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# How do clinical nurse specialists influence primary care management of asthma? A qualitative study

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## KEYWORDS

Asthma;  
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## Summary

**Methods:** We carried out a qualitative interview study alongside a randomised controlled trial which tested the effectiveness of asthma nurse specialists in east London. We carried out face-to-face interviews with five asthma nurse specialists, eight general practitioners (GPs) and six practice nurses, and also held a focus group session with six people who had attended hospital with acute asthma.

**Results:** Four factors were associated with effective specialist nurse liaison: (1) primary care practices which prioritised asthma care; (2) GPs who trusted practice nurses to manage chronic disease autonomously; (3) GPs who recognised specialist nurse expertise and acted on their advice; and (4) practices which had simple systems in place to deal with recommendations. Patients found nurse specialists approachable and informative.

**Conclusions:** Asthma specialist nurse influence was greatest in practices that prioritised asthma care and where practice nurses had clinical autonomy. Patients valued specialist nurses but found advice from a multiplicity of clinicians confusing. Ensuring that practices prioritise chronic disease care, and improving the credibility of nurse specialists amongst GPs, may improve the effectiveness of asthma nurse specialists.

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## Introduction

Clinical nurse specialists have become common in developed health care systems as one response to the increasing burden of chronic disease [1]. There

is inconsistent evidence about their effectiveness, and with a few exceptions [2,3], previous studies are quantitative [4–7]. Maximising the impact of clinical nurse specialists is important. Their roles frequently involve outreach to primary care, but there is little clarity about how they influence care or what barriers exist to their effectiveness.

We carried out a randomised trial testing the effectiveness of asthma specialist nurse liaison

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with primary care in a socially deprived multiethnic area [8,9]. The role of the specialist nurses was to visit general practices to educate primary care clinicians, to make clinical recommendations about individual patients, and to educate patients after hospital attendance. The trial showed that their intervention reduced unscheduled asthma care (emergency visits to primary and secondary care) for patients registered with practices receiving their support. The impact of the specialist nurses varied considerably between practices. We therefore undertook a qualitative assessment of the asthma specialist nurses' role during the trial. Our aim was to determine how specialist nurses influence primary care and individual patient management of asthma in an inner city area. We wanted to identify what factors were associated with effective liaison. Qualitative studies are a recognised and recommended way of understanding the effectiveness of complex health service interventions [10].

## Methods

### Setting

The study took place in Tower Hamlets, one of the most socio-economically deprived and ethnically diverse boroughs in Britain [11].

### Participants

#### Specialist asthma nurses

We carried out in-depth interviews with five specialist asthma nurses—two who carried out the intervention during the randomised trial, another who began work at the completion of the trial, one from a neighbouring borough, and the local lead respiratory nurse.

#### GPs and practice nurses

We carried out in-depth interviews with eight GPs and six practice nurses from practices taking part in the randomised trial. We used extreme case sampling [12] to select practices for data collection from the intervention arm of the trial. Using the specialist nurses' experience to guide sampling, we asked them to identify intervention practices from the randomised trial where they had found liaison productive (which they defined as active and reciprocal) or unproductive (Box 1).

We interviewed three GPs and three practice nurses in the 'productive liaison' group, one pair from each of three practices (Table 1). Only two

### Box 1: Factors identified by asthma specialist nurses characterising practices as having productive and unproductive liaison

General practices with productive liaison (five practices)	General practices with unproductive liaison (four practices)
<ul style="list-style-type: none"> <li>Keen for input from specialist asthma nurse and desire to learn about asthma guidelines</li> <li>Interest in asthma and desire to improve asthma care</li> <li>Eager to receive feedback regarding patients and acted on recommendations for changes to patient treatment</li> <li>Easy to access by specialist nurse</li> <li>Coherent and informative referral requests</li> </ul>	<ul style="list-style-type: none"> <li>Unresponsive to specialist asthma nurse and lack of interest in asthma guidelines</li> <li>Lack of interest in asthma</li> <li>Disregarded recommendations for changes to patient treatment</li> <li>Difficult access by specialist nurse</li> <li>Uninformative and poorly organised referral requests</li> </ul>

GPs and one practice nurse from the practices in the 'unproductive liaison' group agreed to be interviewed. We interviewed three GPs and two practice nurses from randomly selected practices from the control arm of the trial to learn their views on specialist nursing and their approach to providing asthma care.

#### Patients and parents

We interviewed an intensity sample [12] of patients reflecting the diversity of participants in the trial (Table 2). All had received education and advice from the specialist nurses in the trial. Two were Bangladeshi, three were white British and one was Black Caribbean. Three of those interviewed were adults and three were parents of children taking part in the trial.

