Refugee and Refugee-claimant Women and Infants Post-birth
Migration Histories as a Predictor of Canadian Health System Response to Needs

Anita J. Gagnon, RN, MPH, PhD1,2 Elizabeth Stanger, MA5
Geoffrey Dougherty, MDCM, MSc, FRCPc1,2 Jacqueline Oxman-Martínez, PhD6
Robert W. Platt, PhD1,2 Jean-François Saucier, MD, PhD7
Olive Wahoush, RN, MSc, PhD3 Lisa Merry, RN, MSc(A)1,2
Anne George, PhD4 Donna E. Stewart, MD, FRCPc8

ABSTRACT

Background: Minority women from conflict-laden areas with limited host-country knowledge are among the most vulnerable migrants. Their risk status and that of their infants is magnified during pregnancy, birth, and post-birth. We conducted a study to determine whether women’s postnatal health concerns were addressed by the Canadian health system differentially based on migration status (refugee, refugee-claimant, immigrant, and Canadian-born) or city of residence.

Methods: Women speaking any of 13 languages were recruited (with their infants) from postpartum units in the main Canadian receiving cities for newcomers (Toronto, Montreal, Vancouver; total n = 341 pairs from 10 hospitals) and followed at home after birth. Our primary interest was ‘unaddressed concerns’: nurse-identified health concerns based on standards of postpartum care for the woman/infant at 7-10 days post-birth, for which no professional attention had been given or planned.

Results: A difference in unaddressed concerns by migration status was not found in our primary model [OR refugees vs. Canadian-born = 1.40 (95% CI: 0.67-2.93); refugee-claimants, 1.20 (0.61-2.34); immigrants, 1.02 (0.56-1.85)] although differences by city of residence remained after controlling for migration status, income, education, maternal region of birth, language ability, referral status, and type of birth [Toronto vs. Vancouver OR = 3.63 (95% CI: 2.00-6.57); Montreal, 1.88 (1.15-3.09)]. The odds of unaddressed concerns were greater in all migrant groups [OR refugees vs. Canadian-born = 2.42 (95% CI: 1.51-3.87); refugee-claimants, 1.64 (1.07-2.49); immigrants, 1.54 (1.00-2.36)] when analyses excluded variables which may be on the causal pathway.

Interpretation: Women and their newborn infants living in Toronto or Montreal may require additional support in having their health and social concerns addressed. The definitive effect of migrant group needs confirmation in larger studies.

MeSH terms: Refugees; maternal health services; women; pregnancy; postnatal care; infant; newborn; emigration and immigration

La traduction du résumé se trouve à la fin de l'article.

1. McGill University, Montreal, QC
2. McGill University Health Centre
3. McMaster University, Hamilton, ON
4. University of British Columbia, Vancouver, BC
5. Provincial Health Services Authority
6. Université de Montréal
7. Centre hospitalier universitaire de mère enfant, L’Hôpital Sainte-Justine
8. University Health Network, University of Toronto, Toronto, ON

Correspondence: Dr. Anita J. Gagnon, William Dawson Scholar & FRSQ Senior Research Scholar, Associate Professor, School of Nursing & Department of Obstetrics and Gynecology, McGill University, 3506 University St., Montreal, QC H3A 2A7, Tel: 514-843-1419, Fax: 514-843-1439, E-mail: anita.gagnon@mcgill.ca

Acknowledgements: This study was funded by the Canadian Institutes of Health Services and Policy Research and of Gender and Health Research (CIHR #P93555), the Réseau de recherche en santé des populations, and Immigration et métropoles. Le fonds de la recherche en santé du Québec (FRSQ) provided career support to Anita J. Gagnon. CIHR (1999-2004) and the McGill University Faculty of Medicine (2004-05) provided career support to Robert W. Platt. We received in-kind contributions from the Montreal Regional Health Board interpreter services. We acknowledge the assistance of Yongjun Gao in performing the statistical analyses.

Forced migration has increased worldwide, with Canada receiving one of the largest proportions of refugees to industrialized countries.1 Of these, visible minority women with abuse histories, forced to leave their countries, separated from families, with limited knowledge of French or English, and pregnant, are among those at greatest health risk.2,3 Refugee-claimants experience additional stress regarding their uncertain futures and have limited health service eligibility.4 Further, access to services for refugees and refugee-claimants varies by province.4

Short post-birth stays in Canadian hospitals and variable community follow-up, which could result in untoward outcomes,5 combined with steady numbers of arriving refugees, suggest the need for ensuring that care requirements of this group are being met post-birth. To estimate the magnitude of their unmet service needs, we sought to recruit and follow a representative sample of recently arrived refugee, refugee-claimant, non-refugee immigrant, and Canadian-born women immediately post-birth.

Our study question was: Are women’s/infants’ postnatal health concerns addressed by the Canadian health system differentially based on migration status (refugee, refugee-claimant, immigrant, and Canadian-born) or city of residence (Toronto, Montreal and Vancouver)?

