Admission of Rural Origin Students to Medical School:
RECOMMENDED STRATEGIES

MAY, 2004

SOCIETY OF RURAL PHYSICIANS OF CANADA
RR #5 SHAWVILLE QC, Y0X 2Y0
About the Society of Rural Physicians of Canada

The Society of Rural Physicians of Canada (SRPC) is the national voice of Canadian rural physicians. Founded in 1992, the SRPC’s mission is to provide leadership for rural physicians and to promote sustainable conditions and equitable health care for rural communities.

On behalf of its members and the Canadian public, SRPC performs a wide variety of functions, such as developing and advocating health delivery mechanisms, supporting rural doctors and communities in crisis, promoting and delivering continuing rural medical education, encouraging and facilitating research into rural health issues, and fostering communication among rural physicians and other groups with an interest in rural health care.

The SRPC is a voluntary professional organization representing over 1,900 of Canada’s rural physicians and comprising 5 regional divisions spanning the country.

“Nous soignons les régions - We care for the country”
Admission of Rural Origin Students to Medical School: Recommended Strategies

Society of Rural Physicians of Canada Policy Paper
[Approved by SRPC Council - April 2004]

See also Summary Article for: CMAJ 2005; 172(1): 4-7
“Strategies to Increase Enrolment of Students of Rural Origin in Medical School”

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Executive Summary

This report presents education, funding and admissions process recommended strategies to increase the number of rural origin students in Canadian medical schools.

Goal:

A fair and equitable number of rural origin students admitted to Canadian medical schools

Rationale:

Canada has a serious shortage of rural doctors that has a direct impact on the difficult task of providing health care to rural Canadians. The two most important factors associated with a physician’s choice of rural practice location are rural background and rural medical training. In Canada, however, compared with their urban counterparts, very few rural origin students get admitted to medical school. Increasing the number of rural origin medical students needs to be an important component of Canada’s strategy to increase the number of rural doctors to provide a fair and equitable distribution of the medical workforce throughout Canada.

Context:

1. Rural health care is difficult to provide
2. Shortage of rural doctors in Canada
3. Rural origin students more likely to choose rural practice than urban background students
4. Rural origin students severely under-represented in medical school in Canada
5. Rural origin students are educationally disadvantaged
   a. Lower parental education status and lower community education status
   b. Less academic and extracurricular opportunities
   c. Distance and cost access disadvantage for attending university
6. Rural origin students are economically disadvantaged
   a. Lower parental incomes
   b. Higher debt load on entry to medical school
7. Rural origin students face admissions process disadvantage
   a. Most medical school admission committees have no rural members
   b. Most medical schools do not have a policy or strategy for rural admissions
8. Positive change is possible. The number of rural origin students in Australia increased from 10% in 1989 to 25% in 2000 as a result of policy and funding changes.
Recommended Strategies

1. **EDUCATION INITIATIVES**

Objectives:

To increase the number of rural high school graduates who go on to university programs with an interest in medicine as a possible career

To increase the number of rural-origin university students who are interested in a career in medicine and able to meet the entrance requirements to medical school

Recommended Strategies:

1.1. Rural High School Education

1.1.1. University-high school outreach program to students and guidance counselors involving medical students and local physicians

1.1.2. University-high school in-reach education opportunities for rural students to attend science and health-related summer programs

1.2. University Education

1.2.1. Introduce rural components into Health Sciences courses and programs

1.2.2. Establish pre-med rural student clubs and mentoring system

1.2.3. Establish counseling and support system for rural students

1.2.4. Provide pre-med summer school programs for rural students

2. **FUNDING SUPPORT**

Objective:

To reduce the financial barriers for rural origin students enrolling and completing medical school

Recommended Strategies:

1. Fund rural education initiatives
2. Major scholarships for rural origin students
3. Medical school tuition relief for rural-origin students
4. Financial need-based bursaries for medical students

3. **ADMISSIONS PROCESS CHANGE**

Objective:

To admit a fair and equitable number of rural origin students to medical school

Recommended Strategies:

2.1 Rural physicians and rural community members on admission committees
3.2 Rural physicians and rural people as interviewers
3.3 Ensure rural origin students are not disadvantaged by the admissions process
3.4 Rural adjustment factor
2.5 Rural targets
Preamble

The Society of Rural Physicians of Canada (SRPC) recognizes the importance of educating doctors for rural practice. Part of this includes ensuring the admission of a fair and equitable number of students of rural origin as they are the most likely to ultimately choose rural practice as a career. In 2002 national data was published that revealed that rural origin students are seriously under-represented in Canadian medical schools.

