DO MAMMOGRAPHY SCREENING PROGRAMMES REACH IMMIGRANT WOMEN?

A TELEPHONE SURVEY OF SEVEN EUROPEAN COUNTRIES

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ABSTRACT

Introduction: Immigrant women residing in Norway have lower rates of breast cancer, but the tumours are diagnosed at a later stage, giving worse prognosis and higher mortality rates compared with Norwegian-born women. The aim of this study is to shed light on breast screening programmes in Europe to see if women from all ethnic groups have access to and whether they participate in screening programmes.

Method: A questionnaire was pre pared regarding participation in breast cancer screening, including special considerations for immigrant women. Contact persons at European cancer screening programmes in UK, Austria, Norway, Finland, Sweden, Denmark and France were interviewed in semi-structured phone interviews followed up by a structured literature search.

Results: Population-based breast cancer screening programmes were available free of charge in six countries, with a re-payment in Norway. Screening invitations were written in the countries' main language. The participation rate in the UK, Austria, Norway, Finland, Sweden, Denmark and France varied between 72% and 87%, independent of the percentage of immigrants in the country. Compared to women born in the country immigrant women were thought to show a lower participation rate in national screening programmes, though some countries work through immigrant organizations to reach more women from these groups.

Conclusions: To reach all eligible women, a combined approach, adapted to the target population to ensure that all women have the same chance for early diagnosis and life-saving treatment, is needed. Participation in organized programmes for breast cancer should be free of charge.

INTRODUCTION

Though European countries have made good progress in reducing disease specific deaths in recent years, significant differences remain between countries, and many thousands of cancer deaths could be avoided each year if best practice in early detection were applied equally in all Member States.

Breast cancer is the second leading cause of death in the industrialized countries and breast cancer is by far the most frequent cancer death in women. Screening programmes are either publicly or privately funded.

As an example the situation in Norway is outlined. There were 2965 new cases of breast cancer in women, with a mortality of 84% in 2010, and 2011. As the number of immigrants in European countries varies, but they constitute a non-negligible proportion of between 4 and 29% of the total population, and the proportion is on the increase in many countries. By the 1 July 2005 the immigrant population [immigrants and their descendants] comprised 14.9% of the Norwegian population. This immigrant population included immigrants from 222 different countries.

Exploration of variables such as social position or ethnic background in studies of equity in public screening programmes in Europe is of major importance. People emigrate for different reasons, and it would be incorrect to consider immigrants as a monolithic group. Nevertheless, immigrant women can be considered a vulnerable group, underserved by both the scientific and health care communities, and the International Commission on Radiological Protection (ICRP) 2011. Certification of ethnic origin in public registers.

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The highest incidence of cancer found in women in Norway is breast cancer, and one in 12 Norwegian women will develop this disease before the age of 75.

This study aims to investigate immigrant women's perceived access and participation in organised screening programmes for breast cancer in Norway and six other European countries.

METHODS
The study presented here is based on a telephone survey and designed to give a comprehensive picture of immigrants' participation in breast cancer screening programmes in different countries. We chose four Nordic countries, all with almost similar health care models, and the three other countries in different parts of Europe. Semi-structured telephone interviews with key informants from the UK, Austria, France, Norway, Finland, Sweden, and Denmark were conducted. Those key informants held central positions in the various cancer screening organisations holding valuable information on the topic. The key informants were identified by the Norwegian Cancer Registry on recognized organizations and a list delivered at an international meeting at the beginning of the study. All data were collected during 2013.

INTERVIEWING AND RECORDING
Seven telephone interviews were conducted. A recording device to improve accuracy and internal validity documented the interviews. Respondents were assured anonymity. Each telephone interview lasted between 20 and 45 minutes.

Two co-authors were present during each interview, taking notes on the semi-structured questionnaire developed for the purpose of the study. Inclusion was dependent on a verbal informed consent following a short description of the study. The interviews were transcribed and the data verified individually.

Additionally, a structured literature search was performed, and 15 of 442 references were included in the analysis.

ANALYSIS
For the purpose of analysis and within the framework of grounded theory, data gained from our recordings were coded and grouped. The further information from the different interviews was compared.

LIMITATIONS OF THE STUDY
Data obtained express the perceived access and participation of immigrant women in organized screening programmes. Additionally only one key informante was interviewed in each of the included countries. By having only qualitative data we cannot reach scientifically based generalizations, but the outcome consensus among our informants about immigrant women's participation in national breast cancer screening programmes is nevertheless clear. Recall bias must be accounted for, because informants relied solely on their memory. Ethics

The Regional Committee for Medical and Health Research Ethics of Norway (REK) approved this research project.

