

**Promising Practices used by International Medical Graduate Physicians to Increase
Cervical Screening in South Asian and Chinese Immigrants in the Greater Toronto Area**

by

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An oral defense of this thesis took place on December 6, 2018 in front of the following examining committee:

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The above committee determined that the thesis is acceptable in form and content and that a satisfactory knowledge of the field covered by the thesis was demonstrated by the candidate during an oral examination. A signed copy of the Certificate of Approval is available from the School of Graduate and Postdoctoral Studies.

ABSTRACT

Cervical cancer is one of the most preventable cancers, with Pap tests being a widely accessible form of screening throughout Canada. However, participation in cervical cancer screening is historically lower in South Asian and Chinese immigrants. Previous literature showed that the risk of being under-screened is even higher for these women if they receive care from a provider that is from a culturally congruent region. This investigation aimed to qualitatively explore this phenomenon through the perspective of South Asian and Chinese International-Medical Graduate (IMG) physicians. Semi-structured interviews were conducted to identify barriers to cervical screening faced by South Asian and Chinese immigrants across the Greater Toronto Area (GTA), as well as promising practices that are currently being used by IMG physicians to increase cervical screening participation among their patients. Several barriers to and interventions designed to screening were identified at the individual, community, and health care provider level. Promising interventions include linguistically and culturally appropriate health education and access to a female provider.

Keywords: Cervical screening, South Asian, Chinese, Immigrant, International Medical Graduate (IMG) Physician

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CHAPTER I: INTRODUCTION

Cervical cancer is a cancer that results from the abnormal growth of cells in the cervix and is also capable of metastasizing to other parts of the body (Canadian Cancer Society, 2018). It is estimated that approximately 1,550 Canadian women will be diagnosed with cervical cancer each year, and that 400 women will die from the disease (Canadian Cancer Society, 2018). It is most common in women younger than 50 years, and the majority of cases result from infection with one of approximately 15 genotypes of the human Papillomavirus (HPV) (Kjaer et al., 2014). Worldwide, two genotypes, HPVs 16 and 18 account for majority of cases (Munoz et al., 2004). The virus is sexually transmitted and infects epithelial cells, causing a variety of lesions that range from common warts to cancer. Cancers typically arise in individuals who have a persistent infection and who retain oncogene expression for a number of years (Kjaer et al., 2014). It is estimated that approximately 75% of sexually active men and women will have at least one HPV infection in their lifetime. Although HPV is quite prevalent in our population, cervical cancer is almost entirely preventable with regular screening, appropriate follow-up of abnormal Pap test results, and HPV immunization. To aid in the prevention of cervical cancer, Cancer Care Ontario (CCO) championed the Ontario Cervical Screening Program (OCSP) to provide Ontario women with access to comprehensive, coordinated, high-quality cancer screening (CCO, 2018).

Ontario's Cervical Screening Program

The Ontario Cervical Screening Program aims to increase the number of women who receive regular cervical screening through the Papanicolaou (Pap) test. The Pap test is the globally accepted method of cervical cancer screening and functions to detect the development of abnormal cells in the cervix. Early detection of abnormalities can then prevent further

development of cancer. The current Ontario Screening Program recommends that women who are or have ever been sexually active receive a Pap test every three years starting at age 21. Women should continue to have a Pap test until at least age 70 unless otherwise directed by a health care professional. At age 70, screening can cease if a woman has had three or more normal Pap tests in the previous 10 years (Murphy et al., 2012). The Ontario Cervical Screening Program was implemented by Cancer Care Ontario (CCO) in 2000 with the goal of reducing cervical cancer incidence and mortality through routine Pap tests (CCO, 2018). The program, lead by Cancer Care Ontario, invites women to participate in screening, advises them of next steps after their Pap test, and sends screening reminders through the mail (CCO, 2018). From 2013 to 2015, approximately 2.7 million Ontario women were screened for cervical cancer (Cancer Quality Council of Ontario, 2017). While Canadian-born women exhibit a screening compliance rate of approximately 75%, the screening compliance rate for South Asian and Chinese immigrant Canadians is significantly lower (Drolet et al., 2013).

Cervical Screening in Canada's South Asian and Chinese Immigrant Women

Historically, South Asian and Chinese immigrant women have very low rates of cervical screening participation. In fact, only 34% of South Asian and Chinese immigrants will participate in cervical screening, in comparison to 75% of Canadian-born women; and South Asian and Chinese immigrants are 4.3 times more likely to have never been screened than Canadian-born women (Drolet et al., 2013). Furthermore, in Lofters et al.'s (2010) analysis of cervical screening among urban immigrants by region of origin, South Asian women displayed the lowest Adjusted Rate Ratio (ARR) for appropriate cervical cancer screening for women aged 18-49 years (ARR=0.67). For reference, immigrants from the USA, Australia & New Zealand had an ARR of 0.85, immigrants from Western Europe had an ARR of 0.85, those from Latin America and the Caribbean had an ARR of 0.95, and those from Sub-Saharan Africa had an

ARR of 0.97 (Lofters et al., 2010). South Asian nations include Afghanistan, Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Nepal, Pakistan, and Sri Lanka (University of Illinois Library, 2018). Several hypotheses have been offered to explain these low rates including inaccurate beliefs about susceptibility to cervical cancer, lack of knowledge of screening procedures and where to access screening services, and individual, emotion-laden barriers (Crawford, Ahmad, Beaton, & Bierman, 2016; Schoueri-Mychasiw, Campbell, & Mai, 2013). While knowledge of the barriers these women face in regards to screening continues to grow, little has been done to identify the best practice for actually increasing cervical screening participation within this group of immigrant women.

Interestingly, when comparing incidence rates of cervical cancer for South Asian and Chinese women to Canadian women, there is no evident significant difference. The age-standardized cervical cancer incidence rate for Canadian born female is cited as being 12.66 per 100,000 females, while the age-standardized rate for Chinese women has been determined to be 11.30 per 100,000 females (Mosavi-Jarrahi & Kliwer, 2013; Song et al., 2017). Age-standardized incidence rate in South Asian countries range from the highest observed incidence rate of 22 per 100,000 females, occurring in India, to 2.8 per 100,000 females, occurring in Iran (Sreedevi, Javed, & Dinesh, 2015). The incidence rate for South Asian countries is, however, on average, similar to rates seen in Canada and China.

Environmental Scan of Scarborough, Ontario

In 2017, an environmental scan was conducted in partnership with Cancer Care Ontario's Central East Regional Cancer Program (CERCP) in order to identify promising practices for increasing cervical screening participation in South Asian and Chinese populations in Scarborough, Ontario. Scarborough, Ontario is a district located within the boundaries of the

CERCP, known to have lower Pap screening rates than other regional cancer programs. With a large immigrant population, particularly South Asian and Chinese communities, it represents an area of specific interest when thinking about how to address the disparities in Pap screening that exist among Chinese and South Asian Canadians in comparison to the rest of the population (Steele & Karachiwalla, 2017).

Through a search of both published and grey literature, community champions, or individuals that are making a noticeable impact on cervical screening rates in urban South Asian and Chinese populations through various interventions in the Greater Toronto Area were identified. These individuals were asked to describe the challenges and benefits of their interventions, and to identify specific barriers to cervical screening for South Asian and Chinese women. Components of effective interventions were found to be consistent with what was found in the literature (to be further discussed in Chapter 2). For example, the use of community members as lay health workers was shown to be effective at increasing knowledge about the Pap test and reducing misconceptions about the causes of cervical cancer (Crawford et al., 2016). Additionally, providing health system navigation assistance to this population was also shown to be an effective intervention for increasing screening compliance (Dunn et al., 2017). While perceived barriers such as lack of knowledge about the Pap test, transportation issues, and language barriers were also consistent (to be further discussed in Chapter 2), many of the individuals interviewed highlighted the impact of physician-level barriers to cervical screening for this group (Hislop et al., 2003; Hulme et al., 2016). More specifically, the informants of the environmental scan suggested that there may be a link between seeking care from a foreign-trained physician and low cervical screening compliance (Steele & Karachiwalla, 2017).

Although limited information is available, this statement is supported in the literature. International Medical Graduate (IMG) physicians have been found to have lower cervical screening rates than Canadian-trained physicians, and more specifically, it has been shown that physicians who attended medical schools in South Asia and China are more likely to have lower screening rates among their patients than Canadian graduates (Lofters & Lobb, 2015; Thind et al., 2007). Furthermore, it has been found that South Asian-trained physicians have been significantly less likely to screen South Asian women for cervical cancer than other foreign-trained physicians who were seeing region-congruent patients (Lofters & Lobb, 2015). Given that South Asian and Chinese immigrants tend to seek care from physicians within their own cultural group, it is of significant interest to further explore this phenomenon (Lobb, Pinto, & Lofters., 2013). Doing so could lead to the identification of promising practices for increasing cervical screening among South Asian and Chinese immigrants, as well as the identification of specific barriers this population may be facing.

Study Goals, Structure, and Summary

The aforementioned environmental scan highlighted a gap in the available literature surrounding the association between foreign-trained physicians and low cervical screening rates and thus this study aimed to fill in this gap. More specifically, this study aimed to shed light on promising practices currently being used by South Asian and Chinese IMG physicians across the GTA to increase cervical screening in region-congruent patient populations, while also illuminating barriers to cervical screening participation they may encounter. In the initial stage of the study, a comprehensive literature review was conducted to explore any pre-identified interventions for increasing or barriers to screening in this population. After this review was completed, a phenomenological approach (to be discussed in greater depth in Chapter 3) was

taken to qualitatively investigate promising practices being used by this group of physicians and any barriers to cervical screening South Asian and Chinese immigrants may face.

This chapter was written to provide sufficient background information on the Ontario Cervical Screening Program, cervical screening in South Asian and Chinese immigrants, and how the topic of this investigation was decided upon. Chapter 2 builds upon these concepts, providing a detailed summary of the currently available literature. Chapter 3 then describes the methodology of this investigation, including information on the study sample and the processes of data collection and analysis. Chapter 4 presents the findings of the investigation, and Chapter 5 reviews and discusses these findings in greater depth. Finally, Chapter 6 discusses implications of this study for practice, policy, education and research, as well as the strengths and limitations of this investigation.

CHAPTER II: LITERATURE REVIEW

As mentioned in Chapter I, there are multiple barriers to cervical screening that are faced by South Asian and Chinese immigrants and many interventions designed to increase screening participation in these groups.

The literature search and review process provides the necessary background information to situate this research project within the available evidence. The following sections will be discussed in this chapter:

1. *Search strategy and selection criteria*: described the criteria for the literature search and how the articles were selected for the literature review.
2. *Barriers to cervical screening*: describes the barriers to screening faced by South Asian and Chinese immigrants at the patient, community, and provider or health care system level
3. *Interventions designed to overcome identified barriers*: describes interventions designed to target the barriers to screening faced by South Asian and Chinese immigrants
4. *Summary of key findings*: reviews the gaps and inconsistencies of the literature review and discuss the goals of this study

1. Search Strategy and Selection Criteria

Databases searched were Medline, PubMed, CINHALL, and Google Scholar. These databases were searched to gather and review relevant articles related to barriers to cervical screening faced by South Asian and Chinese immigrants and the interventions designed to overcome these barriers. The specific keywords that were used to retrieve the articles were

“barriers to cervical screening South Asian OR Chinese immigrants,” “cervical screening interventions South Asian OR Chinese immigrants,” “cervical screening South Asian OR Chinese immigrants,” and “Asian immigrant cervical screening.” The literature search included studies, which were conducted in North America, the United Kingdom, and Australia. These regions were selected because their healthcare systems are similar to the Canadian system in regards to preventative health care. Furthermore, the articles included in this review had studies conducted within the years 2000-2018. This range was selected to ensure that articles reflected the current healthcare and cultural environment. The inclusion criteria consisted of the following: written in English only; literature published from 2000-2018; cervical screening barriers specific to South Asian or Chinese immigrants; and interventions designed to specifically target cervical screening participation in these populations. Studies published before 2000, written in languages other than English, and investigating populations other than South Asian and Chinese immigrants were excluded.

The scholarly articles used in this review were selected using a two-step process. The initial literature search was conducted using the database searches mentioned above, which resulted in 51 articles from peer-reviewed journals and grey literature once duplicate studies from the databases were removed. The second step involved the review of the abstracts of the articles identified in step one based on the inclusion/exclusion criteria. Articles where South Asian and Chinese immigrants were not the focus of the intervention were excluded, as were articles where the population of study was not necessarily representative of the population in Scarborough, Ontario. For example, studies discussing rural immigrant populations were excluded. Exception was, however, made for one study of Vietnamese immigrants and one study that referred to broader immigrant populations (Morrell et al., 2005; Lam et al., 2003). The

authors of these investigations highlighted that their findings were applicable to other Asian groups. After applying the inclusion/exclusion criteria, 29 articles were retained for data extraction and analysis.

2. Barriers to Cervical Screening

Before discussing promising practices and interventions designed to increase cervical screening participation among South Asian and Chinese immigrants, a thorough understanding of the barriers to screening faced by these women is required. Several barriers to cervical screening for South Asian and Chinese women have been identified within the literature. These barriers can be organized into three levels – (i) patient level barriers; (ii) community level barriers; and (iii) provider and health care system level barriers. Barriers faced at each of these levels will be discussed in detail below.

Patient Level Barriers

The literature has identified many barriers to cervical screening faced by both South Asian and Chinese immigrants. These barriers are best grouped into three main themes: (I) Misconceptions of the causes of cervical cancer; (II) Lack of experience with preventative care; (III) Lack of knowledge of the Pap test procedure.

