

## Research Paper

# Breast screening uptake in Polish women in Scotland

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### What is known?

1. Breast screening uptake in Scotland has been steadily decreasing in recent years; uptake is lowest among migrant and ethnic minority women.
2. Many Polish women have migrated to Scotland since 2004 but their uptake of breast screening is unknown.
3. Poland has had a breast screening programme in place since 2007 with significant differences to that in Scotland.

### What this paper adds

1. Polish women have lower uptake of breast screening compared with the Scottish population.
2. Poland has a breast screening programme and culture significantly different to that in Scotland.
3. New migrants such as Poles have access to two different breast screening programmes. How this affects their choices and screening uptake merits further investigation.

## ABSTRACT

We describe the uptake of breast screening in Polish women living in the Lothian region of Scotland 2010-13. This was done by matching Scottish Breast Screening Programme uptake data to Polish and other ethnicity (determined using OnoMAP). We calculated uptake rate in Polish women and compared this with the uptake in all other women. In 2010-13 553 Polish women were invited for screening in Lothian and 258 attended giving an uptake of 46.7% (compared with 70.7% for all other women).

Breast screening levels in Polish women are considerably lower than for other women. While other ethnic minorities also have lower uptake, the dynamics and explanations of this may be different for Polish women. This low uptake in Lothian and the reasons for it are likely to be similar throughout the United Kingdom. These reasons, including the potential influence of the breast screening programme in Poland, require further investigation.

## Introduction

### Including raising the uptake of cancer screening

Cancer outcomes in the United Kingdom lag behind other developed countries worldwide (Coleman et al. 2011) Patient pathways and particularly late presentation contribute to these poor results. Consequently, the United Kingdom, health systems now have target-driven programmes dedicated to earlier detection of cancer including raising uptake of cancer screening programmes. (Scottish Government, 2012, Independent Cancer Taskforce, 2015)

In Scotland the Detect Cancer Early programme aims to increase the proportion of breast, bowel and lung cancers detected at Stage 1 and therefore improving breast cancer screening uptake is a priority (Scottish Government, 2012). This has been slowly falling from a high of 76.5% in the 2004-07 period to 72.9% in 2011-14. (Information Services Division, 2014) The decline has been attributed to several factors including lack of an explicit role for primary care in the programme and the increasing diversity of populations. (Jack et al., 2014a, Lu et al., 2012, Bansal et al., 2012) Additionally including women for whom screening

is not appropriate (such as being on breast cancer treatment or follow-up or have recently had mammography) in the denominator population raises the concern that uptake levels are artificially deflated. (Mead et al., 2015)

It is well recognised that screening uptake is significantly lower in migrant and ethnic minority groups. (Jack et al., 2014b, Bansal et al., 2012) The literature on these groups is mainly focussed on South Asian or black populations and to our knowledge there are no reports about the breast screening experience of new European migrants. These are people who have arrived in the United Kingdom since the 2004 European Union expansion when the Accession 8 countries joined; A8 countries = Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia. People from Poland form the largest ethnic minority group from the A8 countries in Scotland. The 2011 census shows that of 76,698 A8 nationals living in Scotland 55,231 are Polish, 15,690 of whom live in Lothian (Registrar General for Scotland, 2014).

## Method

We utilised data from the Scottish Breast Screening

Programme (SBSP) screening database to study breast screening uptake in Lothian's Polish community. The SBSP invites women aged 50-70 for screening every 3 years. Those aged 71 or over are able to self-refer to their local screening centre. To facilitate patient access, screening mammography is available at both breast screening centres and from mobile mammography trailer units, which move around the region to give ready access to women living nearby. Women registered with General Practices in the same geographical area are called for screening at the same time and interpretation is available for women if required. To be included in the programme women must be registered with a General Practice meaning that they have a unique Community Health Index number (CHI) which is the key identifier used in health systems in Scotland. Other than a tiny number of women who opt out of breast screening, exclusion criteria are limited to women with bilateral mastectomy or with terminal illness.

The SBSP provided NHS Lothian with the detailed screening history of all Lothian resident women invited for screening for three financial years 2010-11, 2011-12 and 2012-13. Where a woman was invited more than once (under 5% of women) the most recent invitation was selected. The CHI and SBSP datasets both include the CHI number which we used for matching.

NHS Lothian retains 6 monthly CHI database extracts and these were combined for 2009 - 2015 capturing everyone registered with a general practitioner in Lothian over that period. The OnoMAP programme, which classifies people into their cultural or ethnic groups based on characteristics of their name, was run on this combined CHI file to attach nationality information (Lakha et al., 2011). The cohort of women of Polish ethnicity invited for breast screening in Lothian over 2010-13 was thus identified and matched to the screening data extract.

