The Borders that Remain: Prevention of Cervical Cancer in Refugee and Immigrant Women in Canada

Matthew Beckett, MSc[1]

[1] Faculty of Medicine, Memorial University of Newfoundland

ABSTRACT

Objectives: Cancer of the uterine cervix is primarily caused by infection of human papillomavirus (HPV), and annually results in the deaths of 266,000 women worldwide. Screening for cervical cancer, predominantly via Papanicolau (Pap) tests, has tremendously reduced cervical cancer morbidity and mortality in many developed countries, Canada included. Vaccination against HPV also shows great potential as a preventative measure. Unfortunately, refugee and recently immigrated women are among the least likely to participate in screening or vaccination at rates recommended by national and provincial guidelines. To gain insight into the barriers faced by refugee women in their access to preventative measures against cervical cancer, it is imperative that we understand the current state of screening and vaccination in this population, and the cultural and systemic barriers by which they are affected.

Methods: To gather information on prevention of cervical cancer in refugee women in Canada, three databases were searched: PubMed, CINAHL, and Web of Science. A total of thirteen studies were analyzed, as well as eight other supplemental resources.

Results: Rates of cervical cancer screening among refugee and immigrant women were consistently lower than those recommended by provincial guidelines. However, little research dedicated to analyzing HPV vaccination rates of refugees exists. Predictors of low screening and vaccination rates included low socioeconomic factors, recent entry into Canada, and lack of proficiency in English, whereas indicators of screening participation include longer duration spent in Canada, proficiency in English, and access to female physicians and physicians of a similar ethnic background. Screening rates were notably high in an Ontario facility that offers multidisciplinary support to refugees. Furthermore, a study in the Netherlands has drawn attention to the cultural differences that can act as a barrier to HPV vaccination for immigrants and refugees in Western countries.

Conclusions: Preventative health care initiatives should consider the barriers specific to the population at which they are aimed, and work in close collaboration with multidisciplinary settlement services. Further research regarding HPV vaccination rates among refugees in Canada is also required. In light of the current global refugee crisis, applying the insight gained from this research to the incoming Syrian refugee population will be of vital importance.

RÉSUMÉ

Objectifs: Le cancer du col de l'utérus est causé principalement par le virus du papillome humain (VPH), et est responsable du décès de 266 000 femmes annuellement à l'échelle mondiale. Le dépistage du cancer du col de l'utérus, notamment avec le frottis de Papanicolaou (test Pap), a vastement réduit la morbidité et la mortalité dues au cancer du col utérin dans plusieurs pays développés, incluant le Canada. La vaccination contre le VPH démontre aussi un grand potentiel en tant que mesure préventive. Malheureusement, les femmes réfugiées et les femmes ayant récemment immigré sont parmi les moins susceptibles de participer au dépistage et à la vaccination aux taux recommandés par les lignes directrices nationales et provinciales. Pour mieux comprendre les obstacles auxquels font face les femmes réfugiées en ce qui a trait à l'accès aux mesures préventives contre le cancer du col utérin, il est impératif de comprendre l'état actuel du dépistage et de la vaccination de cette population, et les obstacles culturels et systémiques qui les affectent.

Méthodes: Pour rassembler de l'information sur la prévention du cancer du col de l'utérus chez les femmes réfugiées au Canada, trois bases de données ont été examinées : PubMed, CINAHL et Web of Science. Un total de treize études ont été analysées, ainsi que huit autres ressources supplémentaires.

Résultats: Les taux de dépistage du cancer du col de l'utérus parmi les femmes réfugiées et immigrantes étaient invariablement plus bas que ceux recommandés par les lignes directrices provinciales. Toutefois, il existe peu de recherche dévouée à l'analyse des taux de vaccination contre le VPH chez les réfugiés. Les facteurs prédictifs de faibles taux de dépistage et de vaccination incluent les facteurs socio-économiques faibles, l'arrivée récente au Canada et le manque de compétence en anglais, tandis que les indicateurs prédictifs de participation au dépistage incluent un plus long séjour au Canada, la maîtrise de l'anglais, et l'accès à des femmes médecins et des médecins d'origine ethnique similaire. Les taux de dépistage étaient particulièrement élevés dans un établissement ontarien offrant du soutien multidisciplinaire aux réfugiés. En outre, une étude aux Pays-Bas a attiré l'attention sur les différences culturelles pouvant agir comme obstacle à la vaccination contre le VPH pour les immigrants et réfugiés dans les pays occidentaux.

