

**THE ORAL HEALTH OF CANADIAN BORN AND FOREIGN
BORN ONTARIO ADULTS**

**An Analysis of Data from the
Ontario Health Survey
1990**

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INTRODUCTION:

Numerous studies have investigated differences in oral health status according to ethnic and racial origins. Studies from Australia, Europe, the U.K. and the U.S.A. are consistent in finding that ethnic/immigrant groups have poorer oral health and make less use of dental services than others. These differences have been attributed to cultural beliefs, attitudes and practices, and to factors within the host culture that may be impede the access of these groups to oral health care (1-26).

Research into ethno-cultural differences in oral health within Canada's population is minimal and has mostly been restricted to aboriginal peoples (27-39). Consistently, the studies have reported much higher disease levels and higher rates of edentulism. Many also report lower levels of utilization of dental services, lower levels of dental health knowledge and greater needs for treatment and dental health education. Again, explanations offered for these observations range from cultural and social factors inherent to the group studied, to the impact of contact with white Caucasian culture.

Only two Canadian studies of ethno-cultural minorities other than aboriginal peoples have been found. Lee (40) reported that in 1985/6 Toronto born 5 year olds had a mean **def** of 1.07 while immigrant 5 year olds had a mean more than twice as high at 2.75. He further identified Filipino, Southeast Asian, Chinese and Hispanic children as being at greatest risk of poor oral health. Payne and Locker (41) also considered ethnic variation within the city of North York and found significant

differences in oral health behaviours between the Canadian-born population and those reporting Italian ancestry.

Many articles in the literature have questioned the use of ethnicity, race or immigrant status in studies of oral health and stressed the need for great care when doing so (42-45). Any study of groups based on race or ethnicity must take into consideration certain difficulties and limitations of using this as a basis of inquiry or measurement. Care must be taken to clearly identify ethnic/racial groups being studied, more so since general groupings ("Asian") may not take into account important differences between subgroups (East Indian Asians, Chinese Asians, Southeast Asians,). Moreover, other important intragroup factors such as economic status, level of education and religious-cultural differences may also be lost when applying a general, all-inclusive, group label.

Not all people identifying themselves as racially or ethnically different from the majority of a population are necessarily newly arrived immigrants. Indeed, many of these people may be native born and perhaps even second or third generation. Others, while born abroad, may have immigrated at an early age or may have been here for most of their formative years. Equally, as in Canada's case, they may be aboriginal peoples indigenous to the population but possibly with significantly different behaviours and outside the mainstream of the health care system. It is therefore important to consider whether the issue of study is race and ethnicity or whether it is the status of immigrant sections of a population taking into account the length of time since their arrival and their length of exposure to the host culture, and

their degree of acculturation. Of special importance is the need to ensure that the issue of race or ethnicity is not permitted to mask underlying factors of greater significance that are neither racially or ethnically related.

Although the Ontario Health Survey 1990 (OHS) collected only limited information on oral health, it provided a unique opportunity to explore further the relationship between ethno-cultural origin, oral health status and access to dental services. The specific aim of this report was to identify the nature and magnitude of any differences in oral health between the adult Canada-born population and those people identifying themselves as being born outside Canada.

THE ONTARIO HEALTH SURVEY 1990:

The OHS was designed to provide comprehensive information on the health status and needs of Ontarians. Data were collected by personal interview and self-complete questionnaire. Questions on ethnic or cultural identity, place of birth and language spoken at home were included in the former and questions on oral health and use of dental services were included in the latter. The response rate for the self-completed questionnaire component, given to each subject aged 12 years and older, was high (77%) and provided data on over 49,000 people. Of these, 44,000 were aged 18 years and over and these adults have been included in this report. With a response rate of this magnitude, the OHS obtained data on health and behaviours which have a high degree of accuracy for the Ontario population as a whole.

Further details of the methods used in the survey can be obtained from earlier

CDHSRU reports or from Ontario Ministry of Health publications.

MEASURING ETHNO-CULTURAL ORIGIN:

Although questions were asked about ethnic or cultural identity it was not possible to use this variable in the analysis. Over half of subjects designated their identity as Canadian and too few subjects fell into many of the other categories to make the analysis feasible. Consequently, it was decided to use place of birth rather than self-reported ethnic identity as the main dependent variable. This is a proxy and narrow definition of ethno-cultural origin which masks as much as it reveals (46).