I. Misconceptions of Causes of Cervical Cancer

Firstly, multiple studies cite inaccurate beliefs surrounding the causes of and risk factors for cervical cancer to be a barrier to screening for immigrant women of varying ethnicities. Hislop et al. (2004) explored Chinese Canadian's knowledge of cervical cancer risk factors by conducting interviews with 528 Chinese Canadians in British Columbia. Participants were provided a list of 10 risk factors, such as smoking, and asked to identify whether or not they believed each factor

might contribute to cervical cancer. Upon analysis, the group scored an average of 5.2 out of a possible 10. Great variation was seen in the number of correct responses for each individual factor. For example, 84% of women identified “lack of Pap smear screening” as a risk factor, but only 12% of women identified “giving birth to many children” as a risk factor. In terms of how knowledge of risk factors affects screening participation, respondents with greater knowledge scores were significantly more likely to have both ever received a Pap test, and to have received a Pap test within the last three years. Although there was no comparison of native-born Canadians provided within the study, the findings still demonstrate a significant knowledge gap in risk factors for cervical cancer. Lack of knowledge surrounding risk factors to cervical cancer is not a barrier that is unique to Chinese immigrants. Gupta, Kumar, and Stewart (2002) found similar results in their exploration of cervical screening behavior of South Asian Canadians. In their study of 124 South Asian Canadians, while 98% of participants reported sexual activity, only 24% of these women had ever received a Pap test. The authors hypothesize that low screening participation could be due to lack of knowledge regarding risk factors for cervical cancer.

Furthermore, the literature shows that lack of knowledge surrounding the causes of and risk factors to cervical cancer can result in an additional barrier to screening for South Asian and Chinese women – the belief that the Pap test is an unnecessary procedure. Amankwah, Ngwakongnwi, and Quan (2009) explored the barriers to cervical screening for visible minority women in Canada by combining two samples of the Canadian Community Health Survey. It was found that 25.8% of South Asian (n=832) and 29.5% of Chinese (n=1,392) immigrants had either never received a Pap test or received a time-inappropriate Pap test in comparison to 13.5% of Caucasian Canadian women (Amankwah et al., 2009). Upon stratification of the reasons why

these immigrant women of various age groups had never received a Pap test or had a time-inappropriate test, an average of 41.03% of the women between three age groups believed the test was not necessary. Interestingly, this belief was most common among the 50-65 age group, with 50.5% of women who had never been screened reporting feeling the test was unnecessary, a finding that has been reiterated in other investigations (Lofters, Hwang, Moineddin, & Glazier, 2010). This highlights a group of specific interest when designing targeted interventions to improve screening as women in this age group are more likely to be under screened than younger women (Mandelblatt & Yabroff., 2000).

When exploring the reasons some women may feel that the Pap test is unnecessary, many studies suggest the belief is founded in inaccurate beliefs surrounding a women's susceptibility to cervical cancer. For example, some women may believe that they do not require the test if they are in a monogamous relationship or if they are not currently sexually active (Gupta et al., 2002). Recent sexual activity does however not necessarily result in screening participation. In their study of 62 South Asian Canadian university students, Gupta et al. (2002) reported that only 24% of sexually active South Asian university students and Tamil speaking women surveyed had received a Pap test. The 76% of sexually active women who did participate in cervical screening did so due to their self-perceived lack of need for Pap testing (Gupta et al., 2002). This finding again reiterates the influence of lack of knowledge surrounding risk factors to cervical cancer on the belief that the Pap test is an unnecessary procedure.

II. *Lack of Experience with Preventative Care*

Inaccurate understanding of the risk factors for cervical cancer is not the only factor that leads to the belief that the Pap test is unnecessary. The literature shows that some women may

come to Canada from countries where preventative health care such as regular cervical screening programs are not common practice (Peters et al., 2008; Steele & Karachiwalla, 2017). These women therefore may view the Pap test as unnecessary and not participate. It is, however, interesting to note that time spent in Canada does not necessarily improve Pap test participation rates (Lofters, Moineddin, Hwang, & Glazier, 2011).

III. *Lack of Knowledge of Pap Test Procedure*

A third patient level barrier identified within the literature is lack of knowledge surrounding the test procedure itself. Gupta et al. (2002) explored South Asian Canadians knowledge about Pap tests. Within their sample of 62 university students and Tamil-speaking women recruited from local community centers, 16% of students and 66% of Tamil women surveyed did not know that the test involved a vaginal exam. Interestingly, of the women that knew that the test involved a vaginal exam, 39% of students and 13% of Tamil women did not know that the purpose of the test was to screen for cervical cancer. When examining barriers to screening participation, six students within the sample reported avoiding the test due to fear of discomfort. Test avoidance due to fear or pain or discomfort is also prevalent within Chinese immigrant populations. In Taylor et al.'s (2002) exploration of barriers to cervical screening for Chinese Americans, fear of discomfort was associated with low Pap testing rates. Interestingly, the literature shows that knowledge of the Pap test does not necessarily mean an individual will participate in time-appropriate screening. Amankwah (2009) found that even though immigrant women may be aware of the Pap test, they might not be aware of the Ontario Cervical Screening Program's recommendation of screening every three years.

Community Level Barriers

In addition to barriers faced at the individual or patient level, barriers to cervical screening for South Asian and Chinese immigrants can also be identified at a community level. Gupta et al. (2002) suggest that there may be a general lack of knowledge about where to go to receive a Pap smear within the individual's community. This lack of knowledge was also identified as a barrier to screening by key informants of the 2017 environmental scan of Scarborough, Ontario conducted in partnership with Cancer Care Ontario and the Central East Regional Cancer Program (Steele & Karachiwalla, 2017). Key informants of that investigation also highlighted insufficient transportation to appointments as an additional barrier. Amankwah et al. (2009) offer support for this within the literature finding that women with adequate transportation, meaning that they were able to provide their own transportation or transportation was provided to them through an intervention, were more likely to receive a Pap test. While information on the barrier created by inadequate transportation in this population is limited, transportation has been shown to be a significant barrier for other immigrant groups within Canada (Ma, Toubbeh, Wang, Shive, Cooper, & Pham, 2009).

Additionally, the literature shows that the nature of community itself may act as a barrier to cervical screening for immigrant women. Many of the previously mentioned individual level barriers are founded in common cultural beliefs that are prevalent within the community (Steele & Karachiwalla, 2017). For example, the belief of fatalism, or the belief that developing cancer is inevitable, held by some Chinese women perpetuates the sentiment that they do not need to receive a Pap test in adherence with the Ontario Cervical Screening Program's guidelines (Kwok & Sullivan, 2006; Steele & Karachiwalla, 2017). This belief was also named a barrier in two

separate investigations of Chinese-Australian women (Kwok & Sullivan 2006; Kwok & White, 2011).

Provider and Health Care System Barriers

In addition to patient and community level barriers to cervical screening, provider and health care system level barriers have also been identified within the literature. For example, lack of enrollment in a primary care patient enrollment model has been highlighted as a significant barrier to screening for South Asian and Chinese immigrants (Lofters et al., 2011; Lofters, 2010). In Lofters et al.'s (2011) analysis of predictors of low cervical cancer screening among immigrant women in Ontario, Canada, South Asian women were confirmed to have a higher risk of not participating in cervical screening if they did not have a primary care physician. Lofters et al. (2010) acknowledges the importance of primary care physicians in educating women and recommending screening, as does Amankwah et al. (2009). Gupta et al. (2002) also highlight the importance of physician encouragement of cervical screening. Of the South Asian women within their sample who received a Pap test, physician influence was cited as the most important influence in their decision. Given the busy nature of walk-in clinics and immediate care, physicians practicing in these environments may not be able to dedicate time to counseling for cervical screening as when an individual seeks care in a walk-in clinic, they are typically there to deal with a pressing health issue and thus the topic of preventative screening is not discussed (Amankwah et al., 2009; Ahmad, Jandu, Albagli, Angus, & Ginsburg, 2013). Additionally, women may be seeking primary care in clinics and facilities that do not routinely offer Pap tests, which would then result in a referral to a facility that does offer the service (Ahmad et al., 2013). This referral means an additional appointment later for the patient, and thus does not guarantee that the women will receive her Pap test at that point in time.

Another provider level barrier that has been identified within the literature is the absence of a female health care provider. Lofters et al.'s (2011) analysis of urban immigrants showed that South Asian women are less likely to be screened if they have a male provider. This could be because given the intimate nature of the test, female patients may be more comfortable having a female provider do the procedure (Lofters et al., 2011). It has, however been shown that access to at least one female provider, whether this be a primary care physician or a gynecologist, was found to significantly improve the likelihood of screening participation (Lofters et al., 2011). Interestingly, although South Asian immigrants were more likely to have access to at least one female health care provider, they are still under screened in comparison to other immigrant groups and their Canadian counterparts (Lofters et al., 2011). The influence of having a female provider on Pap test participation is, however, not unique to the South Asian immigrant population. In Black, Frisina, Hack, & Carpio's (2006) investigation of barriers to screening for Chinese and Vietnamese immigrants, a lack of a female provider was again cited as a significant barrier, and Amankwah et al. (2009) reported similar findings in their study of visible minority women in Canada. This finding seems to be consistent across various ethnic groups and thus highlights an important factor for consideration when designing interventions to increase cervical screening participation.

A lack of a female provider is not the only provider characteristic that has been identified as being a barrier to cervical screening. Within the literature, there is also evidence to suggest that International Medical Graduates (IMGs) may be less likely to screen their patients for cervical cancer than Canadian- or US- trained physicians. In their study of missed cervical screening opportunities for Manitoba women, Decker et al. (2011) found that Canadian medical graduates were 20% more likely than IMG physicians to perform Pap tests. Furthermore, additional

literature shows that physicians who attended medical school in the Middle East/North Africa, Western Europe, South Asia, or the Caribbean/Latin America were less likely to screen their patients than Canadian graduates (Lofters, Ng, & Lobb, 2015). This is especially true for South Asian women (Lofters et al., 2015). Furthermore, the literature shows that having a provider from the same region may also be an additional barrier to screening for immigrant women. Using a validated billing code algorithm, Lofters et al. (2015) identified predictors of low cervical screening among immigrant women in Ontario and found that immigrant women were significantly less likely to receive a Pap test if their provider was from the same region. This is especially true for South Asians as South Asian-trained physicians were found to be significantly less likely to screen South Asian women for cervical cancer than other international medical graduate physicians who were seeing region-congruent patients (Lofters et al., 2015). This finding served as the basis for this investigation.

3. Interventions Designed to Overcome Identified Barriers

In addition to identifying barriers to cervical screening that are faced by South Asian and Chinese immigrants, this literature review was conducted to also identify interventions that have been designed to overcome these barriers. Successful interventions identified within the literature typically consist of one or more of the following components: (i) patient reminders; (ii) lay health workers; and (iii) navigation assistance.

Patient Reminders

Within the literature, patient level interventions such as reminders and counseling are shown to be effective in increasing cervical screening participation across immigrant groups. For example, the use of reminder phone calls, letters, or emails is commonly discussed as a front-line strategy to promote screening (Morrell et al., 2005). While the degree of efficacy varies, the

literature still offers support for this intervention. For example, Morrell et al.'s (2005) evaluation of the effectiveness of mailed patient reminders showed that the intervention did significantly improve Pap test participation. Ninety thousand under screened women were randomized to be mailed a 48-month reminder letter to have a Pap test, or not to be mailed one. Ninety days after each mail out, Pap test rates in the intervention group were found to be 2% higher than the control group (Morrell et al., 2005). Ethnicities of the study participants within this investigation were, however, not specified.

The available literature also qualitatively explores immigrant women's thoughts on and response to patient reminders. Lee-Lin, Menon, Nail, and Lutz (2012) investigated the thoughts of Chinese-American immigrants in regards to various cancer-screening interventions such as patient reminders that occurred both via mail and through their physician. It was found that reminder notices from health care providers and community service centers served as a facilitator to screening because these women trust the authority and knowledge of a medical doctor (Lee-Lin et al., 2012). Statements such as "I was screened because my doctor reminded me to" were common within their focus groups (Lee-Lin et al., 2012).

Lay Health Worker Model

In addition to interventions targeted at the patient level such as patient reminders, community level interventions are also detailed within the literature. These interventions center on the idea of community-based health education with a lay health worker. A lay health worker is defined as community member considered a peer that is trained to educate other community members about Pap screening. In some cases, this individual also provides navigational support, scheduling and attending appointments with clients as required (Lewin et al., 2006). This model is known by

many names within the literature including the lay peer educator model, health ambassador model, outreach worker model, and women's health educator model. For the purposes of this thesis, this model will be referred to as the lay health worker model. Several studies within the literature have evaluated the effectiveness of lay health workers in increasing cervical screening participation among immigrant women of various ethnic groups. Interventions typically consist of workshops lead by community leaders, and typically cover content related to the causes of and susceptibility to cervical cancer, as well as screening guidelines (Lewin et al., 2006). Solutions to individual and structural barriers to screening and Pap screening procedure are also commonly discussed. The lay health worker model is considered effective at increasing screening because the lay health worker is typically a trusted person from the community that is culturally aware (Lewin et al., 2006). These individuals can then reach out to women and encourage Pap testing in a culturally appropriate manner (Steele & Karachiwalla, 2017).

