus on undergraduate IPE and papers referring to paediatric/neonatal care only. Fewer papers were found than anticipated given the number of different professions working together in maternity services. This gap suggests further investigation is warranted.

(Abstract: 168 words)

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Introduction

The UK government's Secretary of State for Health has recently called for improvements in the quality of maternity care (Department of Health, 2015) to improve safety for mothers and babies and reduce the number of stillbirths, neonatal and maternal deaths by 2030.

One of the pledges is that investment is to roll out training packages so staff have the skills and confidence to deliver safe care. This announcement comes against a backdrop of examples of poor care, public concerns and a public inquiry (Kirkup, 2015b) into failings in maternity services in the Morecambe Bay area in the North-West of England. The chair of the Morecambe Bay inquiry has suggested that one of the reasons for the failures was the lack of 'joined up' continuing professional development (Kirkup, 2015a).

Background

Interprofessional education (IPE) is widely acknowledged as being beneficial for improved patient outcomes across a variety of settings with improved collaboration and teamwork seen as key factors (Hammick, Freeth, Koppel, Reeves, & Barr, 2007). Kirkup (2015a) believed that many of the problems in the maternity unit at Morecambe Bay stemmed from poor team working, and other issues went unrecognised for too long partly because of it. He believed that the lack of trust between different professional groups, which then led to a complete breakdown of working relationships between obstetricians, midwives and paediatricians was the origin for the failings in care. This interpretation is not new or isolated to this Inquiry. For example, both the UK confidential enquiries and Australian reports on maternal deaths respectively have found one facet of substandard care to be the lack of interprofessional collaboration (Haller et al., 2008).

IPE, especially in relation to continuous professional development (CPD), may help to foster trust between professionals and therefore help to improve care. This may be particularly pertinent in maternity care, as a complex mix of different professional groups work closely together; typically including midwives, obstetricians, paediatricians, anaesthetists, neonatal nurses, operating department practitioners, sonographers and physiotherapists.

Different professions often have different aims and values which others may not sufficiently understand or be aware of. In Morecambe Bay, Kirkup (2015a) found this to be a significant concern with poor team working clearly undermining safe and effective care. Maternity services is one of the riskiest health areas suggesting lessons should be drawn from other high risk enterprises where team working during training is routinely included.

The current policy interest and endorsement of IPE in maternity services following the Morecambe Bay Inquiry led us to ask whether there is evidence of IPE happening for professionals providing maternity care services and what the quality of this evidence is.

Methods

An update systematic review of IPE (Reeves et al., 2014) has recently been completed under the auspices of the Best Evidence Medical and Health Professional Education Group. This review searched for relevant IPE studies from May 2005 to June 2014 using MEDLINE, the Cumulative Index of Nursing and Allied Health literature (CINAHL), the British Education Index (BEI) and the Applied Social Sciences Index and Abstracts (ASSIA) databases. This search identified 3387 papers.

A supplementary search of the results of this review was undertaken specifically in respect of maternity services. The following research questions guided this subsidiary review:

- Is there evidence of IPE happening for professionals providing maternity care services?
- What is the quality of this evidence?

The titles and abstracts of papers contained in the database generated for the main IPE review were searched to identify papers where there was evidence of IPE in maternity services. The search terms used are shown in Figure 1. The relevance to maternity services CPD and quality of the papers was then assessed based on criteria set out in the protocol (Reeves et al., 2014).

Results

206 papers were initially identified, with 24 papers included after initial screening, however, none of these papers met the methodological rigor and quality of information criteria for inclusion in the main systematic review. The search results are summarised in Figure 1.

[INSERT FIGURE 1 ABOUT HERE]

The 24 papers included after the initial screening had an international spread reporting research in North America (n=13), Europe (n=7) and Australia (n=4). However, only eight papers dealt specifically with maternity care and included reports of IPE initiatives. These eight papers (see Table 1) report high fidelity simulation related to maternity emergency situations (n=4), initiatives to improve communication or psycho-social skills (n=3) and other specific clinical skills (n=1). The main reasons for non-inclusion at this stage were the papers' focus on undergraduate IPE (n=4), paediatric or neonatal care rather than maternity services (n=10), and other reasons (n=5), such as focussing on antenatal chronic illness management in primary care.