Using the study question "**Where were you born**", respondents were broadly grouped as follows: 1) Canada/USA; 2) United Kingdom; 3) Southern Europe (Portugal, Italy, Greece); 4) Northern Europe (Poland, Germany, Holland, Hungary, Yugoslavia); 5) Caribbean (Jamaica, El Salvador, Guyana, Trinidad; 6) Asia (India, Sri Lanka, Hong Kong, Vietnam, Philippines, China). Only those respondents identifying a place of birth were included and where numbers did not permit analysis by these groupings, the groups were collapsed further. For example, it was often necessary to include those born in the Caribbean and those born in Asia in one group to make analysis of the data possible. While there are enormous cultural differences between these groups there are similarities in that they are often regarded as visible minorities.

Analyses were also carried out comparing those born in Canada/US and those born elsewhere.

In addition to place of birth, age, gender and household income were also used in the analysis. The aim here was to determine whether or not any differences observed by place of birth were due to underlying differences in the socio-demographic composition of the groups.

MEASURING ORAL HEALTH AND USE OF DENTAL SERVICES:

Since the survey did not involve clinical examinations, data on oral health were obtained by means of self-reports. The following key oral health indicators were used:

- * dental status (dentate/edentulous)
- * ability to chew
- * dental and facial pain
- * other oral symptoms
- * time since last visit to a dental care provider
- * number of visits in the last year
- * for those not visiting in the last year, main reason for not visiting
- * dental insurance coverage

GUIDELINES FOR THE RELEASE OF DATA:

Under the guidelines of the Ontario Ministry of Health, the coefficient of variation was used as a measure of the precision of estimates derived from the survey. Where sample sizes were such that coefficients of variation fell between 16.6% and 25.0%, the estimates have been qualified by an asterisk (*). These estimates are subject to

high sampling variability. Where the coefficient of variation was 25.1% or more, estimates have not been released and are replaced in the tables by (-).

PLACE OF BIRTH AND SOCIO-DEMOGRAPHIC CHARACTERISTICS:

TABLE 1
SOCIO-DEMOGRAPHIC VARIABLES BY PLACE OF BIRTH

| | OVERALL | CAN/US | U.K. | SOUTH EUROPE | NORTH EUROPE | CARIB | ASIA |
|-----------------------------------|---------|---------|--------|-----------------|-----------------|--------|--------|
| N = | 7337830 | 5299359 | 402277 | 382980 | 353242 | 169902 | 279392 |
| VALID % | 100.0 | 76.9 | 5.8 | 5.6 | 5.1 | 2.5 | 4.1 |
| MEAN # YEARS IN CANADA | N/A | N/A | 32.7 | 26.3 | 30.2 | 12.9 | 11.1 |
| GENDER: | | | | | | | |
| Male | 48.4 | 48.1 | 44.5 | 51.3 | 50.4 | 45.5 | 51.7 |
| Female | 51.6 | 51.9 | 55.5 | 48.7 | 49.6 | 54.5 | 48.3 |
| AGE: | | | | | | | |
| Mean age | 43.7 | 42.3 | 52.4 | 48.6 | 51.9 | 39.0 | 40.1 |
| 18-64 yrs | 84.6 | 85.4 | 71.4 | 85.8 | 76.4 | 92.2 | 91.2 |
| >65 yrs | 15.4 | 14.6 | 28.6 | 14.2 | 23.6 | 7.8(*) | 8.8 |
| EDUCATION: | | | | | | | |
| Primary | 11.3 | 8.4 | 7.6 | 49.1 | 20.3 | 14.1 | 7.3 |
| Secondary | 48.0 | 50.1 | 50.2 | 37.6 | 40.9 | 51.9 | 42.3 |
| Post Secondary | 40.7 | 41.5 | 42.2 | 13.3 | 38.8 | 34.0 | 50.4 |
| INCOME: | | | | | | | |
| Low Income | 13.3 | 11.8 | 15.4 | 16.7 | 18.2 | 19.9 | 18.4 |
| Not Low <50,000 | 40.0 | 40.8 | 34.5 | 38.0 | 43.4 | 43.5 | 33.9 |
| Not Low >50,000 | 46.7 | 47.4 | 50.1 | 45.3 | 38.4 | 36.6 | 47.7 |

Table 1 shows the place of birth of Ontario adults and the socio-demographic characteristics of the groups used in the analyses. The majority of the adult Ontario population over 18 years of age (76.9%) reported being born in either Canada or the U.S.A., with the remainder (23.1%) being born elsewhere. Reflecting past trends in

immigration, the U.K., Northern European and Southern European born groups have been in Canada two to three times longer on average than the Caribbean or Asian born groups whose migration to Canada has been more recent.