Conclusions: Les initiatives de soins de santé préventifs devraient considérer les obstacles précis auxquels fait face la population ciblée, et devraient travailler en étroite collaboration avec les services multidisciplinaires d'établissement. Plus de recherche sur les taux de vaccination contre le VPH parmi les réfugiés au Canada est également nécessaire. À la lumière de l'actuelle crise mondiale de réfugiés, l'application des connaissances acquises par l'entremise de cette recherche à la population de nouveaux réfugiés syriens sera d'importance vitale.

Keywords: Cervical Cancer; HPV; Pap Testing; Refugee

INTRODUCTION

Cervical cancer is the malignant, autonomous growth of cells of the uterine cervix [1]. It is primarily caused by chronic infection of an oncogenic form of human papillomavirus (HPV), which is transferred predominantly through sexual contact [2]. The fourth most common form of cancer, cervical cancer annually results in the deaths of 266,000 women worldwide, the majority of whom reside in low- to middle-income countries [3]. In developed countries, cervical cancer and associated death are more prevalent among women older than age 30 [2]. The Canadian Cancer Society currently estimates that 1500 women in Canada will receive a diagnosis of cervical cancer in the coming year, and 380 women will die with the disease [4]. This disease has become largely preventable in Canada and elsewhere due to advances in screening for cancerous or precancerous lesions, vaccination against HPV, and early treatment [5]. Canadian rates of cervical cancer are currently among the lowest in the world, the lifetime risk of diagnosis having fallen from 1.5% in the 1950s to 0.66% in the 2000s [6].

Routine cervical cancer screening among women is vital for disease prevention. Although HPV infection is common, subsequent development of cervical cancer is comparatively rare and progresses slowly [7]. Young women commonly contract transient HPV infections that do not manifest as cervical precancer or cancer, as development of the disease often requires years of chronic infection [1,2]. Therefore, while it is rare for women younger than 30 to develop cervical cancer, it is essential that women between ages 30 and 60 participate in regular screening [1,2]. In Canada, current guidelines suggest that women over the age of 21 receive a Papanicolau (Pap) test every one to three years, depending on provincial or territorial policies [7]. A Pap test is able to detect abnormal and potentially precancerous or cancerous cells of the cervix [7]. Widespread Pap screening has substantially reduced morbidity and mortality associated with cervical cancer [8]. Recently developed HPV-based screening techniques may provide further sensitivity and aid in the prevention of precancerous lesions if used in conjunction with Pap testing [9]. At this point, however, the Canadian Task Force on Preventative Health Care does not provide recommendations regarding HPV screening practice, stating that further evidence is necessary [9]. Recent initiatives to administer widespread HPV vaccination, particularly among school-aged girls and young adult women, have been predicted to decrease rates of cervical cancer significantly [10]. Women who do not participate in Pap testing, however, remain at highest risk following vaccination, demonstrating the necessity for continuous screening within the appropriate age range [10].

Although approximately 80% of Canadian women currently participate in recommended screening (largely due to population-based screening programs), those least likely to participate include women who have resided in Canada for less than 10 years and remain culturally and socially isolated [8]. Major indicators for low Pap test rates include low income and education, age, and recent entry into Canada [11]. Racial minorities are more likely to be diagnosed with cancers associated with infectious agents, a category that includes cancers of the cervix, stomach, and liver [12]. It is also more likely for patients of non-white populations to be diagnosed with cancers at more advanced, less treatable stages [12]. Refugee women in Canada comprise a population that often fits the above descriptors, and are therefore at high risk of developing undetected and potentially deadly cervical cancer. The World Health Organization defines a refugee as an individual outside of their home country, who is unable to return to their home country for reasonable fear of persecution on the grounds of race, religion, nationality, or affiliation with a certain group or opinion [13]. These individuals are often at high risk of morbidity and mortality in their new homes due to the factors discussed above. It is therefore essential that health care providers comprehend the complexities of these issues.

This review addresses cervical cancer prevention in refugee and immigrant women, drawing attention to the barriers faced by this population in their access to preventative health care. Primary topics of discussion include cervical cancer screening by way of Pap testing, and vaccination for HPV. By further understanding the issues facing refugees, the Canadian health care system can better mobilize preventative health initiatives to meet the needs of the incoming refugee population.

METHODS

To gather background information on the nature of cervical cancer, statistics regarding its morbidity and mortality, and current guidelines for its treatment and prevention, primarily non-academic sources were consulted. These included resources provided by the World Health Organization, the Canadian Cancer Society, and the Canadian Task Force on Preventative Health Care. These were found on the organizations' web sites, and no exclusionary criteria were necessary for this portion of data collection. Thus, six reports, web sites, or fact sheets from various organizations were used to gain foundational information regarding cervical cancer and its impact on the world today.