In their investigation of the effectiveness of lay health workers to increase cervical screening participation among Vietnamese American Immigrants, Lam et al. (2003) explored how participation in a lay health worker program affected knowledge about the Pap test and causes of cervical cancer. They recruited 10 lay health workers, who in turn recruited 20 women who were then randomized into two groups. One group was provided with a video series to watch, and the other group was provided the same video series, but also met with a lay health worker to discuss cervical screening. At post-intervention, it was found that significantly more women who met with the lay health worker understood that HPV and smoking can cause cervical cancer. It was also found that although screening participation significantly increased in both groups, the increase was even more significant for those that met with the lay health worker (Lam et al., 2003). Lam et al. (2003) credited the lay health worker's cultural knowledge and

access to social networks for their ability to create change, factors that are sometimes lacking in traditional education programs. These results were also confirmed in a larger sample size when Mock et al. (2007) applied the same methods to a randomized group with 1005 Vietnamese-American immigrant women. A greater significant increase in screening participation was seen in the intervention group that received access to the video series and lay health worker than was observed in the group that only received access to the video series (Mock et al., 2007). It is, however, important to note that these studies rely on self-reported data to determine screening participation.

Ma et al. (2015) also explored the effectiveness of lay health workers in a different population of Vietnamese-American immigrants. Lay health workers were trained to deliver culturally appropriate cervical screening programs and to provide navigation assistance to 30 community organizations whose participants were randomized into the intervention group or the control group, who received only the standard educational materials from the American Cancer Society. After 12 months, a greater significant increase in screening participation was found within the intervention group than what was found in the control group. These findings were then validated with medical records and found to be in high agreement (Ma et al., 2015). Fernandez et al. (2009) reported similar results in their study of the impact of Cultivando la Salud, a breast and cervical lay health worker program that targeted Hispanic immigrants in the United States. It was found that the intervention significantly increased Pap test participation among its participants, and the authors again contributed its success to the cultural understanding the lay health workers provided (Fernandez et al., 2009).

This intervention is also commonly coupled with other strategies to create a multi-dimensional approach. Thompson et al. (2016) reiterated the value of a multi-dimensional

approach to increasing screening in their investigation of screening participation in Latino immigrants of the United States. Their intervention consisted of a control group (n=147), who received the standard educational materials provided by the American Cancer Society, a low-intensity intervention group that received a linguistically appropriate educational package (n=150), and a high-intensity intervention group that received the same linguistically appropriate educational package, and a home-based education session (n=146). It was found that the high-intensity arm was most effective at increasing screening participation in women that had never been screened than the low-intensity arm, with a 53.4% increase in comparison to 38.7% (Thompson et al., 2016). This study demonstrates that the intensity of health behavior promotion can influence screening participation, which is a point to consider when exploring best practices to increase cervical screening participation in South Asian and Chinese women across the Greater Toronto Area (GTA).

There are however commonly reported challenges associated with the lay health worker model. One of these challenges and considerations with this model is the resource intensiveness of training and compensating peer educators (Schuster et al., 2015). In their economic evaluation of a lay health worker-led intervention designed to increase cervical screening among Korean-American women, Schuster et al. (2015) found that the incremental cost-effectiveness ratio was estimated to be \$236 USD per screening, without program development costs. This of course should be further explored in a Canadian context but does highlight an important consideration for those looking to implement similar interventions. A second point of consideration for this model is associated with whether the lay health workers should be compensated for their time, or if programs should be volunteer-based. If a program was to be volunteer based, this then adds additional challenges surrounding volunteer retention (Rogers, Rogers & Boyd, 2013; Steele &

Karachiwalla, 2017). Finally, there is also the challenge of ensuring that the scope of work of the lay health workers is clearly outlined (Steele & Karachiwalla, 2017). These considerations must be taken into account when developing a lay health worker-based intervention.

Health Navigation Assistance

In addition to patient reminders and the use of culturally and linguistically accessible lay health workers, successful interventions identified within the literature also contain health navigation assistance or patient navigators. Health navigation is considered a way to improve healthcare delivery by helping users of the healthcare system access the services and care they need (Han, Lee, Kim & Kim, 2008). Navigation assistance may include, but is not limited to, appointment scheduling, transportation, accompaniment to appointments, and referrals to specific clinics (Han et al., 2008). These interventions may use multiple strategies, and can incorporate the lay health worker model where the navigation assistance is provided by a trusted lay health worker.

Wang, Fang, Tan, Lui, and Ma (2010) incorporated navigation assistance into the lay health worker model in their investigation of Chinese-American women. A community-based pilot intervention was developed that provided culturally and linguistically appropriate educational material, access to a Chinese physician, and navigation assistance to help identify and access free screening services. Eighty women were sorted to the intervention group, while 54 women were sorted to the control group. It was found that providing information pertaining to sites that offered free screening services significantly increased self-reported screening participation in the intervention group, with 70% of women accessing screening services, than in the control group where only 11% of women accessed screening services (Wang et al., 2010).

This was also verified by medical staff (Wang et al., 2010). These findings were confirmed in Pourat, Kagawa-Singer, Been, and Sripipatanat (2010) similar investigation of the influence of patient navigators on screening participation of Asian-American immigrants (Pourat et al., 2010). In their investigation, they found that improving knowledge on where to access Pap screening services significantly increased screening participation (Pourat et al., 2010). Furthermore, Fang et al. (2016) reiterated the importance of navigation assistance in their pilot intervention of Korean-American women. It is, however, important to note that some of the success of these interventions can be attributed to the cultural and linguistic accessibility associated with the lay health worker model, and thus the impact of navigation assistance alone is not immediately apparent. It is, however, apparent that multi-dimensional approaches that include navigation assistance are effective at increasing cervical screening participation.

4. Summary of Key Findings

South Asian and Chinese immigrants face barriers to cervical screening at multiple levels. Firstly, at the patient level, barriers such as inaccurate beliefs surrounding the causes of cervical cancer, or inaccurate beliefs surrounding the Pap test itself can prevent screening participation in this population. Because of these beliefs, some women may feel that they do not need a Pap test and therefore are never screened or under screened. Secondly, at the community level, these women face additional barriers such as lack of knowledge of where to access screening services. Finally, at the provider and health care system level, lack of enrollment in a primary care model or lack of access to a female health care provider serve as additional barriers to cervical screening for South Asian and Chinese women.

While the barriers to screening for this population appear to be well understood, there is a gap in the literature surrounding interventions that specifically target South Asian and Chinese

immigrants. On a larger scale, successful interventions designed to increase cervical screening among various immigrant groups tend to consist of three main components. The first component is targeted at the patient level and consists of patient reminders such as letters, phone calls, and emails. The second component is targeted more at the community level, and typically incorporates the lay health worker model. This model is found to be successful because the use of the lay health worker encourages cultural and linguistic awareness in educational initiatives. Finally, the third component of successful interventions is the provision of navigation assistance to link community members with access to screening services. When integrated into the lay health worker model, this proves to be even more effective (Pourat et al., 2010).

As mentioned, there is limited published evidence (especially Canadian studies) that evaluate the effectiveness of interventions designed specifically for South Asian and Chinese immigrants. There is however evidence that shows that in spite of the knowledge surrounding the barriers these women face, South Asian and Chinese immigrant Canadians are still being under-screened (Lofters et al., 2011). More specifically, there is evidence that shows this is even truer if these women receive primary care from an International Medical Graduate (IMG) physician of the same culture. By reviewing and analyzing the literature, a key gap found was that the majority of studies discussing barriers and interventions pertaining to cervical screening focused on the patient perspective, not the perspective of the physician. The lived experience of these IMG physicians should be further explored to gain an understanding of the underlying reasons why these screening rates might be lower than Canadian-trained physicians and Canadian-born patients, and to gain insight into what IMG physicians are doing to promote cervical screening among their South Asian and Chinese immigrant patients.

This study will fill the gaps in the literature by asking the following question: what are the promising practices being used by South Asian and Chinese IMG physicians to increase cervical screening participation among South Asian and Chinese immigrants across the GTA? By undertaking this phenomenological study, the researcher has uncovered barriers to cervical screening for South Asian and Chinese immigrants, as perceived by IMG physicians, and promising interventions these physicians use to increase screening participation. This study builds upon the body of knowledge on the lived experiences of IMG physicians with primary and preventative care, and on the body of knowledge surrounding South Asian and Chinese immigrant's interaction with primary and preventative care. The methodological approach of how this research question is explored will be discussed in the next chapter.

CHAPTER III: METHODOLOGY

This chapter outlines the research methodology and procedures used for the study. It maps the process strategically designed and implemented to meet the study goals. Included are the reasoning and justifications behind each step in the research process.

1. Research Questions

This study examined the following research questions:

- a) What practices are being used by South Asian and Chinese International Medical Graduate (IMG) physicians to increase cervical screening in South Asian and Chinese immigrants across the GTA?
- b) What are the physician-perceived barriers to cervical screening faced by South Asian and Chinese immigrant in the Greater Toronto Area (GTA)?

2. Study Goals and Design

The primary goal of this study was to identify promising practices being used by IMG physicians to increase cervical screening in South Asian and Chinese immigrants across the GTA. The secondary goal of this study was to identify barriers to cervical screening for South Asian and Chinese immigrants. It is hoped that by identifying promising practices and barriers to screening, health care practitioners can use this information to develop their own interventions that will increase cervical screening in this population.

To achieve these goals, the views of South Asian and Chinese IMG physicians currently practicing in primary care across the GTA were explored using an interpretive phenomenological approach (IPA) through the conduction of semi-structured interviews. IPA is a methodology that is used to gain insight into the subjective realities of participants through personal interpretations

and the meanings attached to those experiences (Smith, 2011). It is both highly phenomenological and interpretative because it aims to understand the participant's experiences through their own perspectives, while also requiring the researcher to accurately make sense of the participant's experiences (Shenton, 2004). The researcher aimed to decode meaning from the experiences of the South Asian and Chinese-trained physicians within this study to identify promising practices for increasing cervical screening in South Asian and Chinese immigrants, as well as specific barriers to screening participation. To do so, semi-structured interviews were conducted. These interviews aimed to uncover the shared meanings of participants by exploring their lived experiences surrounding a particular phenomenon (Sorrell & Redmond, 1995). In the case of this inquiry, the phenomena of interest were interventions used to increase cervical screening in South Asian and Chinese immigrants across the GTA and barriers to screening participation. Participants were recruited based on meeting the eligibility criteria discussed below. All participants were required to sign the consent form, which consisted of all of the study details, along with the research ethics board (REB) approval from the University Of Ontario Institute Of Technology. Key informant interviews were conducted with the participants and data was qualitatively and thematically analyzed. Study methodology is discussed in full detail in the following paragraphs.

3. Recruitment Strategy and Research Setting

An environmental scan of current and past interventions being used to increase cervical screening in South Asian and Chinese immigrants in Scarborough, Ontario was conducted in March 2017. This scan was conducted in partnership with the Central East Regional Cancer Program and Cancer Care Ontario. Published and grey literature was reviewed and eight key informants were interviewed. When the decision was made to further explore promising practices being used by International Medical Graduate (IMG) physicians in the GTA, these key

informants were contacted again. If they met the inclusion/exclusion criteria mentioned below they were invited to participate in the study, and if they did not, they were asked to reach out to their professional network and determine if any of their contacts that did meet the criteria were willing to participate. Thus, a snowball sampling technique was used to recruit our participants. Bowling (2014) suggests that the use of snowball sampling is an effective sampling technique for the recruitment of members of small social or cultural groups that may not be easily reached by traditional sampling methods. Additionally, the literature shows that many foreign-trained physicians practice in small, independent practices and thus may not be easily reached by reaching out to established primary care networks (Lofters et al., 2007).

4. Study Participants

Inclusion and exclusion criteria

In order to participate in this study, participants were required to meet the following requirement. The following inclusion and exclusion criteria were applied to potential participants:

Inclusion Criteria

Participants of this study consisted of International Medical Graduate (IMG) Physicians that attended medical school in China or a South Asian nation. South Asian nations include Afghanistan, Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Nepal, Pakistan, and Sri Lanka (University of Illinois Library, 2018). Participants were required to be currently practicing in primary care in the Greater Toronto Area, but were not required to be practicing as a physician in Ontario. Nurse practitioners and physician assistants were included in the study as both are prominent figures in primary care in Ontario (Lowe et al., 2012).

Participants were also required to have self-reported experience working with a South Asian or Chinese patient population.

Exclusion Criteria

This study did not include physicians that received medical training in countries other than Afghanistan, Bangladesh, Bhutan, British Indian Ocean Territory, India, Maldives, Nepal, Pakistan, Sri Lanka, and China. Individuals not practicing in primary care or those practicing outside of the GTA were also excluded from the study.

Sample Size

Given the nature of qualitative research, there are no strict guidelines regarding the sample size of an inquiry. Instead, Patton (2015) suggests that your sample size should be based on the purpose of the investigation and what can be done with the available time and resources (Patton, 2015). With the restrictions of recruiting participants within a limited population of individuals that met the previously mentioned eligibility criteria, this study consisted of six International Medical Graduate physician participants. This sample size allowed for a thorough examination of each participant's responses. Crabtree & Miller (1991) offer support for sample sizes of six to eight in inquiries exploring issues in primary care, stating that such a sample size allows for the exploration and analysis of issues to a sufficient depth. Pietkiewicz and Smith (2012) echo this statement, suggesting that a small sample size enables the researcher to thoroughly examine the accounts of the participants in extensive detail, while also allowing for the investigation of similarities and differences between each response. Furthermore, given that this study consists of a homogeneous sample, it was likely that the data would reach saturation with a small number of participants (Guest, Bunce &

Johnson, 2006). Twelve IMG physicians currently practicing in primary care across the GTA were contacted, and six agreed to participate in the study.

5. Ethics Approval

This study involves human beings as participants and thus ethics approval was required prior to commencing the research. Ethics approval serves to protect the rights, dignity, welfare and safety of all participants of this research study, while also protecting the researcher's rights to conduct an investigation (Creswell, 2013). Ethical considerations for this study were met according to the Research Ethics Board (REB) from the University of Ontario Institute of Technology (File 14558) (Appendix A).

