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A telephone reminder intervention to improve breast screening information and access

J. Offman [a], J. Myles [a,*], S. Ariyanayagam [b], Z. Colorado [c], M. Sharp [d], M. Cruice [e], B.V. North [a], S. Shiel [f], T. Baker [g], R. Jefferies [h], K. Binysh [i], S.W. Duffy [a]

[a] Centre for Cancer Prevention, Queen Mary, University of London, Wolfson Institute of Preventive Medicine, Charterhouse Square, London EC1M 6BQ, UK
[b] NHS England Southside, 105 Victoria Street, London SW1E 6QT, UK
[c] Community Links, 105 Barking Road, Canning Town, London E16 4HQ, UK
[d] Centre for Primary Care & Public Health, Blizard Institute, Yvonne Carter Building, 58 Turner Street, London E1 2AB, UK
[e] NHS Commissioning Board London, 4th Floor, Drummond Street Wing, Stephenson House, 75 Hampstead Road, London NW1 2PL, UK
[f] Central and East London Breast Screening Service, 3rd Floor, West Wing, St Bartholomew's Hospital, London EC1A 7BE, UK
[g] Contracting and Quality Directorate, North and East London Commissioning Support Unit, Clifton House, 75-77 Worship Street, London EC2A 2DU, UK
[h] North and East London Commissioning Support Unit, Clifton House, 75-77 Worship Street, London EC2A 2DU, UK
[i] Quality Assurance Reference Centre, Barts and the London NHS Trust, 1st Floor, 51/53 Bartholomew Close, West Smithfield, London EC1A 7BE, UK

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ABSTRACT

Objectives: In the UK, women aged 50–70 are offered breast cancer screening every three years. Screening participation rates in London have been particularly low. Low rates have been associated with low socio-economic status, and some ethnic groups have been observed to be underserved by cancer screening. This paper reports on a telephone reminder intervention in London Newham, an area of high deprivation and ethnic diversity.

Study Design: Observational study of planned intervention.

Methods: Women invited for breast screening were telephoned to confirm receipt of the invitation letter, remind invitees of their upcoming appointment, and to provide further information. Aggregate data at general practice level on invitation to and attendance at breast screening and on numbers reached by telephone were analysed by logistic regression.

Results: For the 29 participating GP practices (10,928 invitees) overall uptake in 2010 was higher compared to the previous screening round in 2007 (67% vs. 51%; $p < 0.001$). On average 59% of invitees were reached by the reminder calls. A 10% increase in women reached resulted in an 8% increase in the odds of women attending their screening

* *Corresponding author*. Tel.: +44 0207 882 3542.
E-mail address: j.myles@qmul.ac.uk (J. Myles).
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appointment (95% CI: 5%–11%), after adjusting for 2007 attendance rates. Practices with a higher proportion of South Asian women were associated with a larger uptake adjusted for 2007 uptake and population reached by the telephone intervention, (4% increase in odds of attendance per 10% increase in South Asian population, CI 1%–7%, $p = 0.003$) while practices with a higher proportion of black women were associated with a smaller uptake similarly adjusted. (11% decrease in odds of attendance per 10% increase in black population, CI 9%–16%, $p < 0.001$).

Conclusions: A language- and culture-sensitive programme of reminder calls substantially improved breast cancer screening uptake.

Introduction

It is undisputed that mammographic screening prevents deaths from breast cancer, although there is disagreement over the extent of side-effects of the intervention, such as overdiagnosis.[1–3] There is also general agreement that when a woman is offered screening, her decision as to whether or not to attend should be an informed one.[4] The implications of this include that the invitation be accompanied by accurate information about the benefits and risks of screening. Also the decision to participate or not should be based on a decision informed by the likely clinical benefits and risks of screening rather than on whether the invitee remembers the appointment or on physical or organisational barriers to attendance.

The NHS Breast Screening Programme offers two-view mammography every three years to women aged 50–70. Women are invited by postal invitation. In some areas of London, there is concern at the lower-than-average uptake in screening. Screening uptake in London in 2007/08 and 2010/11 was 60.6% and 63.6% respectively, compared to 73.2% and 73.4% for England as a whole.[5] Uptake rates have been shown to be affected by factors such as population mobility,[6] socio-economic status[7,8] and ethnicity[8–10] and all these factors negatively affect uptake in parts of London, including Newham.[11,12]

This paper reports on a telephone reminder intervention in Newham taking place in the context of the 2010 round of screening, in the NHS Breast Screening Programme.

Methods

In Newham, eligible women are invited by general practice with all women from each practice being invited every three years. NHS Newham commissioned Community Links, a Newham based community charity, to carry out telephone reminder interventions aimed at increasing screening uptake in 2010. Local women understanding the socio-cultural profile of the community in Newham and speaking combinations of the following languages spoken in Newham were recruited: Hindi, Urdu, Punjabi, Gujarati, Bengali, Somalian, French, Spanish and English. They attended one training programme covering a general overview on breast cancer and breast cancer screening, the benefits and risks of screening, informed consent and information governance. Lists of women invited were obtained from the Central and East London Breast Screening Services (CELBSS) for each practice. Telephone numbers were those held by general practitioner (GP) practices, and for data protection reasons, reminder calls were made from practice premises. Women invited for breast screening were called not more than five days before the screening appointments with the aim of confirming receipt of the invitation letter, reminding invitees of their upcoming appointment, answering any basic questions, and to providing information on the benefits and risks of breast screening. The callers worked from a flowchart. The procedure was basically to first check that letter had been received. If it had been, and if the woman intended to attend, the caller would make sure she knew where to go. The caller would also provide number to call if she wished to change place or time. If she did not receive letter, the caller would check her address, and tell her verbally where and when the appointment was, again, providing a number to change the appointment if necessary. If she did not plan to attend, the caller would offer information and an opportunity to talk to a practice member. The caller was permitted to correct misapprehensions, but was instructed not to pressure the invitee.

Individual level data were not available. Aggregate data at general practice level on invitation to and attendance at breast screening for all Newham GP practices screened in 2007 and 2010 was obtained from CELBSS. Aggregate data on numbers contacted and reached in the telephone reminders campaign for the 29 Newham GP practices participating were obtained from Community Links. Ethnicity data for Newham women aged 50–70 registered with GP practices in July 2010 was provided by the Clinical Effectiveness Group (CEG) at Queen Mary, University of London who have been collecting GP practice based, self-reported ethnicity across the three former east London PCTs of Tower Hamlets, Newham and Hackney since before 2005 (Hull et al., 2011).[11] Ethnicity data was provided in five major groups: white, South Asian, black, mixed and other. The proportion of women reached by phone reminders, proportion of women in each ethnic group and uptake in 2007 and 2010 were recorded for each practice.

There being no control group without the intervention, the estimate of this effect of the intervention was based on the effect of completeness of contact in the telephone campaign on the uptake of screening at practice level. Data were analysed by logistic regression[13] with outcome the attendance in