Appendix 3 (as supplied by authors): Detailed summary of findings

Prevalence and Incidence of Heart Disease

Four observational studies compared the prevalence and incidence of CVD in Canadian SA with WC. One study used a random population based sampling technique (SHARE)(1), another by Foulds, 2012(2) used a convenience sample, whereas the other two(3-4) used record linkage in existing databases.

The Study of Health Assessment and Risk in Ethnic groups (SHARE; n=946)(1), randomly sampled SA and WC from three cities in Canada between 1997-2000. The age and sex standardized prevalence of CVD [defined as a history of myocardial infarction (MI), angina, silent MI, percutaneous transluminal coronary angioplasty (PTCA), coronary artery bypass grafting (CABG) or stroke] was 10.7 % in SA as compared to 5.4% in WC ($p<0.05$).

In a cross-sectional study, Foulds, 2012(2) conveniently sample SA and WC (n=5505) from urban and rural areas of British Columbia (B.C.). When compared to WC, the age adjusted relative risk (RR) ratio for CVD was higher in SA when compared to WC (RR=1.00), but the difference was not statistically significant (SA Men: 1.34 (95% CI: 0.66, 2.55), p=0.41; SA Women: 1.02 (95% CI: 0.25-3.77), p= 0.98).

In a retrospective database analysis of Ontario records from National Population Health Survey (NPHS) and Canada Community Health Survey (CCHS) covering years 1996 to 2007 by Chiu et al(3) (n=163,797), the age and sex standardized self-reported prevalence of heart disease (SA: 5.2% vs. WC: 5.1%, $p>0.05$) or stroke (SA: 1.7% vs. WC:1.1, $p>0.05$) or combined heart disease or stroke (SA: 6.6 % vs. WC: 5.7 %, p=0.22) was higher but was not significantly different among SA compared to WC. This study scored lower on the NOS scale (NOS<5) and ethnicity and clinical outcomes were self-reported.

Using self-reported ethnicity, a retrospective cohort study of hospital administrative databases (1994 - 2003) in B.C.(4) reported a higher age standardized incidence rate (/1000/year) of acute MI in SA men and women (SA Men: 4.97 vs. WC Men: 3.29, $p<0.001$; SA Women: 2.35 vs. WC Women: 1.53, p=0.01). Additionally, SA men had higher rates of acute MI at earlier ages than WC men. The age-specific incidence in 35-44 year old men was 0.89 (95% CI: 0.71,1.07) for SA and 0.48 (95% CI: 0.45, 0.51) for WC ($p<0.001$). In the 45-54 year age group, these rates

were also higher 3.44 (95% CI: 3.04, 3.83) among SA men than WC men 1.77 (95% CI: 1.71, 1.83; $p<0.001$).

The mortality rates from CVD in SA and WC(5) were reported in a retrospective review of the Canadian mortality database (1979-1993). Here, SA were reported to have significantly higher age standardized proportional rates of mortality from CVD than WC (Men: 42% vs. 29%; $p<0.001$, Women: 29% vs. 19%; $p<0.001$).

Waist Circumference

It is noteworthy that the mean waist circumference in SA men was higher in only one of the five studies(6), which may explain the heterogeneity in the results for WC (men). The reasons for this may relate to difference in age ranges of the study sample. Smith, 2006 enrolled SA men that were much older than WC men. Three studies(7-9) that showed no difference in the waist circumference for men recruited men with similar age ranges and BMIs between the two ethnic groups. Similarly, heterogeneity in the waist circumference in women may be explained by differences in age ranges of the sample. Five studies(2,7-8,10-11) that showed no difference recruited women of similar age ranges and BMIs. One study(9) that showed lower waist circumference in SA women had recruited a much younger cohort of participants as compared to the other four studies. One study(6) that showed a higher waist in SA participants who were older than their WC counterparts.