In contrast to the Canadian/US born population where the mean age was 42.3 years, respondents born in the U.K., and Northern and Southern Europe tended to be older while Caribbean and Asian born respondents were slightly younger. The same was observed, though more markedly, in the proportion of respondents aged 65 years and over. The proportions of elderly were much lower in the Caribbean and Asian groups and much higher in the U.K. and Northern European groups compared to the Canadian/US born respondents.

Some variation was also observed between the groups in terms of education and household income. The Southern European group were the least likely to report post-secondary education (13.3%) and the Asian group the most likely (50.4%). All foreign born groups reported higher percentages of low income households compared to the group born in Canada/US.

EDENTULISM:

Overall, 11% of Ontarians 18 years and over reported being edentulous (Table 2). While the Canada/U.S. and Southern European born groups were very close to the overall rate, the U.K. and Northern European groups reported percentages almost twice as high. However, these groups also had the highest mean ages. Ontarians born in the Caribbean or Asia, the group with the lowest mean age, showed a much lower

rate of edentulism. When those born in Canada or the U.S. were compared with those born elsewhere, no major differences in rates of edentulism were observed (11.0% v 12.8%).

TABLE 2
MEAN AGE AND PERCENTAGE EDENTULOUS BY PLACE OF BIRTH

| | OVERALL | CAN/US | U.K. | SOUTH EUROPE | NORTH EUROPE | CARIB/ ASIA |
|-------------------------------------|---------|--------|------|-----------------|-----------------|----------------|
| AGE: Mean age | 43.7 | 42.3 | 52.4 | 48.6 | 51.9 | 39.7 |
| DENTAL STATUS: Edentulous | 11.0 | 11.0 | 19.2 | 9.5 | 17.8 | 5.8 (*) |

Table 3 shows gender specific rates of edentulism by place of birth. In all groups except the Caribbean/Asian group, females were more likely to be edentulous. A comparison between those born in Canada/US with those born elsewhere revealed the same pattern, with both males and females born outside Canada showing slightly higher rates than those born within North America.

TABLE 3
PERCENT EDENTULOUS BY PLACE OF BIRTH AND GENDER

| GENDER | MALE | FEMALE |
|-----------------------|-------------|---------------|
| PLACE OF BIRTH | | |
| CANADA/US | 9.7 | 12.3 |
| U.K. | 18.7 | 19.6 |
| SOUTH EUROPE | 7.4 (*) | 11.6 |
| NORTH EUROPE | 14.8 | 20.7 |
| CARIBBEAN/ASIA | 7.8 | 3.9 (*) |
| OVERALL | 10.1 | 12.6 |

| GENDER | MALE | FEMALE |
|-----------------------|-------------|---------------|
| PLACE OF BIRTH | | |
| CANADA/US | 9.7 | 12.3 |
| OTHER | 11.9 | 13.7 |

As expected, much higher rates of edentulism were found in those aged 65 years and over (Table 4). In those aged 64 years and under, the Caribbean/Asian and Southern European groups reported rates lower than the other groups. In the older age category figures ranged dramatically from a low of 31.9% for the Caribbean/Asian group to a high of 47.8% for the U.K. born group. The rate for the Canada/US group fell between these two.

When those born in Canada/US were compared with those born elsewhere, no differences were observed in the younger age group, while in the older group, foreign born Ontarians were more likely to be edentulous. Table 5 shows a similar analysis controlling for both age and gender.

