Targeting Adverse Cardiovascular Outcomes in Adult Canadians of South Asian Ancestry

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Adult Canadians of South Asian ancestry are at increased risk of heart disease and stroke due to risk factors such as higher rates of diabetes, obesity and hypertension (high blood pressure), as well as poorly controlled blood pressure and abnormal cholesterol levels.

This article describes how the Pyara Dil (Love Your Heart) program was promoted to Calgary’s South Asian community, in response to such risk factors, and how the program was linked to the local Multicultural Chronic Disease Management program administered by Alberta Health Services. The article offers several recommendations to health care providers and chronic disease management program leaders.

About the Risk Factors

In Canada, cardiovascular disease (CVD) and stroke are second only to cancer as the leading cause of disability and death. South Asian Canadians have a higher rate of CVD, which tends to occur up to ten years earlier compared to the general population (Anand et al., 2000) (Sheth, Nair, Nargundkar, Anand, & Yusuf, 1999).

A greater occurrence of risk factors including diabetes, obesity, hypertension and abnormal cholesterol levels play a significant role in the higher CVD risk for South Asian Canadians (Anand et al., 2000) (Yusuf et al., 2004).

A recent review of CVD risk factors in visible minority populations across Canada (Lui, So, Mohan, Khan,
King, & Quan, 2010) and in Ontario (Chiu, Austin, Manuel, & Tu, 2010) revealed that individuals from visible minorities, although less likely to smoke, were more likely to be physically inactive. Specifically, South Asian Canadians were the least physically active of all groups studied.

**Screening for Risk Factors in Calgary’s South Asian Community**

In 2007-2008, of the more than 300 South Asian adults (>45 years of age) who participated in an initial community-based screening program in Calgary, about 20% reported that they had diabetes, while 50% had hypertension and 40% had abnormally high cholesterol (Jones, 2009) (Jones, 2010).

Based on these early findings, and in collaboration with the South Asian community, the Pyara Dil program was initiated. Under the program, a second round of screening sessions involving more than 600 participants was undertaken from October 2010 to February 2011. The average age of participants in this round was 62 (range 40-94, median 64); women and men were equally represented.

Although final data analysis from the latest screenings has not been completed, similar trends were found:

- 23% stated they had diabetes
- 54.3% had hypertension
- only 50.3% controlled their blood pressure to target levels (<140/90 and <130/80 for diabetics)
- those with diabetes had significantly poorer control rates (36%) than the non-diabetic participants (60%)
- nearly 10% (13.7% of men, 6.5% of women) of those who did not report any history of diabetes, had results suggestive of possible diabetes (participants with abnormal results were advised to see their family physician for further diagnostic testing)
- based on the International Diabetes Federation proposed waist circumference criteria for South Asians, 88.9% (88.7% of men, 89.2% of women) had abdominal or high CVD-risk obesity

**Communities are Involved and Concerned**

Given the screening results from 2007-2008 and more recently, Calgary’s South Asian community has welcomed the Pyara Dil program. Community volunteers have been actively involved during each stage of the program development and implementation.

For instance, 80 members of the Calgary South Asian community volunteered to receive special training about CVD risk factors and how to run the second round of risk factor screening sessions. Some of these volunteers were lay persons, while others were health care providers who self-identify as part of the community.

Overcoming language barriers and boosting cultural sensitivity has been a vital part of the program’s overall success. For example, program volunteers were able to communicate with participants in their chosen language (e.g., Punjabi, Guajarati, Dari, Hindi, English) while screening sessions were held in a range of locations that were most convenient or generally preferred by the community, such as religious facilities and Seniors’ centres.

During the second round of screening sessions, volunteers carried out blood pressure, blood sugar and waist circumference assessments. The range of demographic data collected included age, sex, ethnicity, education level, self-reported diagnoses of CVD, diabetes, HBP, high cholesterol, smoking and family history of CVD.
From Screening to Management

After the assessments, the screening participants were given a wallet-sized card with their screening values and risk level. They were counselled on their risk factors and asked to follow-up with their family doctor.

- Low- or moderate-risk participants were referred to the Multicultural Chronic Disease Management (CDM) program in Calgary (administered by Alberta Health Services) which provides culturally-sensitive programs in different languages, including physical activity components.
- High risk participants were referred directly to their family doctor with a letter indicating their risk levels, as assessed during the screening.
- A project volunteer (from the South Asian community) made follow-up phone calls to all high risk participants to ask if they went to their doctor, and if they had attended the CDM program.

The vast majority of Pyara Dil participants reported that they visited their family doctor, or, if referred, a specialty clinic. Participants also expressed a high degree of satisfaction with the Pyara Dil program. However, no participants accessed the community-based education and exercise opportunities offered through the CDM program. This finding was unexpected. This result came about even though each participant received numerous telephone reminders by telephone, in their preferred language. The reasons for this finding need to be further explored.

Missing Out on Physical Activity

In the CDM program, there is a strong emphasis placed on physical activity (and healthy eating). Given the fact that members of the South Asian community are not currently inclined to participate in the CDM program when referred, it is important that cultural or other barriers be removed.

In fact, the participants in Pyara Dil program noted some of the access barriers that need to be overcome in order to achieve this important goal:

- a majority suggested that the program should be delivered on weekends or evenings, and at more accessible sites such as seniors’ centres, and at more (or all) of their religious facilities
- provision of transportation and help with translation were also suggested

Sustaining the Pyara Dil Program

Based on the results of the screenings in late 2010 and early 2011, and the success of the previous screenings, the Pyara Dil program is now a regular activity in many groups within Calgary’s South Asian community.

- A dedicated community volunteer is now in charge of maintaining the program and has trained several other volunteers.
- Two further screening clinics have been undertaken, in August and September 2011, and plans are underway to continue the screenings on a regular basis.

Recommendations

Based on the challenges and successes related to the Pyara Dil program, here are some general recommendations for health care providers and chronic disease management programs:

- be aware of the increased risk heart disease and stroke faced by South Asian Canadians
- be aware of the need for aggressive risk factor prevention, detection and control (management)
- high risk South Asians (particularly those with diabetes) have significantly poorer HBP control than the general population
- there are substantial numbers of South Asians in the community who likely have diabetes, but do not know it
- using religious and other community facilities may help you reach members of the South Asian community in your region
- aim to host your Chronic Disease Management program elements at times and in places most compatible with participants’ needs

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• seek out other ways and means to more strongly engage South Asian community members in educational and physical activity programs

Next Steps in Calgary and Across Canada

Partly based on the findings and successes of the Pyara Dil program, a collaborative program (distinct from the Pyara Dil program) between Calgary’s South Asian community, family physicians and the local Alberta Health Services Chronic Disease Management program is currently being designed.

Its specific aim will be to address the high prevalence or burden of CVD risk factors in Calgary’s South Asian community.

Furthermore, partly based on the findings of the Pyara Dil program, and with the support of the Public Health Agency of Canada, similar programs are under development in five other cities across Canada. The mandate of this national program (entitled “Know your numbers. — Track your heart”) is to continue the screening and referral elements, and provide a peer support element.

Conclusion

By involving members from Calgary’s South Asian community, we have had great success with the Pyara Dil pre-screening program and we have taken steps to ensure that it will be sustainable on its own. This program success is a good example of how working with one cultural community can help to address important health risks or issues.

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