Fat Distribution

Only two studies examined the differences in abdominal fat distribution using imaging between SA and WC, the Multicultural Community Health Assessment Trial (M-CHAT)(12) (n= 408) and the Molecular Study of Health and Risk in Ethnic Groups(9) (mol- SHARE) (n=108). M-CHAT(12) compared total abdominal tissue (cm^2) in SA and WC. Overall, SA men had higher mean total abdominal adipose tissue than WC men (439.7 ±169.5 vs. 369.1±164.0; $p=0.003$). total abdominal adipose tissue was not significantly different in SA and WC women (454.3±162.9 vs. 438.4 ±184.7, $p=0.420$).

Visceral and Subcutaneous Abdominal Fat

In M-CHAT(12), compared to WC men, SA men had higher median visceral adipose tissue (cm^2) (140.3, IQR: 101.7, 177.2 vs. 104.9, IQR: 81.0, 144.5; p= 0.002). The differences in unadjusted median visceral adipose tissue for women in the two groups were not significant (101.8, IQR: 74.4, 126.8 vs. 98.0, IQR: 67.5, 136.2; p= 0.52). However, when adjusted for age, income, smoking status, menopausal status and BMI, SA women had significantly higher visceral adipose tissue than WC women (p=0.025). In this study SA men had higher median subcutaneous abdominal adipose tissue (cm^2) than WC men (283.2, IQR: 208.5, 363.1 vs. 221.5, IQR: 171.6, 296.3; p=0.006), although the difference in subcutaneous abdominal adipose tissue were not significant in women (339.3, IQR: 238.3, 433.2 vs. 332.1, IQR: 214.1, 416.7; p=0.243). However, when the subcutaneous adipose tissue values were adjusted for age, income, smoking status, menopausal status and BMI, SA women had higher SAT than WC women (p=0.01). Furthermore, SA had significantly higher median deep subcutaneous adipose tissue (cm^2) when compared to WC (178.63, IQR:128.13, 233.38 vs. 150.90, IQR: 110.47, 208.95), p=0.013)(13).

In mol-SHARE(9), in which SA and WC subjects were matched by BMI, no difference in visceral adipose tissue between SA and WC, overall (126.8± 6.1 vs. 117.5±7.0, p>0.05) or when stratified by sex [men: 153.5±8.8 vs. 134.5±12.1, p>0.05; women: 97.3±7.3 vs. 95.6±6.8, p>0.05] were observed. There were also no differences in sex-specific superficial subcutaneous fat (cm^2) between ethnicities (Men: 25.6±1.0 vs. 27.8±1.2, p>0.05; women: 42.2±1.4 vs. 38.6 ±0.9, p>0.05). However, when compared to WC, SA had relatively less superficial subcutaneous fat as a percentage of their total abdominal tissue than WC [MD: -2.94 (95% CI: -5.56 to -0.32, p< 0.05)] and SA had 17% higher deep subcutaneous and visceral fat relative to superficial subcutaneous fat [MD: 0.34 (95% CI: 0.02 to 0.65; p<0.05]. Moreover, when compared to WC, SA had significantly greater adipocyte area [MD: 64.2 (95% CI: 24.3, 104.1; p<0.05)] and maximum adipocyte diameter [MD: 20.68 (95% CI: 7.86, 33.5; p<0.05)].

Liver Fat

Mol-Share(9) compared liver fat % in SA and WC. Liver fat infiltration was significantly higher in SA [MD: 7.43% (95% CI: 2.30 to 12.55; p<0.05)].