RESULTS & DISCUSSION
According to The Cancer Registry of Norway, the incidence rate of breast cancer in Norway rose until 2005. Since 2005, the incidence has shown a plateau, with a slight decrease for the last five-year period.[14] The attendance rate in the screening programme in 2012 was 75%.[14] Based on our informants' participation rates for immigrant women in the UK, Austria, Norway, Finland, Sweden, Denmark, and France were considered lower than participation of the non-immigrant population. Comparing results for population can be seen in Table 1. As data registry do not record ethnicity or country of origin, the actual attendance rates by ethnicity or country of origin remain uncertain.

Breast cancer screening by mammography in the investigated countries is restricted to certain age groups. Enrolment to the mammography screening program is made by mail, based on the population registry, except in the UK, where there is no population registry. Here it is based on the GP patient list. Organized invitation letters are only sent in the official language of the country in question, except for Austria, where there are additional letters in Turkish and Bosnian (Serbo-Croatian). The enrolment letters in the UK are sent in English with reference to a website with information in various languages.

Our results showed that screening programmes are provided by the public health system free of charge except for Norway, where mammography screening requires a co-payment, corresponding to about two hours' wage before taxes for an unskilled worker.[15] All informants told us that their experience was that: that minority groups are not reached, but at the same time none of the countries today had statistical evidence. No country included in the study has information indicating in which country the women were born, due to data protection laws prohibiting the identification of birth country in public registries or due to lack of linkages between different registries. Data on birth country negativity or mother tongue would be necessary for language adjustment of the enrolment letter. The attendance rate for immigrants is an estimation performed by our key informants.

All informants from the seven countries had the impression that immigrant women had a much lower participation rate than native women. The representative lists of immigrants expressed it as a big difference – we have a high number of immigrants but low participation.

We found further that authorities in Austria, UK, France and Denmark had extensive collaboration with immigrant organizations to reach out to the immigrant population with a general nationwide approach. As immigrants often reside in clusters and designated areas, authorities in the UK, Norway, France and Denmark made additional efforts to target those areas with adapted information. Our informants estimated that access for immigrant women is lower than for native women, while focusing on the need to know the actual participation of minorities in the screening programme. Immigrants will continue to make up an increasing and significant part of the urban and rural population of Europe.

For Europe as a multicultural society, equity is a central value of multiculturalism. It is necessary to make an effort to maintain respect for differences while recognizing that some differences coincide against equity.

This study indicates that immigrant women in various countries in Europe do not participate in screening programs at the same rate as women from the majority population. There-

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**TABLE 1**

Comparison: Breast cancer screening in seven different countries in Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Norway</th>
<th>Finland</th>
<th>Sweden</th>
<th>Germany</th>
<th>Austria</th>
<th>France</th>
<th>UK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform screening</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes*</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Cost to participants</td>
<td>yes, a fee</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Participation rate (year)</td>
<td>75% (2009)</td>
<td>87.4% (2006)</td>
<td>72.0% (2006)</td>
<td>73.7% (2006)</td>
<td>80.1% (2005)</td>
<td>75.4% (2005)</td>
<td>75.3% (2005)</td>
</tr>
<tr>
<td>Enrolment letter in:</td>
<td>Norwegian</td>
<td>Finnish</td>
<td>Swedish</td>
<td>Danish</td>
<td>German + Bosnian + Turkish</td>
<td>French</td>
<td>English</td>
</tr>
<tr>
<td>Knowledge of country of origin in program</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Collaboration with immigrant organization</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*Country wide from autumn 2013
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In the context of healthcare in Europe, mammography screening programmes have been widely implemented to detect breast cancer at an early stage. However, the effectiveness of these programmes in immigrant populations may be affected by several factors, including language barriers, cultural differences, and access to healthcare services.

1. **References**
   - [EU Council Recommendation on Cancer Screening](https://www.eurosurveillance.org/conv/10/100002.pdf)
   - [EULAR Recommendations on Breast Screening](https://www.eular.org/eular/recommendations/2020/02/04/BREAST-Screening-EULAR.pdf)
   - [WHO Guidelines on Breast Cancer Screening](https://www.who.int/publications/i/item/9789241566443)

2. **Conclusion**
   - In conclusion, mammography screening programmes in immigrant populations should be tailored to address specific cultural and linguistic needs, ensuring equal access to healthcare services. This can be achieved through the collaboration of healthcare providers and community organizations, ensuring that screening programmes are accessible and culturally sensitive.

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**Conflict of Interest**
None.

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**Do mammography screening programmes each immigrant women?**

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