The participants of this study were required to give informed consent (Appendix B) before the data collection began. Participants were informed that their interviews would be audio recorded and were given information on who would have access to the data, including where it would be stored. This study did entail any known potential harm, injury, or discomfort to the participants. Participants were aware that their involvement in the study was voluntary and that they were able to withdraw from the study at any time without consequence. Study participants were also reminded that they had the right to refuse to answer any of the interview questions if they were uncomfortable and that they would not face consequences in doing so.

Prior to the commencement of the interview, participants were given the opportunity to ask the researcher any questions. They were then asked to carefully read and sign the written consent form. If the interview was being conducted via telephone, participants were required to read, sign, and email or fax the signed form back to the researcher immediately prior to beginning the interview. The researcher then reviewed the form and gave them the opportunity to ask questions.

Confidentiality of the collected data and anonymity of the participants was maintained at all times. Participants were assigned a Participant ID Code in order to de-identify the collected data. Audio recordings were taken by and stored on a password-protected computer, which was accessed only by the researcher. Specifically, recordings were stored in a password protected and encrypted Dropbox folder accessed only by the researcher. Electronic copies of the consent forms were also kept in this folder. All audio recordings and associated transcriptions will be stored for 5 years after the completion of the research study, and after this period, the collected data will be properly destroyed as all files in the Dropbox will be permanently, deleted and the Dropbox account will be closed. The hard drive of the computer of the researcher that transcribed the data will then be reimaged to ensure that all files are permanently deleted. Participants of the study were informed of this procedure, and ensured that any information they provided will remain confidential and only used for the purpose of this study.

6. Data Collection

The process taken during the data collection was as follows:

1. *Brief Introduction*: Participants were thanked for agreeing to meet with/speak with the researcher and were given a brief overview of the interview and its purpose.
2. *Consent Form (Appendix B)*: The researcher ensured that each participant understood and agrees with everything on the consent form. For interviews conducted in person, participants then signed the consent form. If the interview was being conducted over the phone, participants were asked to send back the signed consent form to the researcher immediately prior to the commencement of the interview. The researcher then verbally reviewed the form with the participant prior to beginning the interview. Upon their request, participants were provided with a copy of the consent form for their own records.

3. *Interview (Appendix C)*: The interview was conducted either in person or via telephone.
4. *Brief Thank you*: Participants were thanked for their participation and informed that upon the conclusion of the study, they would be provided with a \$125 gift card to a local coffee shop.

Participant Interviews

All participants engaged in a semi-structured interview consisting of open-ended questions and were interviewed by the primary researcher. Because of the busy nature of primary care, interviews were held either in person, in scheduled meetings room at the participants' place of work, or via telephone when the participant preferred. An interview guide (Appendix C) was created for the interviews to direct the conversation between participants and the researcher. Key questions and prompts were prepared, but in keeping with the semi-structured interview format additional prompts were sometimes developed during the interviews to further explore a participant's experiences, perspectives, and associations in relation to the proposed research question (Gill, 2014) (See Table 1). Interview questions were phrased as descriptively and openly as possible, and participants were encouraged to speak freely and frankly. Upon conclusion of the interview, participants were given the opportunity to add any additional comments they wanted to share in relation to their experiences surrounding cervical screening in South Asian and Chinese immigrants. Participant interviews generally lasted for 25-35 minutes.

Question from Interview Guide	Participant Response	Additional Probe from Researcher
“What approaches have you either used or come across to improve screening participation in these communities?”	“We have used different approaches. One is communicate. As I said, we have Chinese culture and Chinese language... Chinese female patients, if you tell them what the reason for the Pap smear, they will be... (inaudible)...more frequent than 3 years interval (sic).”	“In your experience, is that something that's unique to Chinese women?”

Table 1. Example of probe development during an interview to further explore the experiences of a participant.

Audio Recordings

All participants who agreed to participate in an interview agreed to be audio recorded. This recording was then transcribed *verbatim* into written text. Notes that highlighted areas of conversation that needed clarification, due to a language barrier or poor audibility, were also taken during the interview.

7. Data Analysis

Data analysis was ongoing throughout the completion of this thesis. Before the collected data was analyzed, audio recordings from the key informant interviews were listened to in their entirety and then transcribed *verbatim* in written text. The primary researcher was the only transcriber to ensure consistency between the transcripts. Each recording was transcribed in Microsoft Word on the same day the interview occurred. As previously mentioned, participants were assigned an ID code to aid in the organization of the data and to maintain confidentiality.

These ID codes appeared on the transcripts and audio recordings. If names or locations were mentioned in the interviews, they were replaced with “physician” or “clinic” in the transcript.

After transcribing the interviews, the researcher began to thematically analyze the data. Qualitative analysis software packages such as NVivo and Atlas were not used for this investigation, as those packages are best suited for inquiries that have several researchers involved with large amounts of data (Bender, 2009). Since the sample size of this study was comparatively small, the researcher analyzed the transcripts by hand using the structured method of phenomenological analysis developed by Moustakas (1994). Firstly, the transcripts were read in their entirety several times to allow the researcher to become familiar with the data. Common themes from the participant’s narrative were then generated by carefully considering meaningful patterns, stances, and concerns through the process of coding (Benner, 1994). Secondly, the researcher’s personal experiences with the phenomenon of interest were described in order to set aside any inherent biases (Moustakas, 1994). As a Caucasian female with adequate access to cervical screening, I do not have personal experience in regards to barriers to screening. Thirdly, the researcher identified significant statements about how the participants are experiencing the topic (Creswell, 2013). Each of these statements were treated as having equal worth. Next, these significant statements were grouped into larger units of information known as “meaning units” or themes (Moustakas, 1994). The researcher then began to develop what is known as the *textural description* of the experiences of the participants, or a description of “what happened” (Creswell, 2013). A *structural description* of the participants’ experiences, or the “how,” was then developed (Moustakas, 1994). To develop this description, the researcher reflects on the setting and context in which the phenomenon was experienced (Creswell, 2013). Finally, the textural and structural descriptions were incorporated into what is known as the “essence” of the inquiry

(Moustakas, 1994). The essence represents the culminating aspect of a phenomenological inquiry and functions to explain what exactly the participants experienced, and how the experiences the phenomenon (Creswell, 2013).

After the primary researcher analyzed the interview transcripts pairs, key categories were combined and “outsider checks” of the data analysis were performed with members of the supervisory committee.

8. Scientific Rigour

When assessing rigour in qualitative inquiries, it is important to ensure that the criteria of evaluation are appropriate for qualitative investigations. For example, Agar (1986) suggests that terms often associated with rigour such as *validity* and *reliability* are more suited for quantitative study. For qualitative study, Agar (1986) and Leininger (1985) suggest the use of terms such as *credibility* and *accuracy of representation* is more appropriate given that the goal of qualitative inquiry is to gain knowledge and understanding of the nature of the phenomenon under study. To assess the credibility and accuracy of representation of this investigation, I adopted Guba’s trustworthiness model (Guba, 1981). This model is based on four identified aspects of trustworthiness relevant to qualitative studies: (a) credibility, (b) transferability, (c) dependability, and (d) conformability (Guba, 1981; Krefting, 1991). I will discuss how each criterion was applied to this investigation below.

Credibility

Credibility in qualitative research is evaluated based on the level of confidence that the researcher can place in the authenticity of the research findings (Anney, 2014). To ensure credibility, Shenton (2004) suggests considering the scrutiny of academic associates or

colleagues in both the study design and analysis phases of the research in order to highlight new perspectives and themes. Guba (1981) also notes that peer scrutiny is essential to ensuring authenticity and thus feedback from peers and the supervisory committee was welcomed and encouraged at all points of the investigation.

Transferability

Guba (1981) defines transferability as the ability of research findings to fit into contexts outside the study situation. To ensure transferability of this inquiry, thick description was provided (Guba & Lincoln, 1994). Guba (1981) describes thick description as the inclusion of comprehensive details of the research process, such as methodology and inclusion criteria, so that sufficient descriptive data is provided to allow for comparison (Krefting, 1991). This information is discussed in detail within this chapter.

Dependability

Dependability involves ensuring the findings of the inquiry would be consistent if it were to be replicated with the same subjects or in a similar context (Krefting, 1991). In essence, it is a method employed to ensure that the processes of the investigation are consistent for its entire duration (Guba, 1981). For this inquiry, dependability was ensured using a code-recode procedure (Guba, 1981). Collected data was coded and after a two-week period had passed, the researcher recoded and compared the results.

Confirmability

Guba's criterion of confirmability was also applied to this inquiry. Confirmability is defined by the process of ensuring that the findings of the inquiry are taken only from the

collected data and are not shaped by the researcher's own assumptions (Anney, 2014; Guba, 1981). Prior to initiating the study, I recorded my previous assumptions surrounding this topic and read this at multiple points during the coding process. This allowed me to separate my own thoughts from the responses of the participants.

CHAPTER IV: RESULTS

This chapter will review the results from the exploration of promising practices currently being used by International Medical Graduate (IMG) physicians to increase cervical screening participation among South Asian and Chinese immigrants across the GTA. The qualitative data was collected using semi-structured interviews.

1. Results of Recruitment

Participant recruitment occurred from January to April 2018. Twelve IMG physicians were identified and contacted using a snowball sampling technique. Of the 12 eligible IMG physicians that were contacted, six agreed to participate in the study. Therefore, six IMG physicians practicing in the GTA were recruited to be in the final sample of the study.

2. Demographics of Participants

The professional demographics of the participants were collected using the first question of the semi-structured interview guide, which was: “Please tell me about your professional background; specifically where you received your medical training and how long you have been practicing in Canada.” All six participants of this investigation were female. Three were Chinese, and three were South Asian. All three Chinese participants received their medical training in China, and the South Asian participants received their medical training in Pakistan, India, and Sri Lanka. Four of the six participants are currently practicing as a medical doctor in the GTA. One Chinese participant currently practices as a physician assistant, and another Chinese participant currently practices as a nurse practitioner. The practice setting of each participant is outlined below in Table 2. Time spent practicing in primary care in Canada ranged from four to 10 years (mean=7.2 years). The patient population served by each participant in respect to South Asian and Chinese immigrants is outlined in Table 3 below.

Participant	Years in Canadian Primary Care	Current Practice Setting
1	4	Currently practices as a Nurse Practitioner in a shared office with a male family physician
2	7	Works in a family medicine practice with 9 physicians (6 female and 3 male)
3	6	Currently practices a Physician Assistant in a Community Health Clinic and Family Practice
4	10	Opened her own independent family medicine practice in the GTA 10 years ago
5	8	Opened her own family medicine practice in the GTA 8 years ago
6	12	Opened her own independent family medicine practice in the GTA 6 years ago and also practices at a Community Health Centre

Table 2. Current practice settings of each participant. Chinese participants are highlighted in orange.

Participant	Percentage of Chinese Patients Served (%)	Percentage of South Asian Patients Served (%)
1	99	0
2	100	0
3	80	10
4	5	50
5	5	40
6	5	30

Table 3. Percentage of South Asian and Chinese immigrants within each participants’ patient population. Chinese participants are highlighted in orange.

3. Results of the Interview

The results from the participant interviews were systematically analyzed to identify (a) barriers to cervical screening faced by South Asian and Chinese immigrants of the GTA; (b) promising interventions designed to overcome these barriers and their associated successes and challenges; and (c) reflections on how being culturally congruent with their patients affects their practice. These results are discussed below in the following sections:

A. Barriers to cervical screening faced by South Asian and Chinese immigrants of the GTA

The barriers to cervical screening identified by the participants of this investigation can be grouped into three categories: (1) Patient Level Barriers; (2) Community Level Barriers; and (3) Provider and Health Care System Barriers.

1. Patient Level Barriers

- *Lack of preventative care in home country*

Participants of this study agreed that a lack of preventative care in a patient's home country could act as a barrier to cervical screening participation. This was found for both Chinese and South Asian patients. Speaking in regards to Chinese patients, Participant 1 stated, "Preventative care is not common in China. When you have a disease, you go to see a doctor. When you don't have a disease...I would say lots of them don't because they don't consider preventative care as care." Participant 4 stated that one barrier to screening for South Asian patients "could be they are not used to routine screening that is different than back home." She continued:

"I come from Pakistan and the type of medical practice is different there. Like here, everybody has a family doctor, it's a must, and then you go to a specialist. There it's not like that. You have a walk-in clinic or you have a family doctor that you may or may not go to. But if you have a gynecological issue, directly go to a gynecologist...Also health coverage is not through the government in all aspects so those are huge barriers. So definitely there's no such thing as cervical screening like bio-data or government sending out letters there's no such thing. It comes from your personal preference so you will go to your doctor and you will request one if you feel that you need it, if you have a family doctor that is monitoring just like here, then they will say yes this is what you need. But

not all people, most population, do not have access to that type of health care because of cost, is the main reason.”

- *Language barriers*

Five of the 6 participants noted that language was a significant barrier for cervical screening participation among both South Asian and Chinese immigrants. Participant 2 stated, “If the doctors don’t speak the same language, then they will be reluctant because of the communication barrier.” Participant 5 shared that this barrier may be even more significant for those of a lower socio-economic status as they may have more difficulty assimilating into Canadian culture. Participant 5 stated, “When they suddenly come to a country like this, with the language barrier and all, even coming to see a person who is talking in front of them is a serious thing for them. Just talking to somebody, meeting somebody...it’s I think hard to make a huge step forward coming to see a doctor.” She shared that the language barrier is sometimes even more significant for the older population. She states, “When you start talking about the cervix, they don’t know what you are talking about. So, first you have to explain it’s only for the females. And maybe cancer can happen there. And then it can be too late by the time you know it, and so that is why we’re screening.” Participant 1, however, disagrees in regards to language barriers for Chinese patients. She states that “right now there [are] lots of doctors who speak Mandarin. I wouldn’t consider it as a barrier, but maybe.”