<u>Type 2 Diabetes and Impaired Glucose Tolerance</u>

In the database review studies, prevalence of diabetes mellitus (DM) was established using the International Classification of Disease (ICD)- 10 coding. The prevalence of DM in SA was twice of that of WC. Consistent with this finding, in a chart review study, Khan, 2011(14) reported that SA men and women (ages 35-65) had higher age-specific incidence rates of diagnosed diabetes when compared to WC men and women ($p<0.001$). Similarly, the administrative database study by Chiu et al. (15) reported that SA had a higher age adjusted crude incidence of diabetes rate/ 1000 per year when compared to WC patients (20.8 vs. 9.5). SA also developed diabetes 4.6 years sooner than their WC counterparts. The median age of diagnosis in SA was 49 years as compared to 58 years in WC. In a study by Shah 2013(16), that used health databases from the Ontario Ministry of Health and Long-term care, the mean age at diagnosis for diabetes in SA was 6.7 years younger than WC. In addition, SA developed diabetes at lower body mass index (BMI) cut-offs. Incident rates of diabetes comparable to WC at a BMI of 30 kg/m^2, were seen at BMI of < 24 kg/m^2 for SA. In the random population-based SHARE(1,17), elevated fasting glucose values were observed above a BMI of 21 kg/m^2 in South Asians compared to a BMI $\geq$30 among WC.

We identified two studies that compared impaired glucose tolerance prevalence. Both studies showed a higher prevalence of impaired glucose tolerance in SA when compared to WC. In the SHARE-pilot(18) (n=51), SA were more likely to have impaired glucose tolerance than WC [34.5% vs. 9.5 % , $p<0.04$]. In the main study SHARE(1), 19% of South Asians had impaired glucose tolerance as compared to 15% WC ($p=0.03$). Two studies reported the prevalence of impaired fasting glucose in SA and WC and showed no significant difference in the two groups. He, 2010(19) reported 13.3% prevalence of impaired fasting glucose in SA as compared to 12.6 % in WC ($p>0.05$), whereas in the random population based SHARE(1) the prevalence of impaired fasting glucose in SA trended higher than in WC 7.3% vs. 5.8% but the difference was not significant (7.3 % vs. 5.8 %, $p=0.43$).

Lipids

Six studies(1,8,10,19-21) reported the difference in total cholesterol (TC) (mmol/L) in 998 SA and 1482 WC. There was a trend toward higher TC in SA compared with WC, but the MD was not significant. Significant heterogeneity was observed in the results. A closer look at the studies reveals that the heterogeneity may be explained by differences in age ranges and body

composition among the participants in the included studies. Three studies(1,8,21) that showed a higher TC in SA enrolled men and women of similar ages. One study(19) that showed lower TC levels in SA enrolled SA that were much older that the WC. Whereas two studies(10,20) that showed no difference had recruited participants with similar sex ratios and BMIs between the two ethnic groups.
Only one study looked at mean lipoprotein (a) in South Asians. In SHARE(1), SA had higher sex and age adjusted mean lipoprotein (a) concentrations compared to WC (0.0293±0·018 vs. 0·0259± 0·0119 g/L, p=0.0005).

Two studies compared the levels of apolipoprotein A-1 (Apo A1) in SA and WC. In SHARE(1), SA had lower levels of Apo A1 (g/L) than WC (1.30 ±0.25 vs. 1.42 ±0.28, p<0.0001). In a cross-sectional study of individuals 20-29 years old living in Toronto (n=1631)(22), SA had significantly lower levels of Apo A1 (µmol/L) when compared to WC (39.82 ± 10.61 vs. 44.55± 10.37, p<0.05). Three cross-sectional studies reported levels of apolipoprotein B (Apo B) in SA and WC. In SHARE(1), SA had higher levels of Apo B as compared to WC (1.08 ±0.26 vs. 1.00 ±0.25, p=0.0002). In the study by Garcia-Bailo, 2012(22), SA had slightly higher levels of Apo B (µmol/L) when compared to WC, however, the difference was not statistically significant (0.83 ±0.26 vs. 0.81±0.24). Similarly, M-CHAT(20) reported that median differences in levels of Apo B were higher in SA men and women but the differences were not significant.(SA men: 1.10, IQR: 0.97,1.23 vs WC men: 0.99 g/L, IQR: 0.85,1.20, p= 0.15; SA women: 0.95, IQR: 0.80,1.10 vs. WC women: 0.90, IQR: 0.74, 1.06, p=0.92). One study reported the Apo B/ApoA ratio(61), and the ApoB/Apo A was higher in SA compared to WC men and women (Men: 0.85±0.04 vs. 0.54±0.66; p<0.001; Women: 0.74±0.04 vs. 0.52±0.03; p<0.001).