The OnoMAP sub group category Polish was used to compare Polish and non-Polish breast screening uptake. Having identified the eligible cohort of Lothian women we calculated the attendance rate for these women in each year and confidence intervals overall.

## Results and discussion

553 Polish women were invited for screening in Lothian over the three financial years 2010-2013. 258 attended giving an uptake of 46.7% compared with 70.7% for all other women (Table 1).

The uptake of breast screening in Polish women in Lothian was 46.7% and significantly lower than the 70.7% in the rest of the population. Bansal et al., (2012) reporting on their Scottish census linkage study using 2001 data also showed lower uptake

levels for Indian (67.3%), Pakistani (58.1%) and African (62.6%) women. Therefore the lower Polish uptake levels we demonstrate are shared by other ethnic minorities in Scotland. Although methods and time periods differ, comparisons between this study and Bansal's work suggest that uptake rates in Polish women are possibly even lower than other ethnic minority groups in Lothian.

OnoMAP identifies very few false positives when attributing Polish ethnicity. This high sensitivity is a strength of our study and we are confident that these women are of Polish ethnicity. Nonetheless a small proportion of women identified as 'Polish' may simply have Polish names and represent the legacy of a previous phase of immigration or have married a recent Polish migrant and not be new migrants. The mobility of new migrant populations is high and must be considered when interpreting our findings. We captured women registered with a general practitioner but a small proportion of Polish women permanently resident in Lothian will not be registered. They are thus not included in the denominator while conversely others who have moved away but remain on practice lists will be and recorded as non-attenders which will artificially reduce the uptake rate.

In the three years studied, uptake rate fell in both groups, statistically significantly so in the comparator women. The decline from 50.8% to 42.3% in Polish uptake is concerning and requires more study. Considering the large number of Polish women in Scotland, the lower screening uptake has important practical implications both for individual women and the performance of the SBSP. It is important to understand why the uptake is so low. One key factor might be the fact that Polish migrants to Scotland often visit 'home' and may use health services in Poland as well as Scotland (Gorman et al. 2014). Certainly opportunistic mammography, effectively unavailable in the United Kingdom, is widely available and popular with women in Poland and data concerning these investigations will not appear in the screening programme statistics. Poland has also had a national breast screening programme (offering biannual breast mammography) for women aged 50 - 69 in place since 2007. This programme differs from those in the United Kingdom as it includes women who have had mammography for clinical reasons in their database. (Matkowski and Szynglarewicz, 2011, Amelio, 2013) Its uptake is low - reported as 43% in 2013. (Polish Society of Oncology, 2014) While the Polish and Scottish programmes are broadly similar there are significant differences in access and how readily available it is. The features of each programme and their differences are known to Polish women living in Scotland. They will obviously utilise their knowledge of both programmes in deciding if and where to be screened.

**Table 1:** Comparison in mammography uptake between Polish and other women in Scotland 2010-13.

	Polish women			Other women		
	Invited	Attended	Uptake rate (%)	Invited	Attended	Uptake rate (%)
2010/11	193	98	50.8% (CI: 43.8%, 57.7%)	32,632	23,210	71.1% (CI: 70.6%, 71.6%)
2011/12	121	59	48.8% (CI: 40.0%, 57.6%)	24,966	17,981	72.0% (CI: 71.5%, 72.6%)
2012/13	239	101	42.3% (CI: 36.2%, 48.6%)	35,094	24,340	69.4% (CI: 68.9%, 69.8%)
Total	553	258	46.7% (CI: 42.5%, 50.8%)	92,692	65,531	70.7% (CI: 70.4%, 71.0%)

From anecdotal reports it is known that women may take up 'profilaktyka' (as prophylactic services such as screening are described) and have breast screening while on visits to Poland. It is important to understand the extent of this behaviour and how it affects uptake of breast screening in Scotland. The NHS should consider revising the information we give to women and clinicians to at least acknowledge the existence of different national screening programmes.

Some barriers to screening are common to all women: fear of the test, deprivation, time pressures, cancer fatalism or candidacy - not believing themselves to be at risk (Pfeffer, 2004). Other reasons more specific to ethnic minorities are largely attributed to communication difficulties and different cultural expectations (Jack et al., 2014a, Lu et al., 2012). All of these shape attendance behaviours. However the fact that many new European migrants come from countries with existing national breast screening programmes represents a new dimension in Scotland and also the other countries of the United Kingdom. This is a dynamic not present in ethnic groups from less developed countries without population based breast screening.

Many people are moving between European countries with different levels of breast cancer and women can easily participate in more than one breast screening programme. These programmes may be substantially different and every opportunity to intervene to improve women's informed choice and increase breast screening levels across Europe should be explored (Giordano et al., 2012).

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