- *Misconceptions about the Pap test and causes of cervical cancer*

Misconceptions about the Pap test and the causes of cervical cancer were also cited as a barrier to screening participation. Participant three stated, “Lack of knowledge of the purpose of

this test can be a reason that prevents participation.” Participant 4 echoed that sentiment, stating that “some of them, if they are not sexually active and they are in their 30’s or they are not married, they sometimes feel that they don’t require it or don’t understand that other types of exposures or other sexual practices could also qualify you for a Pap smear.” She also stated, “They could feel that when they are in a monogamous relationship they may not need to get a Pap smear done.” Participant 5 also shared similar experiences. She has found that younger patients may feel they don’t need the test when they only have one sexual partner. She stated that because they are in a monogamous relationship, “they have the feeling ‘Oh we cannot get viruses, there is no way, we cannot get any or there is no way to get the infection with 1 husband.’ Especially the widows, or [those with] no sexual activity for a long time, they say we don’t need it.”

- *Fear of discomfort*

In addition to misconceptions about the test, fear of discomfort during the Pap test was also a significant barrier. Participant 3 ranked this as the number one barrier to screening participation, stating:

“In my experience, discomfort factor of Pap tests is the number one barrier that prevents women from participating in this screening test. Especially in women after child bearing age, and probably experience vaginal dryness and had discomfort from previous exams. That prevents them from doing further tests.”

- *Time taken to complete the test*

Participant 3 highlighted that the time and number of appointments sometimes required to complete the test may also create a barrier to screening. She stated that it can sometimes take up to 3 appointments to complete the screening. Participant 3 stated:

“I’ve found in the past that first I’d talk to patients about this test. Then we’ll book the patient to do this test. And then the third one, probably we call the patient back to discuss the test result...so basically it’s about 3 visits for this Pap test. I think that’s a bit of a concern for some patients with their schedule.”

2. Community Level Barriers

- *Floating immigrant population*

Two of the participants in this investigation cited the nature of a floating immigrant as a community level barrier to cervical screening for both South Asian and Chinese immigrants. Speaking in regards to South Asian immigrants, Participant 5 shared that because her immigrant patient population travels, it is difficult to recall them for screening. She stated:

“The other thing I see, there are some floating parent immigrant population. It’s very difficult to catch them. I don’t think anybody gets this...only the IMG doctors will know. I have a specific population, maybe they are about 55, kind of in the middle, moving closer to 60. They come and go, come and go. So they don’t remain here...so when they come, they focus on their other health issues...blood pressure, weight, diabetes.” She continued: “It’s very difficult to get them to a physical. They go, then in 3 weeks they come back, and you say please can you book. But they still say the same thing, ‘the next time.’”

Participant 1 expressed similar experiences. She has found that in her practice, timely recall can be difficult because her immigrant patient population tends to travel to China. When

discussing the recall of her patients she stated: “We call the patient to come back for the Pap. But they don’t have time to come back right away...they are in China.” Participant 1 reiterated this finding, and added that she has had some patients tell her that they received a Pap test in China. In these situations, she encourages them to have the test again in Canada as she does not have access to the results. She noted: “I told them that even though you had it in China, I am not completely sure how they do it. I still recommend this one here.”

3. Provider and Health Care System Barriers

- *Lack of female providers*

There was a consensus among the participants that lack of access to a female health care provider creates a significant barrier to cervical screening for both South Asian and Chinese women. When speaking in regards to Chinese patients, Participant 1 stated that “they are I think embarrassed to come see their family doctor if male. They don’t want to do this with a male doctor. They prefer to come see you because I am a female.” Participant 2 agreed, stating that if a patient has a male physician, “they will be reluctant to the Pap smear because he’s a male physician and they prefer female physicians.” Speaking in regards to South Asian patients, Participant 4 stated that “if the physician is a male doctor, then definitely they won’t feel comfortable doing it...they would prefer a female physician. But I don’t encounter that because I am a female physician. But yes, it would be difficult if there is a male physician.” Participant 5 shared that if South Asian patients go to a male physician, they may be reluctant to discuss this issue and Participant 6 echoed this, stating that: “When I work with a male physician, some [patients] won’t feel comfortable doing the Pap with a male doctor because of the cultural background.”

- *Time constraints of practice*

Interestingly, time taken to complete the test was not found to be a barrier to screening unique to patients. Physicians also found time to be a significant barrier both during the test procedure and in regards to timely follow-up/call backs for routine screening. Participant 5 spoke of her experiences with her South Asian patients that do not speak English. She shared that these patients will often attend the appointment with their children and have them act as a translator. She stated: “You have to explain to the child, and the child the way they understand it, they translate. So imagine going back and forth, how much time it takes. Imagine in the preventative care, like let's say not today to them, how much time it takes them to explain...so it's a huge barrier, the time constraint.” Participant 2 provided additional insight on the time required to conduct the test itself, sharing that the time required to prep the patient, conduct the test and then prepare the room for the next patient causes the procedure to be “very slow” if completed alone.

When discussing barriers to timely recall for routine Pap screening, Participant 2 stated:

“One [barrier] is my time limit for practice. There’s so many things on the plate, I have to finish everything. The recall for Pap is only one thing...clinic work, lab review, all the consult barriers. I also do the recording for the mammogram call back for screening, and also the immunization for the children. It’s a time limit.” While Participant 4 did not feel that time was a significant barrier in her practice, she did share that she understands how time could be a barrier because “some doctor’s offices have just one receptionist and one doctor”. She stated that screening would then “definitely be a challenge.”

B. Promising interventions designed to overcome identified barriers

The interventions designed to increase cervical screening participation identified by the participants of this investigation can be grouped into 3 categories: (1) Patient Level Interventions; (2) Community Level Interventions; and (3) Provider and Health Care System Interventions.

1. Patient Level Interventions

- *Education on need for Pap test and procedure*

There was a consensus among the participants that the clear communication of the need for and benefits of receiving a Pap test is an effective intervention that can be used to increase screening participation. Participant 3 said she first addresses the discomfort for the test by trying to “spend some time explain [sic] what the procedures with the screening test. And also talk about relaxation techniques about breathing, relaxing the pelvic muscles so this can decrease their discomfort.” Participant 1 also agreed that is important “to explain when you are doing.” She states: “I always tell them...you explain what you are doing...when I do the brush, and I sweep around, it might feel a little painful...I explain to them at the beginning and they understand better.”

Additionally, participants shared that thoroughly explaining the need for and benefits of the Pap test to their patients helped to encourage screening participation. Participant 3 shared that she uses a pamphlet provided by Cancer Care Ontario to explain the reasons for the test. Participant 4 also felt that providing education on the causes of cervical cancer also improves screening participation. She reported that she even draws on her own personal experience to encourage her patients. She stated: “...when I talk to them and explain to them, and let’s say I

give them my own example like I'm married, I have two kids, but I do need a Pap smear and they're "ohh" and so it does help when you explain to them and take the time to communicate.”

Participant 6 reiterated the importance of education in improving screening participation. She shared that she takes her time speaking with each patient but cites her small roster size for her ability to do so. She stated: “I do take my 15 minutes with each patient, sometimes even more.” She uses this time to discuss the need for the test and dispel myths surrounding susceptibility to cervical cancer, such as the myth that it is not required if you are in a monogamous relationship. She finds this discussion to be effective at increasing participation, stating: “Even though they have a relationship with their husband for say 20 years, still they do it because I tell them why, the reasons why they should be doing it.” She also stressed the importance of starting this education early for the patient. She said:

“Basically, any female patient that comes to me, about 20 years old, even less than 20 years old, once they...when they are in high school, they will come to us to get birth control. The moment they ask me for the birth control pill, or the moment I find out they are sexually active, I do educate them. I tell them they need to do this. And just having the birth control pill isn't enough to prevent you from getting any STDs, and also HPV can transmit through the condoms. So they are aware of it. And because of that, when they come to me, not properly for the yearly checkup, so any time they come in, if I haven't seen them in more than so many months, or maybe more than a year, I ask them. Where are we at? Have we done this? I always make sure. At 21, I educate them to start doing that if they are sexually active.”

Furthermore, Participant 3 shared that in addition to educating her patients on the causes of cervical cancer and need for the test, she also provides education on ways to reduce discomfort during the procedure. She shared:

“I spend more time teaching the patient how to relax, how to get in a comfortable position to decrease their discomfort with the screening test. They have a better experience. They know this test is every 3 years – in the future there will be less fear of the discomfort. They will be more willing to do this test. So this is an important part I find. I think we need to spend time to get them to be comfortable with that, this test. This is important to promote future screening tests.”

Participants also agreed that explaining the need for the test and clarifying the causes of cervical cancer does in fact promote a sustainable behaviour change in regards to screening participation. Participant 1 shared that after explaining the need for the test, almost all of her patients agree to participate. When it comes time to complete the test again in the future, she states: “I still remind them, oh your Pap smear is due now, you should do it, it’s very important. Then they will do it.” Participant 2 agreed that this intervention promotes a sustainable screening behaviour change, saying that “because we explain it to them the first time, when 3 years’ time is up and when we call them...if they are in Canada, they usually come back timely.” Participant 2 also added that in regards to her Chinese patients, she has found that “if you tell them the reason for the Pap smear, they will be wanting it more frequent than the 3 year interval.” Participant 4 reiterated this finding, saying that “once they understand and they find why they should get it done, then they just keep on doing it.”

These participants also highlighted that the older population is still harder to engage in screening in spite of this intervention. Participant 1 noted that there is less compliance among her older patients, even after she spends time explaining the test. She stated: “Younger ones, I still consider younger ones less than 50, they understand the importance. But the older ones, no. For those age groups, even if you explain it to them, the success is low.” Participant 5 shared that their reluctance to participate may stem from inaccurate beliefs surrounding the causes of cervical cancer, something that was identified as a barrier to participation in this investigation. Participant 5 reported that older patients have the feeling that when they are with one partner, they “cannot get viruses, there is no way to get the infection with one husband... Especially the widows or those with no sexual activity for a long time.”

- *Cultural and Linguistic Awareness*

The participants also shared that one way to improve screening participation is to communicate in the patient’s own language. Participant 1 shared that her patients have a positive experience because physicians in her practice speak the same language. She stated “We have a clinic here you can come to see us...we have Mandarin speaking doctors...there’s no language barriers. It’s good for them.” She continued: “[They] cannot speak as well and then they feel embarrassed, they prefer...one who speaks their own language, they can express well, there’s no issue.” Participant 2 agreed with this when asked about facilitators to cervical screening in her practice. She stated: “We have Chinese culture and Chinese language. We communicate in the same language.” Speaking in relation to South Asian patients, Participant 4 said that one of the keys to success for her dedicated cancer screening week is “language accessibility.” She stated that she “can accommodate all South Asian people,” and has staff that can speak “Urdu, Hindi, Panjabi, and English.”

The South Asian participants of this investigation also felt that it is important to be culturally aware of their patient population. Participant 6 shared that she often asks to speak to her patients separate from their family members in order to provide an opportunity to discuss sensitive issues. In her experience, she has found that her immigrant patients tend to attend appointments as an entire family, thus, making it difficult to discuss sensitive issues like Pap testing. She states: “Because they are coming from a different cultural background, they may not want to speak in front of their family, and they do come in a large number of family members, I usually tell them I need to speak to your son or daughter in law.”

Furthermore, participants shared that being aware of cultural and religious practices also improves screening participation. Participant 3 said that her practice is aware of religious festivals such as Ramadan and avoids booking Pap tests during this period. She stated that “due to their religion, people can’t or don’t want to come to screen for this screen test during their Ramadan festival.” Participant 3 also shared that they try to book Pap tests for the summer season as it “is better for women doing this test because [there is] less dress and that is easier for them. Instead of the winter, people always wearing more clothes [sic].”

- *Reduce the time required to complete the test*

Participant 3 shared that in order to make screening more convenient for her patients in hopes of increasing participation, she has reduced the number of appointments required to complete the test. She said:

“Previously I need 3 visits to complete the whole process of the screening test. So later, I think about it, I did some reverse. So for example, first visit, if the patient is ready for the test, and after we explain, so I just go ahead and do the Pap test at that visit... So this will

save 1 visit. And also, with the visit to review the test. Usually, after I practiced some time I got more experienced. So when I see the Pap test result is normal, so I just try to call the patient, let them know their normal test, so I don't need them to come back to the clinic to do another session to discuss about test. So this saves another visit...So this improved, so that can get more patients to participate in this exam.”

- *Patient Reminders*

Participants of the investigation noted that patient reminders provided by both the provider and the Ontario government encouraged screening participation. Participant 4 stated: “...the fact that the government sends out letters, that's really helpful. I have so many people that bring this is what I got, what does it mean, so I think those are some good steps.” Speaking in regards to how she personally reminds her patients, she shared:

“Email is good if the patient is checking their email. We use all of those modalities. We will shoot an email to all of patients that we are doing this cancer screening week if you think you're due or you got your letter from the government please book. And then we individually call them and talk to them as well. We did post cards one time. That did help actually because you know you don't often get a post card from your doctor's office. I think the more you use, the better it is.”

2. Community Level Interventions

While the participants of this investigation did not provide great detail on community level interventions they are or have been involved in, they did note that they are aware of some education initiatives that are targeted at the community level. Participant 1 shared that she was

aware of an “initiative they have for new immigrants in the community centre. They deal with Pap smears too.” Participant 3 briefly mentioned that she has attended different community programs to promote screening. She stated: “I did some talks in different groups. Like we have a women’s group and I did some presentations on the screening test.”