Novel Markers of Vascular Risk

A smaller evidence base is available for markers of inflammation and vascular endothelial function, plasminogen activator inhibitor-1 (PAI-1), homocysteine, and C-reactive protein (CRP). In SHARE(1), SA had elevated levels of PAI-1 (17.1±9.61 vs. 5.1±9.92 units/ml; p=0.02), homocysteine (11.22 ±3.76 vs. 10.0±3.78 µmol/L; p<0.001) when compared with WC. No significant differences were reported for fibrinogen levels (3·07±0·85 vs. 2·93± 0·86 g/L, p=0.10).

Four cross-sectional studies(8,20,23,24) compared levels of CRP between SA and WC. SA had significantly higher CRP levels than WC [MD: 0.76 mg/L (95% CI: 0.37, 1.15, p=0.0001) I^2= 3 % ; P_{het} 0.38].

Socioeconomic status and Psychosocial Stress

Only two studies explored the influence of socioeconomic status and psychosocial stress on the relationship between acculturation and cardiovascular risk factors looked in SA and WC. Anand et al.(25) created a social disadvantage index based on income, income sources, job type, education, employment status, and marital status. In this study, SA scored higher on the social disadvantage index when compared to WC (Mean ± SE: 1.53±0.07 vs. 1.36 ±0.07; p<0.001). The study also showed that certain CVD risk factors and prevalence increased with increasing social disadvantage for both SA and WC.

Chiu et al.(3) reported that gender modified the association between ethnicity and psychosocial stress. In their study, 24.8% percent of Asian women reported experiencing stress "extremely" or "quite a bit" on most days, compared with only 20.8% of European women. However, there were no significant differences in the prevalence of self-reported stress between SA and WC men (22.3% vs. 21.9%).

Food Intake

Four studies which analyzed the diet of SA and WC were found. Using estimates derived from a validated culture-specific food-frequency questionnaire (FFQ) in SHARE(26), adult Canadian SA consumed more fibre (21±6 vs. 17±5 g/d; p<0.01) and carbohydrates (290±32 vs. 269±38 g/d, p<0.01) and slightly less total fat (59±11.14 vs. 62±13 g/d, p<0.01) and protein (70±10 vs. 78±14 g/d; p<0.01) relative to WC. Similar differences were also observed in M-CHAT(27) where as a percentage of total energy intake, SA consumed more carbohydrates (55.5±8.7 vs. 47±8.8 %, p<0.001), less protein (16.3±3.7 vs. 17.3±4.2%, p<0.001) and total fat (27.6±7.8 vs. 33.7±7.9%, p<0.001) when compared to WC.

Other aspects of diet also differed between SA and WC. In two studies, SA were more likely to consume adequate amounts of fruits and vegetables (3 or more times a day) compared to WC (1 77-90% vs. 65-82%)(3,28), although SA were more likely to frequently consume "junk food"

(higher scores on a validated FFQ) (23% of SA vs. 16% of WC)(26). Moreover, Chiu et al.(29) noted diet quality, as measured by consumption of fruits and vegetables, was reported to worsen over time among SA. After 15 years of living in Canada, this difference between SA and WC had dissipated, and was no longer significant, with ~20% consuming inadequate servings of fruits and vegetables (less than 3 times a day).