METHODS

Study population
Logs of births to women consecutively giving birth at 10 hospitals serving a high volume of newcomers in the three cities receiving the greatest percentage of refugees for resettlement to Canada (i.e., Toronto, Montreal, Vancouver) were reviewed to identify eligible women. Women were eligible if they planned to remain in the city 2 weeks postpartum, were able to speak one of the study languages, lived within 45 minutes of the project nurse, and were discharged by day 4 for vaginal births or day 7 for caesareans. They were defined as: refugees if they met the UN definition within the last 5 years: "owing to a well-founded fear of being persecuted for reasons of race, religion, nationality, membership in a particular social group, or political opinion, is outside the country of his nationality, and is unable to or, owing to such fear, is
unwilling to avail himself of the protection of that country; refugee-claimants if they applied for refugee status within Canada in the last 5 years or had no known immigration status; non-refugee immigrants if they immigrated within the last 5 years with non-refugee histories; or Canadian-born if they were born in Canada. Women were excluded if they had a major hearing impairment/mental illness, cognitive impairment precluding informed consent, held a “visitor” visa, planned to leave Canada within 1 month, or their infant was to be adopted or had died. All eligible refugees and refugee-claimants were recruited from January 2003 to April 2004 and visited at 1 week postpartum (10 days for cesareans). Because more non-refugee women were available for comparison, we alternated recruitment of immigrant and Canadian-born women by matching those who had delivered at the closest date and time to each recruited refugee/refugee-claimant. Ethics approval from each university and hospital was obtained. Tri-Council Guidelines were followed. Eligibility, consent, and general information were obtained by research assistants on postpartum units using consent forms and questionnaires culturally validated by members of the most common source countries for newcomers to Canada and translated into 13 languages [Arabic, Dari/Persian, English, French, Mandarin/Cantonese (oral; ‘simple’ and ‘complex’ Chinese written), Punjabi, Russian, Serbo-Croatian, Somali, Spanish, Tamil, and Urdu]. Family support and/or interpreters by telephone were used if needed.

Data collection
In addition to questionnaire data, pregnancy, birth, length of hospital stay and health and social needs data were extracted from hospital records. Outcome data on health and social needs at 7-10 days post-birth (based on national guidelines), and services planned or provided were determined by a nurse (to whom migration group was not revealed) during a home visit. Questionnaires included visual analogue scales (VAS) for pain, the Edinburgh Postnatal Depression Scale (EPDS), the Personal Resources Questionnaire (PRQ), and the Abuse Assessment Scale (AAS).

The health system response to concerns was our primary interest. “Unaddressed concern” was defined as a nurse-identified concern based on standards of postpartum care for either the woman or her infant at 7-10 days post-birth (see Table 1), for which no professional attention had been given or was planned. Therefore, patients identified as having no concerns at the time of the visit, or having had concerns that were addressed or for which plans were in place to address them, were categorized as having ‘no unaddressed concerns.’ Subjective concerns were made as objective as possible by applying standardized assessment criteria (e.g., EPDS score ≥12). Care received during the first 7-10 days post-birth was determined via maternal report solicited by the nurse. All project nurses’ records and all maternal reports of care were reviewed by an independent “expert” nurse (i.e., midwife with 30 years’ experience), blind to the research question and group status, to determine the existence of concerns and if they were being addressed.

A pilot study suggested that 65% of women born outside Canada (refugees, refugee-claimants, and immigrants combined) had not had their concerns addressed within the first week postpartum. Literature on these subgroups indicated that the asylum-seekers would have the greatest percentage of unaddressed concerns (75%), followed by refugees (60%), immigrants (45%), and Canadian-born (25%). Using these figures, an alpha of .05 and beta of .2, we estimated a need for 586 women-infant pairs in total to detect these differences.

### Statistical analyses
The proportion of mother-infant pairs with unaddressed concerns was estimated. Group differences were compared using F,
chi-squared and Fisher’s exact tests. We used the proportional-odds model for logistic regression with multinomial outcomes (outcome = unaddressed concern/presence of concern) to control for confounding.

**RESULTS**

Figure 1 shows the study sample evolution. Recruitment rates differed by city – the full sample of 201 women-infant pairs was recruited in Montreal, 103 in Toronto (reduced as a result of a SARS outbreak), and 37 in Vancouver (reduced due to early administrative setbacks and smaller percentages of refugee arrivals). A total of 341 from all 4 groups received home visits. Of these, 65 were refugees; 109, refugee-claimants; 94, non-refugee immigrants; and 73, Canadian-born. Groups differed on factors related to language ability, with greater assistance needed in the migrant groups for answering questions at the home visit (refugees 47.7%, refugee-claimant 33.9%, and immigrants 28.75% vs. Canadian-born 4.1%; p<0.0001), greater use of interpreters [refugees 24.6%, refugee-claimants 17.4%, and immigrants 13.8% vs. Canadian-born 0% (p=0.0003)], and greater use of “other language” questionnaires (50.8% refugees, 32.1% refugee-claimants, 25.5% immigrants, 0% Canadian-born; p<0.0001).