[INSERT TABLE 1 ABOUT HERE]

Discussion

As noted above, only eight papers focussing on IPE for maternity services as advocated by Kirkup (2015a) were found – a figure which is less than would be anticipated given the number of different professions working together in maternity services. This would suggest that either IPE in maternity is not happening or education initiatives are not being studied, evaluated or reported. This gap would suggest further investigation is warranted given the risky nature of maternity services and the increasing use of learning strategies borrowed from the aviation industry (Haller et al., 2008). Indeed the chair of the recent Morecambe Bay Inquiry (Kirkup, 2015b) has stated that continuing IPE should take place to address safety and teamwork issues in what is a high risk speciality in the health service.

Despite the lack of research specific to maternity services, much of the evidence for IPE from other clinical specialities (see Hammick et al., 2007) is likely to be pertinent and supports the concept of IPE in maternity care and current policy. However, research taking into consideration the specific contexts and professional dynamics of maternity services would provide better insight into how this policy should be implemented in practice.

Concluding comments

Improving the quality of maternity services is high on the agenda of the UK government (Department of Health, 2015; National Maternity Review, 2016), with investment in education appearing amongst the recommendations to address poor performance. This review has shown that currently there is little rigorous evidence of the effectiveness of IPE in maternity services and that this is due to both a lack of published studies and the weak quality of those that do exist. Further research is needed to address this so that resources

can be channelled appropriately and that education initiatives which are relevant, appropriate and acceptable to all the interested professional groups can be implemented'.