Upon gaining foundational knowledge regarding cervical cancer and immigrant and refugee populations, academic sources were analyzed. To determine the appropriate search criteria, central concepts, and key words coinciding with these concepts, were identified (**Figure 1**). Central concepts were identified as "refugee women," "cervical cancer," and "prevention." Sub-concepts under the "prevention" umbrella included "screening" and "vaccination." Key words, to be used for literature search, were then gathered for each major and minor concept. Under the concept

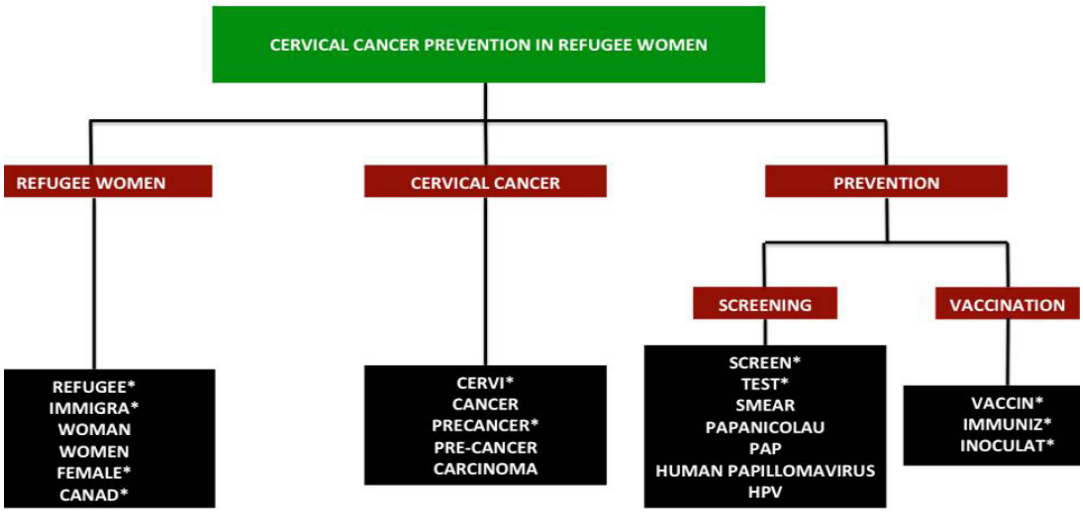

Figure 1: Schematic showing the identification of key words and concepts to be addressed by this literature review.

of "refugee women," key words included "refugee*," "immigra*," "women/woman," and "female*." Under the concept of "cervical cancer," key words included "cervi*," "cancer*," "precancer*," "pre-cancer*" and "carcinoma." Under the sub-concept of "screening," key words included "screen*," "test*," "smear," "Pap," "Papanicolau," "human papillomavirus" and "HPV." Under the sub-concept of "vaccination," key words included "vaccin*," "immuniz*," and "inoculat*" (note that "human papillomavirus" and "HPV" had already been identified when dissecting key words under the "screening" sub-concept). The key word "Canad*" was included as well. Thus, for three major concepts, 21 key words were identified.

To gather resources on the topic of cervical cancer prevention in refugee women, various combinations of the key words identified above were used to search three databases of relevant, peer-reviewed journals. These three databases were PubMed, CINAHL, and Web of Science. Abstracts were assessed for preliminary exclusionary criteria before being uploaded to the reference management software, Mendeley. Duplicates, review articles, non-English papers, and papers published before 2006 (i.e. more than 10 years ago) were immediately excluded. Abstracts detailing investigations of non-cervical cancers were often present in search results, but were excluded from this investigation. Abstracts detailing studies performed outside of Canada were initially excluded, but were reconsidered upon realization of how little research exists that explores rates of HPV vaccination in refugees in Canada. Of those that were reconsidered, a single Danish study [14] was included due to its qualitative and highly applicable analysis of health care barriers facing Somali women. Additional relevant studies were discovered upon review of references within those discovered via the databases named above. Thirteen unique abstracts detailing cervical cancer prevention in refugees were selected for inclusion in this review, as well as eight supplemental resources.