TABLE 4
PERCENT EDENTULOUS BY PLACE OF BIRTH AND AGE

| AGE | 18-64 | 65 > |
|-----------------------|---------|------|
| PLACE OF BIRTH | | |
| CANADA/US | 6.7 | 37.2 |
| U.K. | 8.0 | 47.8 |
| SOUTH EUROPE | 4.2 (*) | 42.3 |
| NORTH EUROPE | 10.4 | 43.0 |
| CARIBBEAN/ASIA | 3.4 (*) | 31.9 |
| OVERALL | 6.5 | 38.9 |

| AGE | 18-64 | 65 > |
|-----------------------|-------|------|
| PLACE OF BIRTH | | |
| CANADA/US | 6.7 | 37.2 |
| OTHER | 6.0 | 43.4 |

TABLE 5
PERCENT EDENTULOUS BY AGE AND GENDER

| AGE | 18-64 | | 65 > | |
|----------------|-------|--------|------|--------|
| | MALE | FEMALE | MALE | FEMALE |
| CANADA/US | 6.3 | 7.0 | 34.5 | 39.1 |
| OTHER | 5.6 | 6.6 | 43.8 | 43.0 |
| OVERALL | 6.0 | 6.9 | 37.1 | 40.2 |

Table 6 shows the percent edentulous by place of birth and household income. The data show that irrespective of place of birth, the proportion edentulous declines dramatically as income rises. Equally dramatic differences were observed within income categories. Among Ontarians from low income households rates varied from a low of 14.1% in the Caribbean/Asian group to a high of 39.2% in the

U.K. group. Differences of a similar magnitude also appeared in those living in middle income households, with U.K. born Ontarians having the highest rate.

TABLE 6
PERCENT EDENTULOUS BY PLACE OF BIRTH AND INCOME LEVEL

| INCOME PLACE OF BIRTH | LOW | NOT LOW <50,000 | NOT LOW >50,000 |
|--------------------------|------|-----------------|-----------------|
| CANADA/US | 24.7 | 13.4 | 4.7 |
| U.K. | 39.2 | 22.3 | 9.0 (*) |
| EUROPE | 25.1 | 14.5 | 6.9 |
| CARIBBEAN/ ASIA | 14.1 | 3.6 | 5.1 |
| OVERALL | 24.4 | 12.3 | 5.2 |

| INCOME PLACE OF BIRTH | LOW | NOT LOW <50,000 | NOT LOW >50,000 |
|--------------------------|------|-----------------|-----------------|
| CANADA/US | 24.7 | 13.4 | 4.7 |
| OTHER | 25.1 | 13.4 | 7.0 |

While it is likely that these differences in edentulism rates are partially due to differences in age, small numbers in some of the groups meant that this could not be explored with these data.

CHEWING LIMITATION:

Those who were unable to chew or bite one or more of three indicator foods were defined as having a limitation in their ability to chew.

While the variation is not great, Canada/US born Ontarians had the lowest rate

of chewing limitation, while the Northern European and Caribbean/Asian groups reported the highest rates (Table 7).

TABLE 7
CHEWING LIMITATION BY PLACE OF BIRTH

| CHEWING LIMITATION PLACE OF BIRTH | YES | NO |
|--|------------|-----------|
| CANADA/US | 8.2 | 91.8 |
| U.K. | 10.9 | 89.1 |
| SOUTH EUROPE | 11.5 | 88.5 |
| NORTH EUROPE | 14.1 | 85.9 |
| CARIBBEAN/ASIA | 13.7 | 86.3 |
| OVERALL | 9.4 | 90.6 |

| CHEWING LIMITATION PLACE OF BIRTH | YES | NO |
|--|------------|-----------|
| CANADA/US | 8.2 | 91.8 |
| OTHER | 12.6 | 87.4 |

Females had slightly higher rates than males. As expected, those aged 65 years were substantially more likely than those aged 64 years and under to report chewing limitations. In both age groups, Caribbean/Asian born Ontarians were more likely than those born elsewhere to report difficulty chewing (Table 8).