For the sample as a whole, the most common unaddressed concerns were postpartum depression (n=58), moderate or greater “other” pain (n=48), and maternal blood pressure aberrations (n=47). Canadian-born women had fewer unaddressed concerns (66.7% vs. 80.2%-87.3% for the migrant groups). The number of unaddressed concerns ranged from 1 to 7 with the mode for each group being one unaddressed concern (29.1%-42.6%). Maternal blood pressure aberrations were unaddressed in 44.4% of Canadian-born vs. 70.6%-87.5% of migrant women (p=0.09).

The maximum proportional logistic model included group (3 categories; “Canadian-born” reference), city (2; “Vancouver” reference), household income (“$≥20,000” reference), language at recruitment (“English or French” reference), referral (“no” reference), time to home visit (“≥14 days” reference – ultimately removed), type of birth (“vaginal” reference), education (“completed more than high school” reference), and geographic region of birth (3 regions; “N. America or Europe” reference).

The odds of unaddressed concerns are presented in Table II. The odds controlling for all variables (including those that could be on the causal pathway) did not significantly differ between refugees, refugee-claimants, immigrants, or Canadian-born (column 1). Odds related to city of birth regardless of migrant status
did differ with odds greater than three [3.63 (2.00-6.57)] for Toronto and nearly two for Montreal [1.88 (1.15-3.09)]. City differences were found in migration group, language, income, education, region of maternal birth, cesarean birth rate, and time to home visit – these were consequently controlled for in the models. Odds by Asian maternal region of birth were almost twice those of North America or Europe [1.96 (1.17-3.30)]. Women with lower education were more likely to have their concerns unaddressed [1.45 (1.02-2.05)]. The proportion of unaddressed concerns was not explained by income, language ability, referral by hospital, or cesarean birth. The second column gives results when variables closely related to migrant group status are not controlled for and show that the odds of unaddressed concerns are greater in all migrant groups than in Canadian-born [OR refugees vs. Canadian-born = 2.42 (95% CI: 1.51-3.87); refugee-claimants, 1.64 (1.07-2.49); immigrants, 1.54 (1.00-2.36)]. Results for all other variables remaining in the model are similar to those of the larger model.

DISCUSSION

In our primary model, there was no statistically significant difference in unaddressed concerns by migration status, however a difference in unaddressed concerns was found by city of residence. The absence of a statistically significant effect by migration status could be the result of diminished statistical power, or the conservative approach taken to risk estimation (in which variables which may have been on the causal pathway were controlled for), or both. A secondary model excluding variables which may have been on the causal pathway information, and were often unsure of their categories. Working in several languages resulted in lengthier interviews which may have reduced participation. The existence of SARS in Toronto led to prohibitions on recruitment by hospitals and reduced confidence in health-related staff, including research staff.

Standardizing assessments of health care provision is inherently difficult in health services research. However, we believe the assessments made in our study were as standardized as they could have been.

Implications

Canadian policy-makers may wish to place renewed emphasis on maternal-infant health care provision in each of our three largest cities to ensure the system is responding to the needs of mothers and infants post-birth, especially given the very large migrant populations in Canada’s major cities and their generally higher birth rates.

CONCLUSION

There was no statistically significant difference in unaddressed concerns by migration status, perhaps due to statistical power and conservative analyses; differences in care provision by city were identified, suggesting that women and their newborn infants living in the largest Canadian cities may require additional support in having their health and social concerns addressed, although this requires additional confirmation. Differences in frequency of occurrence of unaddressed concerns by migrant group were observed in less conservative analyses.

REFERENCES

Preparing for pandemic influenza: What family physicians should know

Family physicians play a major role in planning for and managing pandemic influenza. It is estimated that up to 35% of the population, including your staff and patients, will become clinically ill in the event of pandemic influenza and 0.4% of the clinically ill could die. This document outlines important steps that you should follow to ensure that your practice is prepared for a pandemic outbreak both in terms of infection control and service continuity.

Ask your Medical Officer of Health about your role during a pandemic influenza.

www.pandemic.cpha.ca

A message from the Canadian Public Health Association and the College of Family Physicians of Canada.

Ce que les médecins de famille doivent savoir en prévision d’une pandémie d’influenza

Les médecins de famille jouent un grand rôle dans la planification et la gestion d’une pandémie d’influenza. On estime que 35% de la population, y compris parmi vos employés et vos patients, seront cliniquement malades lors d’une telle pandémie, et que 0,4% des personnes cliniquement malades pourraient en mourir. Voici, dans ses grandes lignes, la marche à suivre pour vous assurer que votre cabinet est prêt à cette éventualité, tant du point de vue du contrôle de l’infection que du maintien des services.

Demandez à votre directeur de la santé publique quel serait votre rôle lors d’une pandémie d’influenza.

www.pandemic.cpha.ca

A message from the Canadian Public Health Association and the College of Family Physicians of Canada.

Un message de l’Association canadienne de santé publique et le Collège des médecins de famille du Canada.