Physical Activity

Six studies assessed physical inactivity in SA and WC. In SHARE(26), SA had lower mean score on the physical activity index (physical exertion score estimated from reported type of occupation, time spent playing sports and type of leisure activities, where a higher score represents increased physical activity) than WC (7.5 ±1.7 vs. 8.3±1.6, $p<0.01$). For the participants in SHARE, Mente et al. (30) noted that SA spent fewer hours/wk on physical activity relative to WC (7.3±0.1 vs. 8.1±0.1, $p<0.001$). In Mol-SHARE(24), SA scored lower on a physical activity scale (0=low, 1=moderate, 2= high) than WC (Men: 1.5±0.1 vs. 1.9±0.1, women: 1.3 ±0.1 vs. 1.4±0.10). In M-CHAT(7), SA were physically active for almost 3 hours less per week than WC (Median mins/week: 166, IQR: 71,294 vs. 321, IQR: 148,151). In a study by Chiu et al.(3), SA were more likely to be physically inactive (≤15 minutes/day of leisure time physical activity) than WC (72.8% vs. 62.7%). Foulds, 2012(2) measured physical activity using the Health Physical Activity Questionnaires. In this study, compared to WC men and women, SA ethnicity was associated with physical inactivity (reporting less than 3 days/week of moderate of intense physical activity) [RR SA Men: 1.45 (95% CI: 1.15, 1.75), $p<0.002$; SA Women: 1.71 (95% CI: 1.41,1.99), $p<0.001$].

In an effort to determine the reasons for this lack of physical activity, Khan, 2010(31), examined the scores on the perceived environments related to physical activity questionnaires, where higher scores indicate a more positive physical activity environment. In this study, SA reported lower availability of home environment (Mean score: 2.25±2.04 vs. 3.20±2.50; $p<0.001$) and lower convenience of physical activity facilities (Mean score: 3.94±4.39 vs. 5.88±4.87, $p<0.001$) when compared to WC. In another study by Booth et al.(32), a greater number of recent immigrants (most often SA) resided in Greater Toronto Area neighbourhoods with low walkability as compared to long-term immigrants (20% vs. 18.3%). An interaction between low

walkability and socioeconomic status (SES) was observed, putting low income recent immigrants in low walkability areas at threefold higher risk for diabetes (16.2 per 1,000) compared to those living in high-income, high walkability areas (5.1 per 1,000).

Diagnosis, management and outcomes

Access to testing

Four studies examined symptom presentations and access to diagnostic tests in SA and WC. In a 2002 chart review study by Gupta et al.(33) of acute MI patients in the Greater Toronto Area, the median time from symptom onset to presentation to the hospital was longer for SA than WC (3.92 v. 3.08 hrs, p =0.04). Both groups received angiography (17% vs. 16.3%, p=0.8) at comparable rates, and the frequency of in-hospital major complications, median length of hospital days (six days for both) and frequency of procedures in hospital was similar. In a database review by King 2009(34), SA patients admitted with acute MI in Calgary health region (Alberta) were less likely to present with a classic symptom profile (midsternal pain and/or midsternal pressure with/without throat/ neck pain with/without shoulder pain with/without arm pain) as compared to WC (79% vs. 93% , p=0.016). In those patients who reported distinct time of onset of symptoms, a greater proportion of SA delayed presenting to the ER for more than 12 hours (47% vs. 27%). In this study, SA with acute MI in Calgary hospitals were also less likely to undergo cardiac catheterization/angiography in less than 3 hours from time of arrival to the Emergency Department as compared to WC (21% vs. 47%; p<0.01).

Khan 2010(35), in their retrospective cohort study of SA from British Columbia (BC) and Calgary Health Region (Alberta), noted that SA patients with acute MI were more likely to undergo cardiac catheterization at 30 d (OR:1.32, 95% CI:1.16–1.52, p<0.01) and at 1 yr (OR:1.44, 95% CI: 1.25–1.65), p<0.01) than WC. In an age-restricted retrospective chart review of incident acute MI cases by Albarak, 2012(36)(n=3057; ages 20-55 yrs), overall, 44.1% SA in Alberta and BC underwent angiography as compared to 42.7% WC patients. Furthermore there were no significant differences in utilization of cardiac catheterization in 24hrs following acute MI between SA and WC patients. However, in this study covering years 1995-2002, SA patients were more likely to undergo cardiac catheterization within 1 year of acute MI (ST-elevation and non-ST-elevation MI) compared with WC patients (88.8% vs 77.3%, $p < 0.01$).