TABLE 8
CHEWING LIMITATION BY PLACE OF BIRTH AND AGE

| AGE PLACE OF BIRTH | 18-64 YEARS | 65 > YEARS |
|-----------------------|-------------|------------|
| CANADA/US | 5.4 | 24.7 |
| U.K. | 6.3 | 22.4 |
| SOUTH EUROPE | 7.6 | 35.0 |
| NORTH EUROPE | 9.1 | 30.1 |
| CARIBBEAN/ASIA | 11.0 | 42.7 |
| OVERALL | 6.2 | 26.8 |

| AGE PLACE OF BIRTH | 18-64 YEARS | 65 > YEARS |
|-----------------------|-------------|------------|
| CANADA/US | 5.4 | 24.7 |
| OTHER | 8.7 | 29.6 |

Not surprisingly, the edentulous were more likely than the dentate to experience limitations in chewing irrespective of their place of birth. Among the dentate, those born in Canada or the U.S. had the lowest rate and those born in the Caribbean or Asia the highest. The rate for the latter was three times that of the former. Among the edentulous, those born in Canada or the U.S. and those born in Southern Europe had the lowest rates, while those born in the U.K. had the highest (Table 9).

TABLE 9
CHEWING LIMITATION BY PLACE OF BIRTH AND DENTAL STATUS

| PLACE OF BIRTH | DENTATE | EDENTULOUS |
|-----------------------|----------------|-------------------|
| CANADA/US | 4.1 | 42.5 |
| U.K. | 4.5 | 61.5 |
| SOUTH EUROPE | 6.7 | 40.2 |
| NORTH EUROPE | 8.5 | 56.0 |
| CARIBBEAN/ASIA | 12.0 | 52.9 |
| OVERALL | 5.1 | 43.8 |

| PLACE OF BIRTH | DENTATE | EDENTULOUS |
|-----------------------|----------------|-------------------|
| CANADA/US | 4.1 | 42.5 |
| OTHER | 8.2 | 45.1 |

ORAL SYMPTOMS:

Respondents were asked to indicate if they had recently experienced one or more of five oral symptoms. These were toothache, tooth pain with hot or cold, pain in the jaw joint, bleeding gums and pain from dentures.

As shown in Table 10, there was virtually no difference by place of birth in the experience of these symptoms. This was also the case for the percentages experiencing one or more or no symptoms (Table 10).

TABLE 10
PERCENTAGE REPORTING ORAL SYMPTOMS BY PLACE OF BIRTH

| SYMPTOM PLACE OF BIRTH | TOOTH ACHE* | HOT/ COLD* | GUMS* | JAW PAIN** | DENTURE PAIN ** |
|---------------------------|----------------|---------------|-------|---------------|--------------------|
| CANADA/US | 13.8 | 25.2 | 14.3 | 7.5 | 5.8 |
| U.K | 14.0 | 23.0 | 12.5 | 7.1 | 5.8 |
| SOUTH EUROPE | 16.9 | 19.5 | 16.3 | 7.4 | 6.1 |
| NORTH EUROPE | 12.6 | 24.3 | 14.0 | 4.6 | 9.2 |
| CARIBBEAN/ASIA | 12.2 | 16.1 | 15.9 | 5.4 | 5.9 |
| OVERALL | 13.7 | 24.0 | 14.5 | 7.2 | 6.0 |

(*) Dentate subjects only (**) All subjects

TABLE 11
ONE OR MORE ORAL SYMPTOMS BY PLACE OF BIRTH (ALL SUBJECTS)

| SYMPTOMS PLACE OF BIRTH | ONE OR MORE | NONE |
|----------------------------|-------------|------|
| CANADA/US | 36.8 | 63.2 |
| U.K. | 32.0 | 68.0 |
| SOUTH EUROPE | 33.4 | 66.6 |
| NORTH EUROPE | 33.8 | 66.2 |
| CARIBBEAN/ASIA | 31.7 | 68.3 |
| OVERALL | 35.6 | 64.4 |

| SYMPTOMS PLACE OF BIRTH | ONE OR MORE | NONE |
|----------------------------|-------------|------|
| CANADA/US | 36.8 | 63.2 |
| OTHER | 32.6 | 67.4 |

In all groups women had higher rates of oral symptoms than men. Ontarians aged 65 years and over reported rates that were much lower than those aged 18 to 64 years. The only exception to this was for Caribbean/Asian born Ontarians aged

65 years and over who had a rate twice as high as their counterparts born in other countries. Overall, Canada/US born Ontarians aged 18 to 64 years reported slightly higher rates of oral symptoms than those born elsewhere while the reverse was the case for those aged 65 years and over. The differences were however small.