3. Provider and Health Care System Interventions

- *Dedicated time to cancer screening*

Participant 4 shared that in order to increase screening participation among her patients, she dedicates a week every summer to cancer screening, focusing on patients who “didn’t have a Pap smear, never had a Pap smear, or [are] overdue.” This intervention targets the aforementioned barrier of physician’s time constraints of practice. She stated that this intervention “does require a lot of time because we have to go through all our lists of patients, who’s due, who’s not, and calling them, and so we need that type of time and that’s why we dedicate a few weeks every year just to focus on this so we are not running out of time every year.” Interestingly, this intervention encompasses some of the previously mentioned patient-targeted interventions such as the availability of staff that speak the same language as their patients, and educational sessions. Participant 4 shared that they also do “some kind of lemonade stall, just to make it like an event” for her patients.

- *Additional staff support*

There was a consensus among the participants that additional staff support allowed them to improve screening participation among their patients. Participant 2 shared that she has someone that can help set up and clean the room after she performs the test. She stated:

“The secretary can help me set up everything including label the swabs, take out the perfect size of speculum, and also prep the patient – tell them how to undress themselves, cover with the drapes. And when I enter the room, we do the Pap smear right away...After the Pap test, she cleans the room, cleans the table so that it will be ready for the next patient.”

Furthermore, she shared that she works at another clinic that does not have this additional support and can clearly see the difference. She continued: The other clinic, there is no one else to help me set up the Pap. I do see the difference. I find at this clinic, with the secretary support, I can do the Pap smoothly and quickly.” Participant 4 reiterated the importance of additional staff support for her previously discussed dedicated cancer screening week. She shared that during the week and the weeks leading up to it, she “does extra hours for the staff.” She also reiterated the importance of having extra staff members that speak the same languages as her patients. She said: “I have an intern who is South Asian, a couple of years ago I had a girl who speaks Tamil so that was helpful. So we definitely have extra staff around that time.”

- *Referral systems for male providers*

The participants of this investigation also highlighted the role of a Pap test referral system for male providers at increasing screening participation. Participant 2 stated:

“In my practice, we have 6 male physicians, and 3 females. So the 6 male physicians usually refer their patients to us...In this way, not just the 3 female physicians have a good completion rate, [but] also the 6 male physicians...Also some male Chinese speaking physicians outside of our clinic, they refer their patients to our clinic for the Pap

test. Sometimes we do see walk-in patients, from male colleagues outside of our clinic, some in for the Pap test.”

Participant 4 shared that she participates in a similar initiative. She states that within her network, there is “a set of male physicians that if they are not comfortable, they refer to a female colleague and then we can do that for their patient.” Participant 6 also has a referral system in place within her clinic. She states: “I have a male doctor in my clinic also, he asked me ‘if whether one of my patients asks you to do a Pap, would you be able to do that?’ And I said ‘sure, not a problem.’”

C. Influence of shared culture on practice

Participants of this investigation highlighted that a shared cultural understanding between themselves and their patients acts as a facilitator to cervical screening participation. When asked if she feels that being from the same region as her patients promotes screening, Participant 2 stated: “I think its cultural understanding...it helps patients to understand the Pap and accept the procedure.” Participant 4 shared similar thoughts. Speaking in regards to the relationship she has with her patients of the same cultural background, Participant 4 stated: “You know they feel comfortable asking their questions and you kind of have that rapport if they feel that we come from the same culture so we understand. And even some of their concerns, we understand.” When asked if being from a similar cultural background as her patients helps them feel more comfortable, she responded:

“Yeah, I think it does, it terms of doing the Pap smear. They feel very comfortable. I would think they would feel comfortable talking to me, at the same time, they will feel comfortable participating in it, to do the Pap test. I think so. I mean being a female, and

being from the same country, it is a plus point. I think so. They will feel comfortable to open up to you.”

Participant 5 reiterated this finding, sharing that she feels South Asian patients seek her out because they are from the same culture. She stated:

“So they [patients] tend to look for somebody, IMG doctors. That’s what I see. Those groups, because they specifically want to get...I think they feel distant from the local doctor, so they keep looking for somebody that either looks like them, or talks like them...somebody, some connection they try to find. And many of those groups are coming more towards us...They find some similarities with being maybe the local, maybe the way I behave, or the way...something... body language... Something they see a comfort in.”

Furthermore, when discussing the influence of a floating immigrant population on timely screening, she shared that IMG physicians may have knowledge on this population that Canadian trained physicians may not. She stated: “The other thing I see, there are some floating parent immigrant population. It’s very difficult to catch them. I don’t think anybody gets this...only the IMG doctors will know...” This comment demonstrates the cultural insight IMG physicians may have in regards to the South Asian and Chinese immigrant populations.

4. Summary of the Results

In summary, this chapter demonstrated the results of the participant interviews. The data showed the perceptions of the participants in regards to barriers to cervical screening faced by South Asian and Chinese immigrants and interventions designed to overcome these barriers. The data also detailed the perceptions of the participants in regards to how being from the same

cultural background as their patients affects their practice and influence on cervical screening participation.

The synthesis of these findings resulted in the identification of 3 main levels at which barriers to cervical screening occur and where promising interventions can be developed and targeted. Table 4 displays these levels and their associated barriers, while Table 5 displays promising interventions developed at each level with respect to the strategies identified by the participants. The findings detailed in Tables 4 and 5 will be discussed in greater depth in the following chapter.

Patient Level Barriers	Community Level Barriers	Provider and Health Care System Barriers
<ul style="list-style-type: none"> • Lack of preventative care in home country • Language • Misconceptions about the Pap test and causes of cervical cancer • Fear of discomfort • Time taken to complete the test 	<ul style="list-style-type: none"> • Floating immigrant population 	<ul style="list-style-type: none"> • Lack of female health care providers • Time taken to complete the test

Table 4. Barriers to cervical screening for South Asian and Chinese women as identified by the participants.

Patient Level Interventions	Community Level Interventions	Provider and Health Care System Interventions
<ul style="list-style-type: none"> • Education on need for Pap test and procedure • Cultural and linguistic awareness • Reduction in time required to complete the test • Patient reminders 	<ul style="list-style-type: none"> • Community education • Workshops 	<ul style="list-style-type: none"> • Dedicated time to cancer screening such as Cancer Screening Weeks • Additional staff support • Referral system for male providers

Table 5. Promising interventions use to cervical screening for South Asian and Chinese women as identified by the participants.

CHAPTER V: DISCUSSION

The goal of this study was to gain an understanding of the barriers to cervical cancer screening faced by South Asian and Chinese immigrants, while also identifying promising practices being used by International Medical Graduate (IMG) physicians across the Greater Toronto Area (GTA) to increase screening participation in these groups. This chapter includes the analysis and interpretation of the previously described results. In the following sections, barriers to cervical screening and interventions identified by the participants of this investigation will be discussed and examined as they relate to the evidence. As categorized in Chapter IV, barriers to screening and the resulting interventions will be discussed at the patient level, the community level, in addition to the provider and health care system level.

Barriers and Interventions at the Patient Level

When discussing barriers to cervical screening faced by South Asian and Chinese immigrants, participants of the investigation identified several patient level barriers. In this section, I will comment on the following barriers and resulting interventions: the patient's lack of

experience with preventative care in their home country; misconceptions of the Pap test and causes of cervical cancer; and language barriers.

Patient's Lack of Experience with Preventative Care in their Home Country

Peters et al. (2008) reported that some immigrant women might feel that the Pap test is an unnecessary procedure because they did not have previous experience with preventative care prior to coming to Canada. The findings of this investigation support this proposition. In the current study, both South Asian and Chinese participants shared that they have encountered patients that feel the Pap test is unnecessary because they have never been informed that they should have one before. The participants did, however, share that once they educate their patients on the need for the test, they are very likely to participate in screening. Furthermore, the participants shared that this promotes a sustainable health behaviour change in their patients. This therefore highlights that providing patient education in regards to the necessity of the Pap test is a promising practice being used by IMG physicians to increase cervical screening participation. In fact, the importance of educating patients on cervical screening was a recurring theme identified in the participants' responses. Providing adequate education and counselling does however present its own challenges, such as the time required to do so, as well as ensuring that the information is linguistically accessible to patients. These challenges will be discussed in greater depth in the following sections.

Misconceptions of the Pap Test and Causes of Cervical Cancer

Misconceptions of the Pap test and causes of cervical cancer were identified within the literature as a barrier to screening participation. Hislop et al. (2004) found that Chinese Canadian immigrants had limited knowledge pertaining to risk factors for cervical cancer and Gupta et al.

(2002) found that South Asian Canadian immigrants also had limited knowledge on their susceptibility to cervical cancer. Participants of this investigation confirmed these results. Both the South Asian and Chinese participants of this study shared that in spite of public health education efforts, there are still common myths surrounding causes of and susceptibility to cervical cancer that are perpetuated among their patients. Common myths include the assumption that the Pap test is not necessary if you are in a monogamous relationship or that it is not needed if you have not been sexually active for a long period of time.

In regards to promising practices used to overcome this barrier, there was a consensus among the participants that patient education surrounding susceptibility to cervical cancer is very effective in encouraging screening participation. One participant shared that she feels she has no issues surrounding cervical screening in her South Asian patients because she takes the time to thoroughly discuss her patient's susceptibility to cervical cancer and need for the test. The importance of patient education is also evident within the literature as it is a key component of the lay health worker model often used in interventions designed to increase cervical screening participation. In this model, a community member is trained to be a lay health worker that provides cervical screening education to their peers. Lam et al. (2003) reported that having immigrant women discuss cervical screening with lay health workers was more effective at increasing screening participation than providing women with only traditional educational materials such as a video or pamphlet. Mock et al. (2007) reported similar findings, as did Ma et al. (2015).

Lam et al. (2003) propose that lay health workers are able to promote this change in behaviour because their cultural knowledge allows them to communicate the need for the test and address concerns in a culturally appropriate manner. This proposal was confirmed by the

participants of this investigation. This finding is important because it demonstrates that not only education itself will be sufficient to increase cervical screening, but also that this education needs to be provided in a culturally appropriate manner. Cultural appropriateness of educational material must be carefully considered when developing interventions designed to promote screening. Furthermore, as seen in the lay health worker model, the participants of this investigation shared they felt that being from the same culture as their patients helped to encourage screening participation. They stated that because they shared a cultural understanding, they were able to effectively dispel myths that were specific to their culture, and use themselves as an example to promote screening participation. This is an interesting finding given that Lofters et al. (2015) and Decker et al (2011) quantitatively demonstrated that IMG physicians are less likely to screen region-congruent patients than Canadian medical graduates. This contradiction highlights the need for further exploration to understand the complexity of the influence of shared culture on practice.

Language Barriers

Within the literature, language was cited as a significant barrier to cervical screening participation for both South Asian and Chinese immigrants (Hulme et al., 2016). Hulme et al. (2016) reported that language was a prominent barrier for both South Asian and Chinese women who had never been screened, as did Steele and Karachiwalla (2017). The participants of this investigation confirmed this finding. The majority of the participants reported that being a health care provider that speaks the same language is crucial for encouraging screening participation as they are then able to explain the reasons for the Pap test and the procedure itself in an accessible way for the patient. One Chinese participant did however report that in her experience, language was not a significant barrier to screening participation for Chinese patients as there are many

providers who speak Mandarin or Cantonese. This participant shared that she does not think language limits screening participation in this population because patients that do not speak English are already seeking care from a provider that speaks the same language as they do, and thus are provided with an opportunity to easily discuss cervical screening in a manner that is accessible to them. This is an interesting finding given that within the literature, there are many interventions that target a language barrier for Chinese immigrants (Thompson et al., 2016; Wang et al., 2010). Furthermore, this finding signifies that different immigrant populations may require different interventions or approaches to increase screening as the barriers within each population may be unique.

Both the South Asian and Chinese participants did however feel that communicating in accessible languages for their patients was a promising intervention for increasing cervical screening participation. Participants shared that even if they did not speak the same language as their patients, they provided access to additional staff members that did speak the required language. One participant who spoke of her annual Cancer Screening Week shared that she brings in additional staff members that speak a variety of South Asian languages to ensure that she can clearly communicate with her patients. Another South Asian participant shared that although she speaks only English, she encourages her patients who do not speak English to bring their children to their appointments to act as a translator. She did state, however, that the translation process takes more time than what is often available and so discussing screening can be difficult. She also stated these patients typically present with pressing health issues that they would like addressed and so preventative care such as cervical screening becomes a last priority for them.

The participants of this investigation highlighted that language can be a significant barrier to cervical screening participation for South Asian and Chinese immigrants, and thus it is important to continue to develop promising practices, such as the provision of bilingual staff, that can increase participation in this population. Participants also shared that the development of linguistically appropriate educational materials such as brochures and pamphlets would aid in their encouragement of cervical screening in this population. This investigation demonstrates the need for organization such as CCO to not only expand their material to include additional South Asian languages such as Tamil, and Mandarin and Cantonese. Organizations like CCO should also ensure that these materials are easily accessible to health care providers and community groups.

Barriers and Interventions at the Community Level

When discussing barriers to cervical screening faced by South Asian and Chinese immigrants at the community level, participants of the investigation identified the nature of a floating immigrant population as a barrier to screening participation. In this section, I will comment on this finding, providing new insight on the low rates of cervical screening observed in immigrant patient populations of IMG physicians in comparison to Canadian graduates (Lofters et al., 2015).