Outcomes post- MI: Mortality rates and Recurrent AMI

Eight studies compared short- and long-term mortality rates in SA and WC patients with MI were identified.

Short-term mortality

In Gupta 2002(33), risk-adjusted in hospital mortality rate in the Greater Toronto Area was similar for both groups (9.1% vs. 7.7%, p=0.20). In a chart review, Raghavan, 2008(37) noted that SA with acute coronary syndrome (ACS) in Montreal, Quebec had higher in hospital all-cause mortality (5% vs. 2%) when compared to non-South Asians. In a chart review in Toronto, Brister 2007(38) reported that as compared to WC, SA had increased in hospital operative mortality (2.5% vs. 1.1%, p=0.02) after admission for MI. South Asian ethnicity was also associated with higher post-CABG mortality (OR: 3.1, 95% CI: 1.4, 6.8) when compared to WC. However, Khan, 2010(35) reported lower 30-day mortality in SA acute MI patients (OR: 0.88, 95% CI: 0.75,1.03, p=0.10) among SA in BC and Alberta. In a retrospective cohort study using the hospital administrative data from BC (1999-2003) by Gasevic, 2013(39), there was no significant differences in 30-day mortality post CABG (OR: 0.64, 95% CI: 0.20-2.01, p=0.44) and percutaneous coronary intervention (PCI) (OR: 1.63, 95% CI: 0.83-3.20, p=0.15) between SA and WC. In a retrospective chart review of 7135 patients with AMI by Albarak, 2012(36), adjusted hazard ratios for short term mortality were not significantly different between SA and WC (HR: 0.90; 95% CI: 0.38 to 2.10) in BC and Alberta.

Long-term mortality

Raghavan 2008(37) reported that 1-year mortality was substantially higher in SA patients (6.1% vs. 1.5%) after MI in Montreal, Quebec. However, Quan 2010(40) showed that SA patients in BC and Alberta had better survival compared to other Canadians (adjusted Hazard Ratio (aHR):0.76, 95% CI 0.61 to 0.95) in a follow-up of 10.5 years. In a study using the database at a cardiac center in London, ON, Jones 2012(41) showed no significant differences in 5-year mortality post PCI in SA and WC (aHR: 0.96, 95% CI: 0.75-1.23). Gasevic, 2012(39) used BC

hospital administrative data and reported that there were no significant differences in 1-year mortality post CABG (HR: 1.12, 95% CI: 0.50,2.25, p=0.76) and PCI (HR: 0.77, CI: 0.43,1.40, p=0.39) in SA and WC. Furthermore, Albarak, 2012(36) reported that 3.5 yr long-term mortality (HR: 0.81, 95% CI: 0.53,1.26) was not significantly different between SA and WC patients with acute MI in BC and Alberta.

Three studies described the frequency of recurrent AMI in patients with MI. In a retrospective cohort study by Khan, 2010(35) conducted in BC and Alberta, adjusted HR for survivors of MI only were non-significant among the two groups (aHR:1.07, 95% CI: 0.95–1.2, p=0.20). In Gasevic 2013(39), aHR for SA and WC survivors of AMI in BC was not statistically significant for recurrent AMI post CABG (HR: 0.44, CI: 0.10-1.85, p=0.26). However, when compared to WC, SA ethnicity was associated with higher rates of recurrent AMI post PCI (HR:1.34, CI: 1.08-1.67, p=0.007). In Albarak 2012(36), 27.1 % of SA in B.C. and Alberta had recurrent AMI as compared to 24.4% of WC patients (HR: 1.07, 95% CI:0.89,1.29) and 2.9% had congestive heart failure (CHF) vs. 2.7% of WC (HR: 0.90, 95% CI:0. 51,1.59). Although in a subgroup analysis of patients with diabetes, SA were significantly more likely to develop a recurrent AMI than WC (aHR: 1.48, 95% CI: 1.04, 2.11) over an 8-year follow-up period.