### Interviews

GF carried out semi-structured interviews with all clinicians but one (Box 2).

Data from patients and carers were gathered using a focus group and follow up telephone interviews. The focus group was conducted during an afternoon by the researchers (GF, MG and CG) in a local health centre with assistance from a bilingual advocate. Focus groups have the

**Table 1** Characteristics of general practices sampled.

Group	GPs interviewed	Practice nurses interviewed
Productive liaison		
Practice A: three partner group practice	1	1
Practice B: seven partner group practice	1	1
Practice C: six partner group practice	1	1
Unproductive liaison		
Practice D: three partner group practice	1	1
Practice E: two partner group practice	1	No nurse
Practice F: singlehanded practice	Declined	No nurse
Control		
Practice G: three partner group practice	1	1
Practice H: two partner group practice	1	1
Practice I: singlehanded practice	1	No nurse
Total	8	6

**Table 2** Characteristics of patient informants.

Patient	Age	Sex	Ethnicity	BTS step	Education beyond 16*
1	47	F	White British	3	Yes
2	44	F	White British	3	No
3	38	M	Bangladeshi	2	Yes
4	4	F	Bangladeshi	2	No
5	13	F	Black Caribbean	2	Yes
6	8	M	White British	3	No

\* Parent.

advantage of allowing interaction between participants helping them to explore and clarify their views [13]. Their main disadvantage is that without skilful facilitation, individuals' views may not be heard. All participants gave informed consent. Interviews were tape recorded and transcribed verbatim.

**Box 2****Topic guide for interviews with clinicians**

- contact and communication with the specialist nurse,
- perceptions of the specialist nurses' role,
- barriers to effective care,
- views of self management plans and their ease or difficulty of implementation in a diverse population

**Topic guide for focus group and interviews with patients and carers**

- contact and communication with the specialist nurse,
- perceptions of the specialist nurses' role,
- views on the management of asthma
- views of the concept of self management.

Approval was given by the local research ethics committee.

**Analysis**

Our theoretical framework was structuration theory [14]. We explored how specialist nurses established their liaison role by interacting with practices (the main structures of interest) and with individual practitioners and patients (the main actors or agents of interest). We defined structural factors as being those related primarily to organisation and policy, and individual factors as being those related to attitudes. Analysis followed the framework method to organise the data, with constant comparison between new and existing data as the interviews progressed [15,16]. A multidisciplinary group (anthropology, academic nursing, primary care) familiarised themselves with transcripts. GF developed a thematic framework and coding index which was reviewed by the group to ensure that it addressed the data comprehensively. Two researchers (GF and CG) coded transcripts and discussed discrepancies. GF constructed charts comprising the main themes for all respondents, which were: (1) asthma self-management; (2) roles

of the specialist nurses; (3) communication; and (4) the randomised controlled trial. All authors interpreted the data. Names of informants have been changed to provide anonymity.

## Results

### Establishing the specialist nurse service

Specialist nurses described the difficulties they encountered in setting up a new liaison service with sometimes reluctant GPs. Difficulties reflected lack of clarity in the definition of a specialist nurse – ‘*there’s no definition of what a clinical nurse specialist is*’ (SN1)–and isolationism by some GPs–‘*the single-handed practices... they like to work very much on their own*’ (SN1). The specialist nurses talked of power imbalances between professions–‘*...I’ve been told that you’re just a nurse*’ (SN1),–and encountered demeaning rejection by some general practitioners–‘*One GP said “I haven’t got anybody who has asthma” (laughs) and of course, you can’t disagree with them*’ (SN3).

This lack of clarity of their role and the novelty of the service had both advantages and disadvantages, allowing the specialist nurses to be flexible and proactive; but this relied on their developing skills which went beyond clinical knowledge to an understanding of how practices do and don’t function, how to approach individual practitioners, and the ability to exert influence when and where they could. Examples cited by specialist nurses of their extended skills included: carrying out surveys of practice need; running small group education sessions and debating research evidence with doctors and nurses in primary and secondary care; developing preferred methods of communicating with practices; negotiating access past receptionists; and developing training courses. Some GPs had unrealistic expectations of their role – that they would set up and run asthma clinics in their practices. However, specialist nurses used these expectations to gain access to and gain trust from underdeveloped practices that would otherwise have rejected them.

*Interviewer:* ‘They hadn’t answered your letters or phone calls and you...turned up on their doorstep – literally, you knocked on the door?’ ‘*Yeah,...I got in and they just gave me a cup of tea...the doctors there having given us a million reasons why we couldn’t go in, then let us do [some clinics] for them*’. (SN3)

### Reciprocal communication between specialist nurses and primary care

Reciprocal communication became routine between the specialist nurses and responsive practices, establishing the nurses’ liaison role. This communication was almost exclusively with practice nurses.