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

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Figure 1
Search results

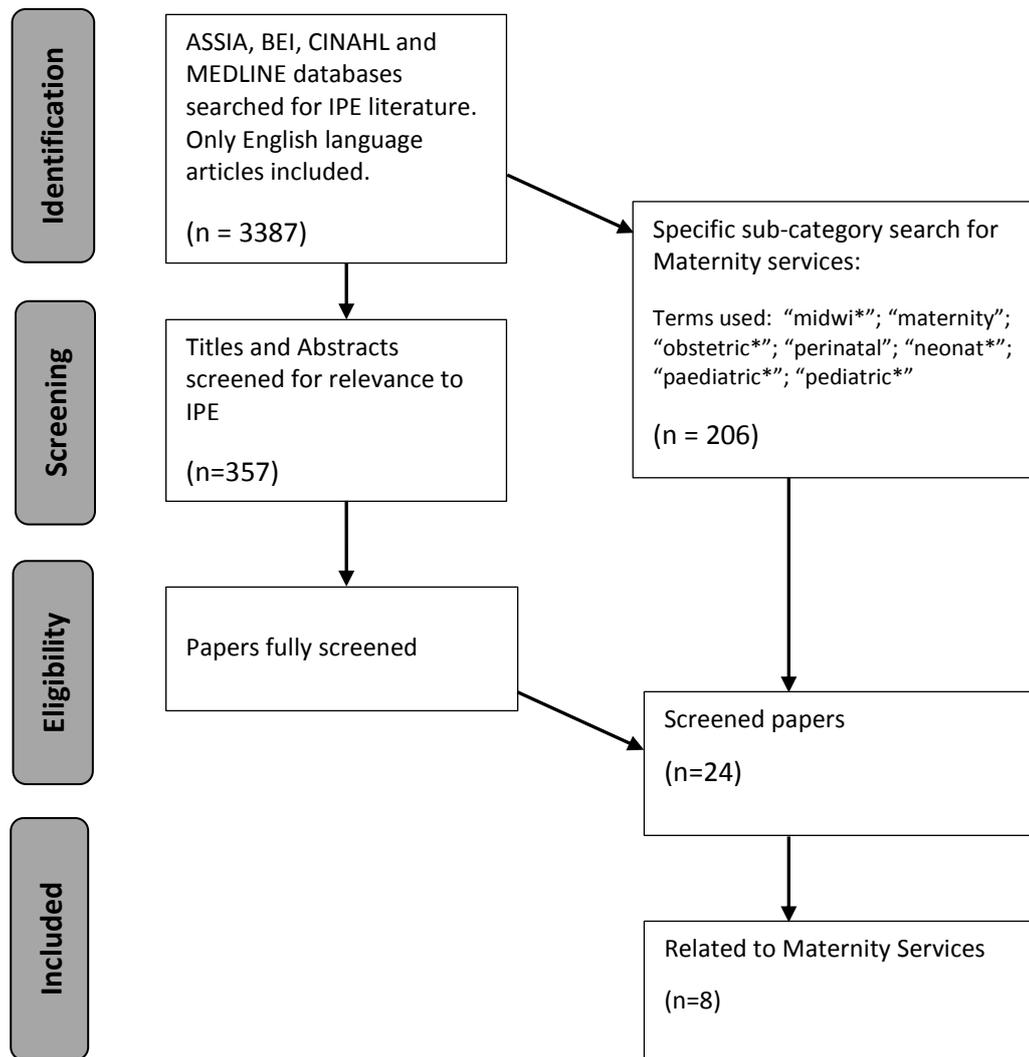


Table 1: Overview of included IPE studies undertaken in maternity services

<i>Lead author/year of publication</i>	<i>Setting, Country</i>	<i>Sample and number</i>	<i>Intervention</i>	<i>Methodological Comments</i>
Burke (2013)	University Women's Hospital, Chicago, USA	Obstetricians, midwives, anaesthetists, nurses (n=370)	Didactic training plus simulation exercise as part of mandatory training programme for doctors and nurses (midwives).	Participant feedback is main source of evaluation data, with some global outcome measures linked to improvement in safety
Daniels (2008)	Labour and Delivery ward, Stamford, USA	Nurses, midwives, obstetricians, anaesthetists (n=49)	Simulation based training for interprofessional teams. Two scenarios followed by a facilitated debriefing	Paper reports evaluation only of the medical residents in the group. All simulations were videotaped.
Haller (2008)	University affiliated hospital, Geneva, Switzerland	Nurses, midwives, technicians, doctors (n=239)	Used a CRM (Crew Resource Management) approach based on commercial aviation methods. Produced a film showing errors and included role play but not simulation	The paper only reports participants' satisfaction with training
MacEachin (2009)	Kaiser Permanente system, California, US	Nurses, certified midwives and physicians as trainers (offered to all staff, n=1838)	Fetal monitoring training programme. IP collaboration to create multi-media training package; IP champions (train the trainer) then roll out across system	Evaluation is based on feedback on training programme and safety perceptions. Data from baseline 2002 and four years post intervention.
Posmontier (2012)	Philadelphia, US	Obstetricians, nurse practitioners, nurse students, physician assistants (n=35)	Teamwork simulation of an obstetric emergency	Pre-test/ post-test measures were self-report by students. Findings show that intervention enhanced mutual support and communication but no significant increase in attitudes for structure, situation monitoring, and leadership.
Rego (2011)	Queensland, Australia	Obstetricians and midwives (n=195, 77% midwives, 23% medics) Follow-up with 20 midwives and 10 Drs)	Maternity Crisis Resource Management (MaCRM) programme. 2 day course including didactic teaching, skills stations (number of potential crises) and simulated emergencies.	Evaluation included learner satisfaction with training; learning uptake, transfer of learning to workplace and outcomes. 3 months post-training a sample of midwives and doctors were followed up with further interviews with supervisors to balance effects of self-reporting.
Saxell (2009)	Vancouver, Canada	Medical, Midwifery and Nursing Undergraduate Students (n=467)	3 different programmes targeted at students interested in maternity care (incl. normal labour and birth workshop; student	Only reports student satisfaction

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<i>Lead author/year of publication</i>	<i>Setting, Country</i>	<i>Sample and number</i>	<i>Intervention</i>	<i>Methodological Comments</i>
			Doula support program; and a student-led maternity care club.	
Solomon (2011)	McMaster University, Ontario, Canada	Undergraduate students (incl. medics, nurses, therapists, midwives) (n=96)	Program evaluation of IPE 3hr team based communications skills initiative.	Evaluation based only on student satisfaction plus scales measuring readiness for IP work