One study reported the health status after MI in SA and WC patients. In a database review by Bainey 2011(42), SA in Alberta were more likely to report poor health status, as measured by Seattle Angina Questionnaire (SAQ), at 1 year after angiography. SAQ is a self-reported measure of health status where lower scores indicate poor health. The mean scores for angina frequency (86±23 vs. 88±20, p<0.001), treatment satisfaction (86±19 vs. 89±16, p<0.001) and quality of life (QOL) (71±24 vs. 76±21, p<0.001) were significantly lower in SA. There were no significant differences in angina stability (77±28 vs. 77±27, p=0.627) and exertional capacity (75±23 vs. 80±23, p=0.11).

Revascularization procedures: CABG and PCI

In a retrospective chart review, Gupta 2002(33) reported that SA in the Greater Toronto Area were equally likely to undergo PCI (2.9 vs. 3.4, p=0.60) and CABG (4.2% vs. 2.2 %, p= 0.06). Similarly, in a chart review, Singh, 2005(43) reported that the revascularization procedure rates

were comparable in SA and WC in the GTA (1% vs. 1 %). However, in the case control study by Raghavan 2008(37) (n=130), SA in Montreal were less likely to have PCI, (26% versus 34%) and more likely to undergo CABG (32% versus 18%). This trend persisted at 1-year time point (PCI: 48% versus 62%, CABG: 35% versus 22%).

In a retrospective study by Quan 2010(40), SA with coronary artery disease (CAD) in BC and Alberta were less likely to undergo PCI (aOR: 0.86, 95% CI 0.79 to 0.93) within six months after coronary angiography when compared to WC. This was consistent after 10.5 years of follow-up after coronary angiography (aHR 0.95, 95% CI 0.90 to 1.00). However, the frequency of CABG was similar (aOR: 0.95 (95%CI: 0.87–1.04) in both groups. In a chart review study in BC and Alberta, Khan, 2010(35) noted that PCI [aOR: 1.06 (95% CI: 0.9, 1.24] or CABG frequency [aOR: 1.04 (95% CI: 0.82,1.32)] were not significantly different at 1 month after AMI. This trend was true for 1 year after AMI as well [PCI aOR: 1.06 (95% CI: 0.90,1.24 ; CABG aOR: 1.09 (95% CI: 0.90,1.33)].

Overall, SA appear to delay presentation to hospital, but once in hospital they appear to have a similar access to diagnostic procedure and interventions (PCI, CABG) compared to WC, however there is some practice and outcome variation between provinces. The outcomes after hospitalization for ACS suggest that SA may have higher short-term (< 1 yr) recurrent event rates including re-hospitalization, and recurrent angina. However short and long-term mortality post MI appears to be similar among SA and WC.

Cardiac Rehabilitation

One study compared participation rates in cardiac rehabilitation programs between Canadian SA and WC patients. In a hospital cardiac rehabilitation record review by Banerjee, 2010(44), SA were less likely to complete the program than WC (43.3% vs. 50.8 %, p=0.04). However, at the end of 6-month program, from those who completed the program, SA were more likely to achieve target heart rate (41.8% vs. 54.7%, p=0.02) and achieved greater change in maximum metabolic equivalents during the exercise tolerance test (1.35±1.8 vs. 0.93±1.35, p=0.07). One qualitative study showed that South Asians respond differently to referral type for cardiac rehabilitation and may be more responsive to liaison referral, where the referral is facilitated

through a discussion with a health care professional, as opposed to automatic referral via a computerized system(45,46).

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