TABLE 12
ORAL SYMPTOMS BY PLACE OF BIRTH AND AGE (ALL SUBJECTS)

| AGE | 18-64 | 65 > |
|-----------------------|--------------|----------------|
| PLACE OF BIRTH | | |
| CANADA/US | 39.7 | 20.1 |
| U.K. | 37.5 | 18.0 |
| SOUTH EUROPE | 34.8 | 24.7 |
| NORTH EUROPE | 37.9 | 20.3 |
| CARIBBEAN/ASIA | 30.7 | 42.3 |
| OVERALL | 38.3 | 21.1 |

| AGE | 18-64 | 65 > |
|-----------------------|--------------|----------------|
| PLACE OF BIRTH | | |
| CANADA/US | 39.7 | 20.1 |
| OTHER | 34.8 | 23.1 |

USE OF DENTAL SERVICES:

For the purposes of this report, use of dental services was measured in terms of the percentage who had not seen a dentist or dental care provider within the past year. Table 13 shows that the highest rate was observed in those born in the Caribbean or Asia, almost one third of whom had not had a dental visit in the

previous year. Among the dentate, the same pattern was observed, except that the disadvantage of Caribbean/Asian born Ontarians was more pronounced. As expected, relatively few edentulous Ontarians had a dental visit in the previous year. It was, however, interesting to note that Canadian/US and U.K. born Ontarians who were edentulous were the least likely to have had such a visit.

TABLE 13
NO DENTAL VISIT IN THE PREVIOUS YEAR BY PLACE OF BIRTH
AND DENTAL STATUS

| PLACE OF BIRTH | ALL | DENTATE | EDENTULOUS |
|----------------|------|---------|------------|
| CANADA/US | 28.4 | 23.0 | 80.3 |
| U.K. | 31.6 | 20.7 | 86.4 |
| SOUTH EUROPE | 24.2 | 20.4 | 65.1 |
| NORTH EUROPE | 28.2 | 19.7 | 76.9 |
| CARIBBEAN/ASIA | 33.7 | 31.9 | 65.5 |
| OVERALL | 28.7 | 23.4 | 79.1 |

Tables 14, 15 and 16 consider the effect of gender, age and income level upon use of dental services.

Overall, men were more likely not to have had a dental visit than women. For women, the highest rate observed was for those born in the Caribbean or Asia.

When age was considered, older Ontarians were more likely than younger Ontarians not to have had a dental visit in the previous year. In both age groups, Caribbean/Asian born people had the highest rates, so that almost two-thirds of older people born in these countries had not accessed dental services in the

previous year.

The percent not having a dental visit in the previous year declined as household income increased. In the low income group, Canada/US and U.K. born Ontarians had the highest rates, while in the middle and high income groups only the Caribbean/Asian groups had rates in both categories somewhat higher than the overall rates.

TABLE 14
NO DENTAL VISIT IN THE PREVIOUS YEAR
BY PLACE OF BIRTH AND GENDER

| GENDER PLACE OF BIRTH | MALE | FEMALE |
|----------------------------------|-------------|---------------|
| CANADA/US | 31.6 | 25.4 |
| U.K. | 35.3 | 28.5 |
| SOUTH EUROPE | 23.9 | 24.5 |
| NORTH EUROPE | 31.7 | 24.5 |
| CARIBBEAN/ASIA | 34.8 | 32.6 |
| OVERALL | 31.7 | 26.1 |

| GENDER PLACE OF BIRTH | MALE | FEMALE |
|----------------------------------|-------------|---------------|
| CANADA/US | 31.6 | 25.4 |
| OTHER | 31.5 | 27.8 |

TABLE 15
NO DENTAL VISIT IN THE PREVIOUS YEAR
BY PLACE OF BIRTH AND AGE

| AGE PLACE OF BIRTH | 18-64 YEARS | 65 > YEARS |
|-----------------------|-------------|------------|
| CANADA/US | 26.5 | 40.7 |
| U.K. | 23.6 | 54.7 |
| SOUTH EUROPE | 21.6 | 41.3 |
| NORTH EUROPE | 23.9 | 44.5 |
| CARIBBEAN/ASIA | 31.5 | 62.8 |
| OVERALL | 26.4 | 43.2 |

| AGE PLACE OF BIRTH | 18-64 YEARS | 65 > YEARS |
|-----------------------|-------------|------------|
| CANADA/US | 26.5 | 40.7 |
| OTHER | 25.6 | 50.2 |