*Rafia (practice nurse) at Whitechapel Health Centre has really thrown herself into asthma – she really enjoys seeing them ...they have quite a few difficult patients so we communicate quite freely – she has no problem phoning me up about patients which is how it should be, it’s what the whole point of the liaison nurse is about really.* (SN1)

### Factors associated with effective specialist nurse liaison with primary care

We found strikingly contrasting perspectives from clinicians from practices in the productive and unproductive liaison groups. These illustrate four factors (two structural, two individual) relevant to effective liaison.

#### Structural factors

##### *Practices which prioritised asthma care*

Asthma was a priority in practices in the productive liaison group, evidenced by training for nurses and auditing of care. There was an enthusiasm about asthma care:

*‘I really enjoyed my asthma study leave. When I first started ... I didn’t feel like I had the knowledge. So it was a case of ringing up, having some tutorials, working with GPs but also I had an afternoon with Jill (the specialist nurse) and I made myself known to her and since then I have actually done a three day course on asthma. ... It was great’* [CPN3Intg].

The specialist nurses were highly valued by the practice nurses; their letters helped the practice nurses identify and follow up high-risk asthma patients, thus helping audit care, and they were seen as peers, people who could be contacted easily as an expert resource for advice, thereby boosting clinical confidence amongst the nurses:

*‘It’s feedback, it’s highlighting the people that we haven’t addressed and that’s good because of the recalling not working you know.* [APN1Intg].

By contrast, asthma care was not a priority for practices in the unproductive liaison group. Clinical priorities were set by other organisations such as the primary care trust:

*'We have had so much with ischaemic heart disease and diabetes that ... asthma seems to have... become neglected' [DGP2Intp].*

Asthma was a minor issue in the context of perceived overwork, increasing demand, lack of organisation, and high staff turnover.

#### *Practices which had simple systems in place to implement specialist nurse recommendations*

Simple systems in practices from the productive liaison group ensured recommendations in the specialist nurses' letters were implemented:

*'[letters] go to the GP and then they come to me but sometimes, having said all that, ultimately often the GPs just put them in my tray' [CPN3Intg].*

For practices in the unproductive liaison group, poor administrative organisation meant that letters from specialist nurses went unnoticed:

*'It is possible that I have had letters but we have so much post... there might have been letters about asthma patients' [DGP2In p].*

Practices lacked strategy for implementing their recommendations.

#### **Individual factors**

##### *Clinicians who recognised specialist nurse expertise and acted on their advice*

Specialist nurse expertise was seen as vital, identifying patients at high risk after hospital discharge and helping the practice nurses when their practice recall systems had failed.

*'If we didn't have that ... we wouldn't have any idea of who's a priority and who's at the most risk and it identifies those who are most at risk which we wouldn't be able to pick up otherwise. So I'm sure it's potentially saving lives... I mean I think it would be a shame if this post were taken away' [APN1Intg].*

By contrast, poor communication between the GPs and the practice nurses in practices from the unproductive liaison group was compounded by disinterest in the role of a specialist nurse:

*'I don't know what the [practice] nurses are doing... I don't know anything about the [specialist nurses'] role but presumably it's liaison between the hospital and primary care' [DGP2Intp].*

##### *GPs who trust practice nurses to work autonomously*

Practice nurses in the practices with productive liaison enjoyed clinical autonomy which the GPs valued and respected:

*'We are all very comfortable and confident in how Lynn manages our asthma cases' [BGP5Intg].* This was valued by the practice nurses:

*'the doctors are quite happy that we have responsibility for those things and so they're quite*

*happy to [laughing] pass it on to us really... so no that's not a problem here at all' [BPN2Intg].*

In practices with unproductive liaison, practice nurses felt marginalised and complained:

*'we don't get to know about it. I'm presuming that the letter goes to the GPs or whatever and I think that probably it's an indication that the practice sharing of information isn't as good as it should be... I've seen the [specialist nurse's] letters, but... they don't come to me, it's only when I've been looking back at people's notes' [HPN6intp].*

## **Specialist nurse interaction with patients**

### **Self-management advice in a deprived multicultural area**

Specialist nurses had a pragmatic and flexible approach to providing self-management plans whereby the complexity of the advice was proportional to patients' understanding of their illness and willingness to take responsibility. Social circumstances and ethnic background were also important factors. They spoke of providing 'degrees of self-management plans' [SN1] according to the patients' circumstances, and of the time required to develop rapport and agreement. Thus, a few patients received a written plan with a supply of oral rescue corticosteroids, others received a verbal plan, and others were unable to progress beyond a plan consisting of basic information—'this is your reliever and this is your preventer' [SN1]. Although patients were happy to be advised, self-management advice was only worth providing if the patient wanted this level of responsibility — 'Well you take advice but it depends if you want it or not.' [1FWBPaA].