Floating Immigrant Population

Two participants of the investigation shared that the nature of a floating immigrant population is a community level barrier to cervical screening participation. A floating immigrant population refers to when a group of people split their time between Canada and their home country. This finding was not detailed within the literature and thus highlights an interesting area for future exploration. In fact, one participant highlighted that this phenomenon may be

something that only International Medical Graduate (IMG) physicians are aware of because of the cultural understanding they have with their patients. The participants shared that sometimes when the health care provider notices that their patient is due for their routine screening, they call to notify the patient and find that the patient is out of the country and will be for a few months. Then, when the patient returns, they typically present with pressing or immediate health issues they would like addressed and are thus very difficult to engage in screening procedures at that time.

While previous literature shows that IMG physicians are less likely to screen region-congruent patients for cervical cancer than Canadian graduates (Decker et al., 2011; Lofters et al., 2015), the findings of this investigation suggest that perhaps this barrier is not perpetuated by the physicians themselves, but rather their patient population. There is only so much a physician can do to encourage their patients to participate in cervical screening. Once these resources are exhausted, it is up to the patient to decide whether or not they receive the Pap test. If the patient is unable to have the test because they are out of the country that is beyond the physician's control.

Lofters et al. (2015) reported that South Asian-trained physicians are less likely to screen their South Asian patients for cervical cancer than Canadian medical graduates. This phenomenon, however, could be explained by the fact that South Asian immigrants may be more likely to seek out South Asian physicians, a finding detailed by the participants of this investigation. One participant shared that she often has South Asian immigrants from various nations enter her practice seeking care. She feels this occurs because the South Asian patients may feel more comfortable seeing a provider of the same cultural background. The influx of South Asian patients to South Asian-trained providers may then magnify the effects of a floating

immigrant population on cancer screening rates within each provider's patient population as they then have a greater number of patients that are difficult to engage in screening. This finding highlights an important area for future research regarding how to ensure that floating immigrant populations like those observed in the South Asian and Chinese cultures receive adequate preventative health care such as cervical screening. Interventions such as they lay health worker model should thus be considered to educate the greater community on the importance of screening compliance according to the Ontario Cervical Screening Guidelines (Lam et al., 2003).

Barriers and Interventions at the Provider and Health Care System Level

When discussing barriers to cervical screening faced by South Asian and Chinese immigrants at the provider and health care system level, participants of the investigation identified several barriers. In this section, I will comment on the following: lack of access to a female provider; and time constraints of practice.

Lack of Access to a Female Provider

Lack of access to a female health care provider is cited within the literature as a significant barrier to cervical screening participation. Lofters et al. (2011) reported that urban South Asian immigrants are significantly less likely to be screened if they have a male provider, and Black et al. (2006) reported similar findings for Chinese immigrants. All participants of this investigation confirmed this finding and shared that in order to overcome this barrier, they participate in a referral system for male health care providers. These referral systems exist within practices, and allow male physicians outside of the practice to refer their patients to participating female providers. The participants shared that this has been an effective strategy to encourage screening participation and it is thus recommended that referral systems such as these be

included in the development of best practice guidelines. This finding is confirmed in the literature and detailed in the environmental scan of best practices being used to increase cervical screening in South Asian and Chinese immigrants in Scarborough, Ontario commissioned by the Central East Regional Cancer Program (Steele & Karachiwalla, 2017).

Time Constraints of Practice

In addition to physician gender, the participants of this investigation also highlighted that time constraints of practice during appointments can limit their ability to spend time dispelling myths surrounding the causes of and susceptibility to cervical cancer, something that they identified as a barrier to screening participation for both South Asian and Chinese immigrants. This echoes what is found within the literature. Lofters et al (2011) reported that lack of enrollment in a primary care model is a significant barrier to screening participation. This is because these women are seeking primary care in walk-in clinics or urgent care and usually present with an immediate health issue that they would like addressed, leaving little time for the physician to discuss preventative care measures with them (Ahmed et al., 2013; Amankwah et al., 2009). This finding illuminates an important consideration for those developing interventions to improve cervical screening participation. Interventions must be designed to target immigrant women that are seeking primary care outside of a traditional patient enrolment model to ensure that there is adequate time to discuss preventative care measures such as cervical cancer at each point of interaction with the health care system.

Furthermore, participants of the investigation shared that the time constraints of practice are even further magnified when coupled with a language barrier. One participant discussed her experiences surrounding her older patients that do not speak any English. These patients often

arrive at their appointment with their children to act as a translator, and often have immediate health issues they want dealt with. It is thus very difficult to save time for their child translate the need for the test and details of the procedure.

In regards to promising practices used to overcome this barrier, participants of the investigation stated that dedicating time specifically to cancer screening allows them to improve screening participation in their patients. One participant hosts an annual Cancer Screening Week where she dedicates all appointments to cancer screening, bringing in additional staff leading up to the event to go through patient records and contact those that are due for screening. These staff members also provide support in counseling the patients on the need for the test and on the procedure itself. Furthermore, this intervention also identifies additional staff support to assist with screening as another component of successful interventions. Other participants of the investigation reiterated the importance of additional staff support in facilitating patient reminders, as well as when prepping the patient for the test and cleaning the room after the procedure. One participant shared that she works in one clinic that has additional support, and one that does not. She stated that there is a notable increase in the number of patients she can see when the extra support is available.

These findings echo what was found in the literature surrounding the influence of additional staff support on screening uptake. Gill and McClellan (1998) found that the adoption of a policy in which nurses performed a chart review to alert physicians to which preventative services were due had a positive impact on cervical screening rates. Furthermore, Arroyave, Penaranda, and Lewis (2010) reported similar findings in their exploration of the impact of non-physician staff on cancer screening interventions. Future research and policy development should further explore the how non-physician staff such as nurses can be used to increase cervical

screening participation among South Asian and Chinese immigrants. As demonstrated by the responses of the participants of this investigation and in the literature, non-compliance with cervical screening guidelines is a complex issue that must be addressed beyond the physician level.

Contributions to the Literature

This study is one of the first to qualitatively explore cervical screening in South Asian and Chinese immigrants from the perspective of primary care providers of the same culture. Previous research quantitatively highlighted that South Asian and Chinese-trained physician have lower cervical screening rates than other physicians treating regent-congruent patients and this study explored possible explanations of this phenomenon (Lofters et al., 2015; Decker et al., 2011). It was found that the participants of this investigation view being from a similar culture as an asset to promote cervical screening and suggest that the discrepancy between the screening rates of themselves and Canadian-trained physicians is not explained by physician actions, but rather by characteristics of the patient population. These characteristics include cultural barriers associated with having a male physician and the nature of a floating immigrant population. This study also confirmed barriers to cervical screening identified in the literature and supported previously identified interventions to increase screening participation.

CHAPTER VI: CONCLUSION

The strengths and limitations of this study, along with its implications, inform thinking about future directions for practice, education, policy, and research in the area of cervical cancer screening of South Asian and Chinese immigrants by International Medical Graduate (IMG) physicians across Ontario, and more specifically in the Greater Toronto Area. In concluding this thesis, specific strengths, limitations, and implications for practice are highlighted, which therefore strengthen the understanding of promising practices being used by IMG physicians to encourage cervical screening among South Asian and Chinese immigrants.

Strengths

The strengths of this study reside in the methodological choices used. While the literature quantitatively illustrates that there is a discrepancy between the cervical cancer screening rates of Canadian-trained and IMG physicians, there is a notable gap in regards to an explanation as to why this discrepancy exists. By exploring this qualitatively, this study begins to fill that gap. This section focuses on the two main strengths of this study: qualitative methods; and small sample size. Small sample size will also be discussed as a limitation in the following section.

Qualitative Methods

As previously mentioned, existing literature consisted mostly of studies that used quantitative methods to explore the topic, highlighting that there was in fact a discrepancy in screening rates between Canadian-trained physicians and IMG physicians. Although quantitative methods can concretely confirm this discrepancy, I believe that taking a qualitative approach to the issue broadens our understandings and can uncover potential reasons for why this is happening, while also offering potential solutions. For example, the study by Lofters et al. (2015) reported that South Asian trained physicians are significantly less likely to screen their South Asian patients for cervical cancer than other internationally trained physicians who were seeing region-congruent patients (adjusted odds ratio: 0.56 [95% confidence interval 0.32-0.98]). However, the reasons behind these results could be further explored through qualitative methods to gain a deeper understanding of this phenomenon. While previous research cited having a provider of the same cultural background as a barrier to screening, through the qualitative exploration of the lived experiences of IMG physicians, the present study found that IMG physicians that participated in this study actually view being from the same culture as an asset when encouraging cervical screening. They claim that the cultural understanding they have with their patients allows them to effectively encourage screening participation.

Furthermore, an additional strength of this investigation is found within its choice of participants. While previous qualitative research tends to centre on the patient, this investigation chose to explore the experiences of the physicians, thus functioning to begin to close this gap within the literature.

Some of the findings supported what is already known in regards to barriers to cervical screening for South Asian and Chinese immigrants. These barriers include patient level barriers, such as misconceptions surrounding the Pap test and causes of cervical cancer, community level

barriers, such as lack of knowledge of where to access screening services, and provider level barriers such as lack of a female provider (Amankwah et al., 2009; Black et al., 2006; Gupta et al., 2002; Hislop et al., 2014; Lofters et al., 2011; Lofters et al., 2015; Ma et al., 2009). Most of these studies used quantitative methods to identify barriers to screening and the few that did investigate qualitatively, only focused on the patient's perspective. The present study added a broader understanding to the topic by exploring the barriers to screening through the perspective of the physician.

Small Sample Size

The small sample size was both a strength and a limitation to this study. The limitations of the small sample size will be discussed in the subsequent section.

Although the sample size was small, it allowed the researcher to carry out in-depth interviews with the participants of the investigation, which in turn generated new findings on promising practices being used to promote cervical screening, as well as on the influence of shared culture on practice. It also allowed the researcher to be flexible when finding times to meet with each participant given the nature of the hectic nature of each physician's work environment. While a larger sample of IMG physicians would have meant more interview data, which could have potentially demonstrated a broader variation of experiences among the participants, the likelihood of interpretations drawn from the results does not necessarily rely solely on the number of participants (Bender, 2009). There was corroboration among the six participants' experiences in regards to barriers to screening that their patients face, as well as in regards to the strategies they use to overcome these barriers. Additionally, all six participants

shared that they felt being from the same culture as their patients did not serve as a barrier as previously identified within the literature, but rather as an asset for their practice in this area.

Limitations

Identifying the limitations of this study provides a strong foundation for the development of future research. The limitations do not highlight errors in the undertaking of this study, but instead highlight the drawbacks to some methodological choices made, as well as unexpected shortcomings. The limitations are categorized into the methodological choices pertaining to sample size and the gender of the participants.

The sample size for this investigation (n=6) was small due to time constraints with data collection, as well as potential participant's willingness to participate in the study. Recruitment for the investigation was difficult given that potential participants currently practicing in primary care typically have very busy schedules, and thus were not as willing to participate as originally hoped. It was also harder to identify South Asian and Chinese IMG physicians using a snowball sampling technique than originally thought. It is therefore suggested that those who wish to undertake similar investigations first identify a network of physicians and begin recruiting from that network instead of relying on a snowball sampling method.

Furthermore, the small sample size of this investigation resulted in all 6 participants being female. This is strong limitation given that each participant identified having a male provider as a significant barrier to cervical screening for both South Asian and Chinese immigrants. While the participants of this investigation felt that being from the same culture as their patients encouraged screening participation, this may be different for male providers. It is thus recommended that future investigations do their best to incorporate the perspective of male

IMG physicians. It must also be noted that the physicians that participated in this investigation may not necessarily be representative of most South Asian or Chinese IMG physicians. Given the voluntary nature of this study, these physicians may be particularly dedicated to this cause, which may in turn influence their practice. Caution should thus be taken when generalizing these findings to a larger population and the need for further research in this area is again demonstrated. Nonetheless, the results from this investigation did shed light on the influence of shared culture on practice, presenting some important considerations for future practice and policy, education, and research.

A final limitation of this study can be found in the limited discussion of community-level interventions within the semi-structured interviews. While participants highlighted community-level barriers, discussion on interventions targeted at the community level were brief. This could be due to the fact that as primary care physicians or nurse practitioners, the participants primarily interact with patients at the individual level. This finding highlights the need for future research to include perspectives from health care practitioners outside of primary care such as public health professionals.

Implications

The implications of this study can be divided into two main categories: enhancing practice and policy, enhancing education, and developing research. These categories will be discussed below.

Enhancing Practice and Policy

Guidelines and practice standards, such as the guidelines outlined in Cancer Care Ontario's Ontario Cervical Screening Program, already exist for physicians and health care

providers. These guidelines outline best practices in regards to cervical screening to ensure that users of the health care system obtain the best care possible. However, even though these guidelines are in place, South Asian and Chinese immigrants are still under screened. The present study thus functioned to identify promising practices that are being used to encourage cervical screening in these populations to ensure adequate screening according to the guidelines of the Ontario Cervical Screening Program. This study can be used as a foundation to develop best practice guidelines and recommendations for not just IMG physicians, but also all practicing physicians in Ontario. These results highlight that there are common components among successful interventions such as linguistic and culturally accessibility, as well as education on the causes of cervical cancer. The dissemination of these components can allow other physicians to adopt similar practices, and therefore encourage cervical screening in their own patient populations. Furthermore, the present study also identified IMG physician-perceived barriers to cervical screening for their South Asian and Chinese patients. These barriers included lack of a female healthcare provider, the nature of a floating immigrant population, and language barriers. The identification of these barriers highlights areas where future interventions could be targeted. This is not only an implication for physicians, but also for other public health professionals and policy makers. All levels should be involved in the development of these interventions in order to identify the most effective strategy to encourage cervical screening participation.