TABLE 16
NO DENTAL VISIT IN THE PREVIOUS YEAR BY PLACE OF BIRTH AND INCOME

| INCOME PLACE OF BIRTH | LOW | NOT LOW <50,000 | NOT LOW 50,000 > |
|--------------------------|------|-----------------|------------------|
| CANADA/US | 48.4 | 32.7 | 19.8 |
| U.K. | 49.4 | 38.1 | 21.5 |
| SOUTH EUROPE | 36.6 | 20.4 | 20.6 |
| NORTH EUROPE | 40.8 | 32.5 | 19.0 |
| CARIBBEAN/ASIA | 43.0 | 36.8 | 25.0 |
| OVERALL | 46.5 | 32.5 | 20.5 |

| INCOME PLACE OF BIRTH | LOW | NOT LOW <50,000 | NOT LOW >50,000 |
|--------------------------|------|-----------------|-----------------|
| CANADA/US | 48.4 | 32.7 | 19.8 |
| OTHER | 42.4 | 31.9 | 21.7 |

DENTAL INSURANCE COVERAGE:

Table 17 shows the percentage in each group with some form of dental insurance, either private or government, which paid for all or part of their dental care. The groups with the highest rates of coverage were Canada/US and Caribbean born Ontarians, while the Asian born population had the lowest rate of coverage.

TABLE 17
DENTAL INSURANCE BY PLACE OF BIRTH

| INSURANCE PLACE OF BIRTH | YES | NO |
|-----------------------------|------|------|
| CANADA/US | 67.5 | 32.5 |
| U.K. | 65.4 | 34.6 |
| SOUTH EUROPE | 64.3 | 35.7 |
| NORTH EUROPE | 58.4 | 41.6 |
| CARIBBEAN | 67.4 | 32.6 |
| ASIA | 55.3 | 44.7 |
| OVERALL | 65.8 | 34.2 |

Table 18 considers the effect of dental insurance coverage on use of dental services. The percentage not having seen a dental care provider in the previous year was almost twice as high for those without as those with dental insurance. Differences by place of birth were small for Ontarians with insurance but more marked for those without. Almost half of Caribbean/Asian born Ontarians without dental insurance had not seen a dental care provider within the last year. Table 19, which shows the main reason for not seeing a dentist within the past year, also indicates that this group cited cost as the primary reason for non-attendance.

TABLE 18
NO DENTAL VISIT IN THE PREVIOUS YEAR
BY PLACE OF BIRTH AND INSURANCE

| INSURANCE PLACE OF BIRTH | YES | NO |
|-----------------------------|------|------|
| CANADA/US | 22.7 | 40.2 |
| U.K. | 25.0 | 46.0 |
| SOUTH EUROPE | 19.4 | 32.4 |
| NORTH EUROPE | 20.4 | 39.8 |
| CARIBBEAN/ASIA | 24.7 | 48.0 |
| OVERALL | 22.5 | 41.2 |

| INSURANCE PLACE OF BIRTH | YES | NO |
|-----------------------------|------|------|
| CANADA/US | 22.7 | 40.2 |
| OTHER | 22.6 | 41.8 |

TABLE 19
NO DENTAL VISIT IN THE PREVIOUS YEAR
BY PLACE OF BIRTH AND REASON

| REASON GIVEN PLACE OF BIRTH | EXPENSE | NO PROBLEM | OTHER |
|--------------------------------|---------|------------|-------|
| CANADA/US | 24.9 | 45.5 | 29.6 |
| U.K. | 18.6 | 53.0 | 28.4 |
| SOUTH EUROPE | 31.2 | 41.7 | 27.1 |
| NORTH EUROPE | 27.8 | 52.2 | 20.0 |
| CARIBBEAN/ASIA | 36.0 | 46.9 | 17.2 |
| OVERALL | 25.7 | 46.3 | 28.0 |

| REASON GIVEN PLACE OF BIRTH | EXPENSE | NO PROBLEM | OTHER |
|--------------------------------|---------|------------|-------|
| CANADA/US | 24.9 | 45.5 | 29.6 |
| OTHER | 28.7 | 48.5 | 22.8 |

LANGUAGE BARRIERS TO DENTAL CARE:

Use of dental services for immigrants or racial/cultural minorities may be affected by these groups speaking a language other than that of the dominant culture. Although admittedly imprecise due to the nature of the survey questions, the data suggest that use of dental services may be affected by language barriers. Table 20 indicates that when English is not the main language spoken at home, higher percentages report not having seen a dental care provider in the previous year. The differences were marked for all groups except those born in Northern Europe.