RESULTS AND DISCUSSION

Screening

In Canada, up to 80% of women are successfully reached by organized cervical cancer screening programs [8]. Refugee and immigrant women, however, have consistently shown rates of screening lower than recommended by provincial guidelines [11,15-19]. Several investigations have addressed rates of cervical cancer screening among refugee women and women who have recently immigrated to Canada. One Ontario study found that 46.9% of the study cohort of recent immigrant women was unscreened during the three-year study period [16]. When country or region of origin was analyzed, screening rates were often found to be lowest in women of South Asian origin [17,18], suggesting the importance of specific cultural differences in screening participation. Multiple socioeconomic factors were indicators for low screening rates, including low levels of education and income, minority status, lack of proficiency in English, older age, and recent entry into Canada [11,16,19] (**Figure 2**). Refugees are often of low education and income, causing these factors to become potentially confounding variables. After control for these variables, however, it was noted that women of this population still demonstrated a rate of compliance with provincial screening guidelines that was 23% lower than women born in Canada [11]. Higher income, higher levels of education, lower age, and longer duration spent in Canada were positively associated with an increase in screening frequency among refugees from most ethnic backgrounds, with Vietnamese women standing as an exception in the case of the latter factor [11,18]. One study, however, which

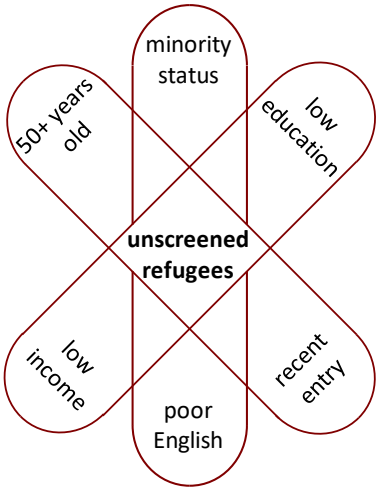

Figure 2: Six predominant non-medical factors that act as barriers to cervical cancer screening among refugee women.

investigated cervical cancer screening of urban immigrants, found that, while immigrant women generally report higher screening rates after a longer duration spent in Canada, rates still do not reach those of Canadian-born women after ten years [17]. Also, although high income has generally been accepted as indicative of high tendency for Pap screening in Canadian-born women, this association was weaker in urban immigrants, suggesting the presence of more significant factors in this population [16-18]. These are implications of fundamental barriers hindering these women in their preventative health care, and potentially their long-term integration into the health care system in general.

To analyze the barriers impeding adequate cervical cancer screening in refugee women, one must become familiar with the challenges faced by this population and the ways in which their incoming culture and experiences may be incompatible with our current approaches to preventative care. As refugee women in Canada are of diverse origins, there exists a multitude of interrelating explanations for their choices and behaviors. Language and cultural barriers can result in lack of knowledge and understanding of preventative procedures, and, especially when coinciding with past trauma, can result in fear of an authoritative physician with whom they would likely struggle to communicate. Proficiency in English was a major indicator for documented Pap tests in refugees at a Toronto, Ontario health center [20], but this finding could not be reproduced in another Ontario study in which most refugee participants were English speakers [11]. Simple lack of access to family physicians was also an inhibitory factor [15]. A 2011 study by Lofters et al. commented on the importance of access to physicians of a cultural or ethnic background similar to that of their refugee patients [16]. Access to female primary care physicians was found to be of even greater importance in increasing rates of screening participation across refugees from all regions of origin [16]. This is unsurprising, as cultures have varied practices regarding the appropriate boundaries of interactions between non-related men and women. Comfort with one's physician, and with the system as a whole, is paramount to one's active participation in their care, and can help to overcome other social and economic barriers.

A retrospective study by Wiedmeyer et al. investigated the rates of cervical cancer screening among refugee women served by a multidisciplinary community health center in Toronto, Ontario, known as Access Alliance Multicultural Health and Community Services (AAMHCS) [20]. These researchers assessed the documentation of Pap tests in 357 eligible women attending the AAMHCS, and found that 92% of eligible women had been approached for screening, and 80% had been appropriately screened [20]. The only variable that significantly indicated a delay of documented Pap tests was proficiency in English [20]. These screening rates were higher than the local population of similar demographic and socioeconomic status [20]. A limitation of this study was that its setting in a single, particularly accessible clinic limited its applicability to the rest of Canada [20]. In drawing attention to the immense value of a facility that specifically caters to a high-risk population, however, this limitation also represents a significant strength. The AAMHCS strives to overcome the barriers facing refugees by providing longer appointments, access to allied health professionals, translation services, and settlement services [20]. This facility is a shining example of how to address the challenges faced in the preventative care of refugees, and presents a model that other facilities should strive to emulate.

The primary limitation regarding the investigation of screening rates is the use of self-reported data in many studies [11,19]. With self-reported data comes the possibility of inaccuracy due to poorly kept personal records, inaccurate memory, and fear of judgment or other consequences. Conversely, retrospective studies that utilize documentation by health care providers do not bear these same limitations. Also, longitudinal studies, though time-consuming, are less limited than cross-sectional studies in

their ability to fully explore trends within populations, capturing larger windows of patients' lives. Small sample sizes can be problematic, but are sometimes unavoidable when investigating highly specific populations. The existence of multiple studies of various design helps to comprehensively illustrate the picture of cervical cancer screening. All of these limitations are particularly significant when studying a population that is socially and culturally isolated, which may also explain why data regarding refugee screening rates on a nationwide scale are difficult to locate.