For patients without fluent English the specialist nurses taught self-management using tactics which included using sign language, pictures and interpreters (often receptionists and family members). Whilst they had plans and information translated into Bengali, most Sylheti-speaking Bangladeshis do not read Bengali. The concept of self-management was thought more difficult to convey to people from Bangladesh: *'Bengali patients do not tend to question the medication... on the whole they do not tend to wish to have that sort of responsibility—of making that sort of [self-management] decision' (SN1).*

### **Patients' views**

Our informants were positive about the specialist nurse. They felt they could talk to her, *'...could tell her like we are now'* and that *'she understood'*

[1FWBP.a.A], unlike some doctors they'd met—'she wasn't stuck up' [2FWB46B]. Patients could telephone to sort out misunderstandings:

*'there was a bit of a muddle with the new tablets but that quickly got resolved' [3FWB50D].*

Patients generally described their GP or practice nurse as the person most important to them in managing their asthma, suggesting that the specialist nurses successfully handed back care after hospital discharge. Specialist nursing exacerbated the problem of conflicting advice from different clinicians:

*'one says one thing, you see someone else and they say something different and I think its better if you just see the one specific person' [2FWB46B].*

Conflicting advice led to one parent consistently lying to the GP about her child's inhaler use to avoid further discussion that she perceived as unhelpful.

## Discussion

### Effectiveness of specialist nurse liaison with primary care

Our findings show how specialist nurses influence primary care and what factors promote effectiveness. Specialist nurses use more than their clinical skills to influence primary care, drawing on their knowledge of the structures of, and individuals within, primary care in order to exert their influence. This required a range of organisational, administrative, teaching, negotiating and interpersonal skills. Their influence was greatest in practices with sound organisational structures and good inter-professional relationships, and negligible in practices lacking these features. Their input helped practice nurses to identify, follow up, and audit care of high-risk asthma patients.

### Strengths and weaknesses of this study

Although our sample was small we strengthened the validity and reliability of our analysis using a number of approaches. We used a range of relevant sources: medical and nursing; management, primary and secondary care; patients and carers. We constantly compared new data with existing data as the interviews progressed. We used a multidisciplinary group to promote reflexivity during interpretation of data. Coding of interviews was carried out independently by two researchers to enhance consistency. Triangulation of data from the specialist nurses (who identified practices as being easy or problematic to liaise with), with our ease (or difficulty) in obtaining interviews with clinicians

from the respective two groups, and the data from the interviews themselves, point to there being important differences in the attitudes and behaviour of the clinicians from the two groups of practices. Our sample was relatively small and we cannot claim data saturation. We carried out interviews after the end of the randomised trial, rather than in parallel, to prevent interviews contaminating the trial intervention. Our strategy of sampling practices from the extremes within one primary care trust provided contrasting and illuminating data. Structuration theory, [14] although usually heuristic rather than explanatory, provided a useful means to understand how specialist nurses addressed the structures and individuals within primary care in order to establish a new service. For instance, their recursive communication with practice nurses established them as an important resource for primary care — one that would be missed if withdrawn. A perverse effect of their introduction in east London was that the gap between asthma care provided by the best and the worst practices widened, since the patients registered with practices liaising well with the specialist nurses benefited whilst those in the poorly-liaising practices fell behind.

The facilitators and barriers we identified are likely to hold for specialist nurses from any clinical specialty trying to influence inner city primary care. Our observations extend those of Wiles [2] who suggested that developing the roles and responsibilities of practice nurses might improve the effectiveness of specialist nurses. Improving the effectiveness of specialist nurse liaison with primary care also depends on promoting inter-professional relations, improving organisation and resourcing of primary care, and developing the broader expertise and training of specialist nurses.

### Self-management of asthma in a deprived multicultural area

Attitudes to asthma self-management plans were more positive than those reported by Jones [17]. Although many east London patients do not describe formal self-management plans, they carry out quite sophisticated and effective self-care [18]. Our sample was too small to elaborate possible differences in attitude to self-management between ethnic groups. Further work should address this. Patients valued the specialist nurses but found conflicting advice from multiple clinicians confusing. As the diversity of people providing self-management education expands (now including doctors and nurses from primary and secondary care, community pharmacists and lay educators) the potential for

conflicting messages to patients increases. Coherent messages from different sources are vital.

### Competing interests

None declared.

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Contributors: CG had the idea for the study; all elaborated the design; MG oversaw the analysis, to which all contributed. GF carried out the interviews and coded the data. CG wrote the first draft which was commented on by all authors. CG is the guarantor.

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