This prompted the formation of a national task force to address this issue. A large number of physicians volunteered to become involved in the project, such that a core national committee was made, as well as a larger interest group. As well as the input of the committee and the interest group, three focus group sessions have been held: at CFPC Family Medicine Forum 2002 in Montreal in November 2002 that led to the establishment of this group, the SRPC Annual Rural and Remote Conference in Kelowna in April 2003, and the CFPC Family Medicine Forum in Calgary in October, 2003. Over 100 submissions have been received from individuals and groups including the Canadian Federation of Medical Students (CFMS) Executive Committee, the SRPC National Student Committee, and the CFPC Section of Teachers Executive. A survey of Canadian medical school associate deans for admissions was also conducted to determine the current status of rural admission initiatives and strategies.

In presenting these recommendations, the SRPC hopes that policies, strategies, initiatives and funding can be implemented to increase the number of rural origin medical students to a fair and equitable level and thus ultimately result in more students graduating who will choose a career in rural practice.

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Context and Comments

“Universities [should] work with professional associations, governments and rural communities to determine the barriers that prevent rural students from entering the profession, and take appropriate action to eliminate or reduce these barriers.” (Canadian Medical Association 2000)

“...increasing the number of physicians who grew up in rural areas is not only the most effective way to increase the number of rural physicians, but any policy that does not include this may be unsuccessful.” (Rabinowitz 1999)

1. Rural health care is difficult to provide

Comment: Canada, with 10 million square kilometers, is the second largest country in the world but has a population of only 30 million people. Depending on the definition of rural used, between 21 and 38% of Canadians live in rural areas. (Appendix 1) The geographic realities of time and distance combined with limited or distant specialist and high-tech resources makes providing rural health care a difficult challenge. An adequate number of well trained rural doctors is essential for the provision of accessible quality rural health care.

2. Shortage of rural doctors in Canada

Comment: Canada is facing a shortage of rural doctors, both family physicians and specialists (Romanow2003,Health Canada2004). Using the StatsCanada definition of rural and small town, currently 22% of the population of Canada is rural, and 17% of family doctors and 3% of specialists. The family doctor to population ratio in rural Canada in 2002 was 1:1201 compared to 1:981 for Canada as a whole, or put another way, 1175 rural family doctors are needed to bring the family doctor to population ratio up to the same level as Canada overall. This does not include the needs of rural communities that are within the commuting zone of urban centres. In 2002, only 75 of the 711 family medicine training program graduates from 2000 entered rural practice. (Buske 2003) The developing overall family physician shortage in Canada will only make the situation worse.

3. Rural origin students more likely to choose rural practice and family practice than urban background students


Canadian clerkship students from a rural background were significantly more likely than their urban-raised peers to indicate they planned to do rural locums and practice in a rural community (Woloschuk 2002). This student cohort was followed into practice and of those completing family medicine residency training, those with rural background were 2.5 times more likely to be engaged in rural practice than their urban-raised peers. (Woloschuk 2004) Upon entry, Canadian medical students from smaller communities are also more likely than those from large urban communities to indicate a preference for family practice as a
career choice. (Scott 2004, Woloschuk 2002, Wright 2004) This is important in the context of the dramatic decline (44% in 1992 to 25% in 2003) in the number of graduating medical students choosing family medicine residencies and Canada’s increasing shortage of family physicians (Banner 2004). Rural origin family medicine residents in Ontario were found to be 5 times more likely to indicate their intention to practice in a rural location than their metropolitan counterparts. (Rourke in press, Incitti 2004)