TABLE 20
PERCENT WITHOUT A DENTAL VISIT IN THE PREVIOUS YEAR
BY PLACE OF BIRTH AND HOME LANGUAGE

| HOME LANGUAGE PLACE OF BIRTH | ENGLISH | OTHER |
|---|----------------|--------------|
| CANADA/UK/US | 28.1 | 36.9 |
| SOUTH EUROPE | 19.8 | 27.0 |
| NORTH EUROPE | 28.2 | 28.3 |
| CARIBBEAN/ASIA | 29.1 | 39.1 |
| OVERALL | 27.8 | 35.2 |

| HOME LANGUAGE PLACE OF BIRTH | ENGLISH | OTHER |
|---|----------------|--------------|
| CANADA/UK/US | 28.1 | 36.9 |
| OTHER | 26.5 | 31.8 |

DISCUSSION AND CONCLUSIONS:

Many studies have reported that minority groups have poorer oral health and less access to dental services than the indigenous population. Canadian data on this issue, however, are minimal.

Although only a few questions relating to oral health were included in the Ontario Health Survey, the data offer valuable information concerning the oral health status and utilization patterns of the population of Ontario. In this report we have analyzed the data to determine if differences existed according to ethno-cultural origin, measured crudely in terms of place of birth.

Overall, variation was observed between Canadian/US born Ontarians and those born elsewhere in rates of edentulism, oral functional problems, oral symptoms and use of dental services. However this variation was not consistent, always negative or of great magnitude. Variation which appeared between the foreign born groups and the Canada/US born population often disappeared when foreign born respondents were grouped together.

The most consistent differences between Ontarians born in Canada or the U.S and Ontarians born elsewhere were observed with respect to the Caribbean/Asian group. Though likely to be very different culturally, Caribbean and Asian born Ontarians were similar in that their average age was lower than other Ontarians, they had been in Canada for a much shorter period of time and they were slightly more likely to live in low income households.

While these two groups had the lowest rate of edentulism overall, in both age

categories they tended to fare worse on the other measures of oral health status used in the analysis. For example, among the dentate, the percent reporting chewing problems was almost three times as high for this group as for those born in Canada or the United States. Caribbean/Asian born people aged 65 and over were almost twice as likely as Canada/US born Ontarians of the same age to experience problems in chewing. In addition, Caribbean/Asian born elderly were twice as likely as their Canada/U.S. born counterparts to report oral symptoms.

With respect to dental care, dentate Caribbean/Asian born Ontarians were the most likely not to have seen a dental care provider in the previous year. The disadvantage of elderly Caribbean/Asians is again apparent, with two-thirds not having had a dental visit in the prior 12 months. As a whole, a higher percentage of the Caribbean/Asian group also gave cost as the main reason for having no visit in the previous year compared to the Canada/US group. There was also an indication that language barriers may also be important. Where English was not the main language spoken at home, a larger percentage had not accessed dental care.

It should be apparent that the data presented here are limited and there are some difficulties in drawing firm conclusions from these analyses. Firstly, the small number of questions provided only very limited measures of oral health status and use of dental services. Secondly, and perhaps more importantly, no clinical examination was possible and we therefore lack critical objective data related to the oral health status of the population. Given also that this was a general survey whose focus was not directed to ethno-cultural or immigrant groups, the numbers made it

necessary to examine the data by categories that were overly broad. While this may have had the effect of masking or distorting differences, it certainly had the effect of subsuming wide, and possibly very divergent, groups into larger and less distinctive ones.

Where differences were observed in oral health and use of dental services, they more frequently occurred in the group who represent the youngest, most dentate as well as the newest additions to the Ontario population. Elderly subjects within these groups appeared to be particularly disadvantaged. Fewer differences were observed in those groups who have been here much longer and who may therefore have a closer association to the indigenous population. In light of these findings, and in view of the limitations of the present data, it is necessary to look further at the issue of ethno-cultural variations in oral health by specially designed studies.

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