Vaccination

Widespread vaccination against HPV has the potential to transcend the inequalities faced by populations at high risk of developing cervical cancer and significantly reduce incidence of the disease [10,19]. Ideally, widespread vaccination would result in lower rates of cervical cancer across demographic groups with differing rates of screening participation. Unfortunately, those factors that correlate with low screening participation, such as low education, low income, and minority status, also correlate with low HPV vaccination rates [10]. It should also be noted that Canada currently approves vaccines against HPV 6, 11, 16, and 18 [6], but that not all cervical cancers can be attributed to these four strains of the virus [10]. Little research exists regarding the rates of HPV vaccination among Canada's immigrant and refugee populations. It is therefore imperative that further investigation takes place in order to optimize vaccine distribution within high-risk populations.

Although research in a Canadian setting is lacking, various investigations have been conducted elsewhere in North America and Europe in an effort to conceptualize the barriers hindering HPV vaccination within immigrant and refugee populations [14,21]. Application of these findings to Canadian refugee populations must be done conservatively, as cultural and systemic differences between various countries of origin and destination could significantly influence the challenges faced by refugees in their respective settings. There is benefit, however, in learning of the perceptions and concerns of refugees in countries with similarities to our own.

One particularly insightful investigation was conducted in the Netherlands in 2015, and used semi-structured interviews to qualitatively explore the perceptions of Somali women with respect to cervical cancer screening and HPV vaccination [14]. This study identified several key barriers to preventative health care in this population, many of which are likely applicable to refugee and immigrant populations elsewhere [14]. One such barrier was a lack of understanding of the purpose and side effects of the injection [14]. These women mistrusted the health care system, and feared the possibility of deception and becoming an unknowing subject of research [14]. Cultural attitudes and the fear of shame and stigma also inhibited vaccine uptake [14]. Women were self-conscious about the appearance of previously mutilated genitalia, and were concerned that HPV vaccination in adolescent girls was a normalization or encouragement of sex at an inappropriately young age [14]. It is also important to note that the decision-making process of women of this population generally relies upon social connections and the support of cultural peers [14]. However, language barriers often result in adult mothers learning of such things as HPV vaccination through their young, English-speaking daughters, forcing mothers to make decisions without their close peer group [14]. These women noted that the individualized, patient-centered decision-making of Western medicine was incompatible with the group-based decision-making with which they were typically more comfortable [14]. This study was potentially limited by language barriers, which may have resulted in nuances and details being lost in translation, and by the unstructured and public nature of the interviews, which was intended to provide comfort for the interviewees, but may have restricted truthfulness of responses [14]. In spite of these limitations, such personal and culture-specific insights are invaluable in the effort of a health care system to optimize its preventative health strategies for vulnerable populations.

CONCLUSION

The information assembled in this review has helped us to gain insight into the challenges and barriers facing refugee and immigrant women in Canada, and can hopefully be used to optimize our current methods of preventative health care. This review is limited by the ongoing influx of refugees, and the rise of numerous social programs to accommodate them, demanding further research to keep up with this evolving population. Effective cervical cancer prevention initiatives should be based on specific evidence regarding the populations and settings in question, and should be a collaborative endeavor with other vital settlement services, as we have seen in the case of Toronto's AAMHCS [20]. After finding solace from the challenges in their nations of origin, it should not be surprising that the first concern of newly settled refugees is to establish basic needs for themselves and their families in a new country. Barriers to preventative health care preclude this prioritization, however. We should therefore seek to understand these challenges and barriers and address them in a multidisciplinary and culturally competent way. In doing so, we can provide a warm and supportive welcome to our nation.

Further research should explore rates of HPV vaccination in refugees in Canada, and the barriers that prevent refugees from taking this preventative measure. As HPV vaccination has the potential to overcome the inequalities of cervical cancer screening, it is crucial that we learn more of the barriers that prevent it from doing so. Each combination of community of origin and

community of destination creates a unique mosaic of cultures. It is therefore vital that each community receiving incoming refugees conducts research on cervical cancer prevention in their own refugee population. Prevention initiatives aimed at these vulnerable groups will likely be more effective at a local level, and this is why we must assess specific needs and challenges in each individual community. It will be through collaboration and understanding that the greatest impact will be made on the health of these new Canadians.

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