Enhancing Education

This investigation highlighted barriers to cervical screening faces by South Asian and Chinese women, as perceived by South Asian and Chinese physicians. The physicians that participated in this investigation shared that they feel being from the same culture as their patients allows for cultural understanding between physician and patient, and thus provides

deeper insight into barriers to screening that stem from cultural practices. Sharing this insight with physicians outside of the South Asian and Chinese cultures through education will allow more physicians to ensure that their patients are being adequately screened according to the Ontario Cervical Screening Guidelines by addressing these barriers in their patient populations. Additionally, the participants of this investigation shared important strategies for increasing screening participation in these under screened populations. Educating other physicians and health care providers on these strategies can also help in increase screening participation.

Developing Research

In addition to implications for practice, there are also implications for research that arise from this investigation. By taking a phenomenological approach to research and focusing on the lived experiences of IMG physicians, this investigation sheds new light on the interactions between IMG physicians and their patients of similar culture in regards to cervical screening. This highlights that phenomenologically informed participatory methods can be of value when investigating physician-patient interaction and practice within diverse healthcare settings. Furthermore, by using conversational style qualitative research, it was possible to identify promising practices being used by IMG physicians to increase cervical screening in their patient populations, as well as the successes and challenges of these interventions.

The results of the present study also highlight important implications for the development of future research projects. The participants of this investigation shared that they felt being from the same culture as their patients was an asset to the encouragement of screening participation. The participants were, however, all female and it is thus unclear if male IMG

physicians would have the same lived experiences. Future research should focus on exploring the lived experiences of male IMG physicians in order to gain complete understanding in this area.

Closing Thoughts

As detailed in this investigation, the barriers to cervical screening faced by South Asian and Chinese women are complex in nature, and the interventions designed to overcome these barriers are even more so. It is evident that there is not only one solution to this problem and that a multi-faceted approach must be taken in order to improve screening participation in these populations. IMG physicians have a unique ability to provide insight on this issue and their lived experiences should be considered when developing and evaluating best practices.

This study has successfully achieved its goals of identifying both barriers to cervical screening faced by South Asian and Chinese immigrants and promising practices being used by IMG physicians to increase screening participation in these populations. Using a phenomenological approach, this research identified barriers at the patient level, community level, and the provider or health care system level. Promising practices identified by the participants of this investigation target the barriers of each level, successfully encouraging cervical screening participation. The investigation also sheds light on the influence of shared culture on the interactions between female IMG physicians and their patients.

The findings of this investigation have relevant implications on practice, policy, and education. Physicians and health care providers working with South Asian and Chinese patients should take note of the barriers to screening identified by the participants of this investigation and be mindful of them in practice. The identified barriers and promising practices should also be considered by policy makers when evaluating current best practice guidelines and developing

future policies. Furthermore, the findings of this investigation can be used to educate other physicians and health care providers on promising practices for increasing screening participation in South Asian and Chinese women.

This investigation also highlighted areas for future research. While this study uncovered important implications for practice, future research should aim to include the perspectives of male IMG physicians in relation to cervical screening of immigrant populations. Doing so will broaden the understanding of the interactions between IMG physicians and their patients, and potentially explain the lower cervical screening rates identified within the literature in comparison to Canadian-trained physicians. The outcomes of this study deepened my understanding of the barriers South Asian and Chinese immigrants face in relation to cervical screening and the ways in which IMG physicians work to overcome these barriers. I also gained a broader understanding of the influence of shared culture on practice for IMG physicians. I am grateful for having had the opportunity to explore this topic and look forward to following development in this area of research.

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Appendix A. REB Approval Notice

Date: February 06, 2018

To: Manon Lemonde

From: Shirley Van Nuland, REB Chair

File # & Title: 14558 - Promising practices currently being used by IMG physicians to increase cervical screening participation among South Asian and Chinese immigrants in the Greater Toronto Area

Status: **APPROVED** (conditions outlined in November 24, 2017 letter have been addressed)

Current Expiry: November 01, 2018

Notwithstanding this approval, you are required to obtain/submit, to UOIT's Research Ethics Board, any relevant approvals/permissions required, prior to commencement of this project.
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The University of Ontario, Institute of Technology Research Ethics Board (REB) has reviewed and approved the research proposal cited above. This application has been reviewed to ensure compliance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2 (2014)) and the UOIT Research Ethics Policy and Procedures. You are required to adhere to the protocol as last reviewed and approved by the REB.

Continuing Review Requirements (all forms are accessible from the [IRIS research portal](#)):

- **Renewal Request Form:** All approved projects are subject to an annual renewal process. Projects must be renewed or closed by the expiry date indicated above ("Current Expiry"). Projects not renewed 30 days post expiry date will be automatically suspended by the REB; projects not renewed 60 days post expiry date will be automatically closed by the REB. Once your file has been formally closed, a new submission will be required to open a new file.
- **Change Request Form:** Any changes or modifications (e.g. adding a Co-PI or a change in methodology) must be approved by the REB through the completion of a change request form before implemented.

- **Adverse or Unexpected Events Form:** Events must be reported to the REB within 72 hours after the event occurred with an indication of how these events affect (in the view of the Principal Investigator) the safety of the participants and the continuation of the protocol (i.e. un-anticipated or un-mitigated physical, social or psychological harm to a participant).
- **Research Project Completion Form:** This form must be completed when the research study is concluded.

Always quote your REB file number (**14558**) on future correspondence. We wish you success with your study.

Dr. Shirley Van Nuland Janice

REB Chair

shirley.vannuland@uoit.ca

Research

researchethics@uoit.ca

Ethics

Moseley

Officer

Appendix B. Participant Consent Form

Title of Research Study: Promising practices currently being used by IMG physicians to increase cervical cancer screening among South Asian and Chinese immigrants in the Greater Toronto Area

You are invited to participate in a research study entitled **Promising practices currently being used by IMG physicians to increase cervical cancer screening among South Asian and Chinese immigrants in the Greater Toronto Area**. This study has been reviewed the University of Ontario Institute of Technology Research Ethics Board 14558 and originally approved on November 2, 2017.

Please read this consent form carefully, and feel free to ask the Researcher any questions that you might have about the study. If you have any questions about your rights as a participant in this study, please contact the Research Ethics Coordinator at 905 721 8668 ext. 3693 or researchethics@uoit.ca.

Researcher(s): Dr. Manon Lemonde, Morgan Steele

Principal Investigator, Faculty Supervisor, Students, etc.: Dr. Manon Lemonde (faculty supervisor), Morgan Steele (Masters of Health Science student)

Departmental and institutional affiliation(s): Faculty of Health Sciences

Contact number(s)/email: manon.lemonde@uoit.ca, morgan.steele@uoit.ca or 905.721.8668 ext, 2706

External Funder/Sponsor:N/A

Purpose and Procedure:

This research project seeks to determine promising practices that are being used by South Asian and Chinese IMG physicians in the Greater Toronto Area (GTA) for increasing cervical cancer

screening among South Asian and Chinese immigrants. We would like to know what is currently being done to promote and encourage cervical screening in this population. If you decide to take part in this study, the researcher will conduct a brief 30-45-minute interview with you at a location and time that is most convenient to you. During this interview, the researcher will ask questions about your experiences surrounding the promotion of cervical screening in South Asian and Chinese immigrants. This includes questions surrounding barriers to screening, interventions that you have undertaken to increase screening, and the successes and challenges of these interventions. Interviews will be audiorecorded.

Potential Benefits:

You will not benefit directly from participating in this study.

Potential Risk or Discomforts:

There are no foreseeable risks associated with participation in this study.

Storage of Data:

Interview recordings will be stored in a password protected and encrypted iCloud accessed only by Dr. Manon Lemonde and Morgan Steele. The data will be kept until the conclusion of the study, which is estimated to be April 2018. After this time, the data will be destroyed.

Confidentiality:

Information on your professional background including country in which you received medical training and years of practice will be collected. The research team, consisting of Dr. Manon Lemonde and Morgan Steele will have access to this information.

Audio files and transcriptions will be stored in a password protected and encrypted iCloud that will only be accessed by Dr. Manon Lemonde and Morgan Steele. No personal identifiers such as name, or location of practice will be included in published findings.

Your privacy shall be respected. No information about your identity will be shared or published without your permission, unless required by law. Confidentiality will be provided to the fullest

extent possible by law, professional practice, and ethical codes of conduct. Please note that confidentiality cannot be guaranteed while data are in transit over the Internet.

Right to Withdraw:

Your participation is voluntary, and you can answer only those questions that you are comfortable with answering. The information that is shared will be held in strict confidence and discussed only with the research team.

You may withdraw from the study at anytime. Withdrawal will not affect your compensation for participating. If you withdraw from the research project at any time, any data that you have contributed will be removed from the study and you need not offer any reason for doing making this request. Should you wish to withdraw after the data has been disseminated or published, please be aware that it is difficult, if not impossible, to withdraw results once they have been published or otherwise disseminated.

You will be given information that is relevant to your decision to continue or withdraw from participation. Participants are free to withdraw from this study up until February 14, 2018. If a participant chooses to withdraw from the study, collected data will be destroyed.

If you wish to withdraw from the study, please contact the Principal le Investigator: Dr. Manon Lemonde, University of Ontario Institute of Technology, at manon.lemonde@uoit.ca

Conflict of Interest:

There are no real, potential or perceived conflicts of interest concerning this study.

Compensation:

To thank you for your participation you will be provided with a \$125 gift card to a local restaurant.

Debriefing and Dissemination of Results:

Upon conclusion of the study, you will be provided with a debriefing email detailing the key findings. Findings of this investigation may be submitted for presentation/publication at scientific conferences or journals.

Participant Concerns and Reporting:

If you have any questions concerning the research study or experience any discomfort related to the study, please contact the researcher Dr. Manon Lemonde at 905.721.8668 ext, 2706 or manon.lemonde@uoit.ca .

Any questions regarding your rights as a participant, complaints or adverse events may be addressed to Research Ethics Board through the Research Ethics Coordinator – researchethics@uoit.ca or 905.721.8668 x. 3693.

By consenting, you do not waive any rights to legal recourse in the event of research-related harm.

Consent to Participate:

Written Consent

1. I have read the consent form and understand the study being described;
2. I have had an opportunity to ask questions and my questions have been answered. I am free to ask questions about the study in the future;
3. I freely consent to participate in the research study, understanding that I may discontinue participation at any time without penalty. A copy of this Consent Form has been made available to me.

(Name of Participant)	(Date)
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(Signature of Participant)/

(Signature of Researcher)

(Signature of Researcher)

Appendix C. Interview Guide

Participant Interview Script

Introduction

Good morning. My name is Morgan Steele and I am a Masters of Health Science student at UOIT in Oshawa, Ontario. I'm currently working on a project with Dr. Manon Lemonde, a faculty member at UOIT, and Dr Onye Nnorom, a family doctor and primary care lead with Cancer Care Ontario's Central East Program. The objective of our project is to determine promising practices currently being used by Chinese and South Asian IMG physicians to increase cervical screening in the GTA.

This study has been approved by the UOIT Research Ethics Board REB 14558 on November 2, 2017.

You have been identified as someone who understands the issue of screening in these communities and might have some insight into ways we can address this challenge. Do you have some time now for us to provide some background on the project and ask you a few pre prepared questions about your work? We're anticipating this should take about (35-45 minutes). If not, can we set up a time to call you back?

Our goal over the next few weeks is to speak with physicians like yourself to get ideas on ways we can champion local initiatives to improve Pap testing rates in South Asian and Chinese populations throughout the GTA. We are very interested in hearing about your experience in this area. We're hoping to glean from you what approaches you think might have an impact on screening rates in this population, what the strengths and challenges of these various approaches might be and how they might be scalable to larger communities.

All your comments will be important and relevant and we urge you to speak freely and frankly about your experiences. This interview will be audio recorded to be transcribed at a later date. Everything you say will be treated confidentially, and will not specifically identify individuals interviewed or their organization in our final report.

You have been given time to read and sign the consent form. Do you have any questions before we begin?

1. Please tell me about your professional background, specifically where you received your medical training and how long you have been practicing in Canada.
 - a. Practitioner/organizational roles
 - b. Length of time as a primary care physician
 - c. Population served
2. In your experience, what are some of the reasons that South Asian and Chinese women are less likely receive a Pap test compared to the general population?
 - a. Structural barriers
 - b. Cultural barriers
 - c. Individual barriers
 - d. Other reasons?
 - e. Reasons specific to the Greater Toronto Area?
3. What approaches have you either used or come across to improve screening participation in these communities?
 - a. Describe the intervention.
 - b. Individual level or population level
 - c. Population targeted
4. In your opinion, how successful was this approach in terms of improving knowledge or attitudes towards Pap testing, ultimately leading more women to receive the test?
 - a. Sustainable change?
 - b. How do you measure the success of the intervention?
5. What do you think it was about this approach that lead to it's success?
 - a. Accessibility
 - b. Organization
6. What is your opinion on the long term success or sustainability of such an approach (i.e. can there be sustained/long term changes in behaviour because of it)?
 - a. If not, what would it take for changes in Pap uptake to be sustained long-term?
7. Can you describe some of the challenges you see with this type of approach or strategy and any lessons learnt along the way in dealing with these challenges?
 - a. What would you have done differently?
 - b. Specific components that did not work?
 - c. What would you do in the future?
8. Do you think this intervention is scalable or applicable to South Asian and Chinese populations throughout the GTA?
 - a. What should be considered if this were to be implemented on a larger scale?
9. Any specific challenges associated with being an IMG??

10. Is there anything else that you would like to share in relation to your experiences surrounding the promotion of cervical screening participation in South Asian and Chinese immigrant populations in the GTA?

Thank you for taking the time to speak with me. Are there any questions you would like to revisit or clarify? Please do not hesitate to contact us should any concerns arise. We will provide you with a debriefing email detailing the findings of this investigation in the coming weeks.

Thanks again!