Although rural background has the most powerful impact on eventual rural practice, because most medical students are from an urban background, a significant portion of rural doctors do and will need to come from an urban background. Longer rural medicine learning experiences in medical school and postgraduate family medicine training are associated with significantly greater numbers of residents indicating rural practice as a career choice and both rural and urban origin doctors in rural practice. (Incitti 2004, Rourke in press) "Rural educational experiences during training have a significantly stronger influence on urban-raised physicians than rural-raised physicians." (Chen submitted) More detailed discussion of Canadian medical education for rural practice can be found in “Postgraduate education for rural family practice: Vision and recommendations for the new millennium”, a report by the CFPC Working Group on Postgraduate Education for Rural Family Practice (Working Group on Postgraduate Education 1999) which was endorsed by SRPC and CFPC, as well as subsequent journal articles.

This monograph will focus on admission and preadmission initiatives related to rural origin medical students.

4. Rural origin students severely under-represented in medical school in Canada

Comment: Rural origin students are under-represented in medical schools in Canada. Nationally, only 10.8% of the medical students lived in rural areas at high school graduation as compared to 22.4% of the population. (Dhalla 2002) In the 2003 survey of medical school admission associate deans for this task force, no Canadian medical school reported has as high a percentage of rural origin medical students as the provincial rural population. National data on applicants including grade points averages and offers is not available, but Ontario data suggests that fewer rural students than their urban counterparts apply to medical school and even those who do apply, with similar grade point averages and MCAT scores to their urban counterparts, fewer rural students are accepted. (Hutton-Czapski in press)

5. Rural origin students are educationally disadvantaged

a. Lower parental education status and lower community education status

Comment: Dhalla (Dhalla 2002) found that medical students were most likely to have parents who were more highly educated, and particularly parents who were doctors. This is a significant factor for rural students as people living in rural communities have much lower education status than their urban counterparts. (Appendix 1) This can result in less parental and community role models and encouragement and even acceptance of higher education including medical school.

b. Less academic and extracurricular opportunities

Comment: Many rural high schools can provide neither the breadth nor depth of academic programs or enrichment activities that are available to urban high school students. In particular, the opportunity to participate at a provincial or national level is often significantly less for rural students. This is not only a direct educational disadvantage, but can also be a disadvantage when a rural student’s CV is comparatively assessed without a rural appreciation. Rurality also presents a technology disadvantage: “Rural individuals...within each age class...within each income class...within each educational attainment class, are less likely to own a computer or to be connected to the Internet.” (Appendix 1)
c. Distance and cost access disadvantage for attending university

Comment: Rural students do not have the option of attending university in their home town, but by necessity have to travel away from home to attend university. This is another factor that contributes to the smaller number of rural origin students attending university than their urban counterparts. (Appendix 1) This geographic barrier is extreme for Canada’s most isolated rural people such as those in Nunavut, the Northwest Territories, the Yukon, and remote parts of many provinces. This includes many Aboriginal Canadians who face additional language and cultural barriers.

6. Rural origin students are economically disadvantaged

   a. Lower parental incomes

   b. Higher debt load on entry to medical school

Comment: Medical students are more likely to come from families with high incomes. (Dhalla 2002) Rural families are significantly poorer than their urban counterparts (Appendix 1) and the high cost of medical education is a higher perceived and real barrier for more rural students than their urban counterparts. Rural students don’t have the option of getting an undergraduate degree in their home town. This results in additional costs for accommodation and other living expenses that are not necessary for urban students who are able to get their undergraduate degree in their home city. Rural students in medical school have a higher debt load and increased financial anxiety compared to their urban counterparts.

7. Rural origin students face admissions process disadvantage

Comment: The medical school admission process may be unintentionally biased and difficult for rural medical students. (See comments under 4.)

   a. Most medical school admission committees are composed of entirely urban members

Comment: In the 2003 survey, of Canadian medical school admission associate deans, only 3 indicated they had a rural physician on their schools admission committee. It is difficult to develop policies that take the rural admission issues into account if there is not rural representation on the admission committee. Similarly, the heavy preponderance of urban interviewers at most medical schools may result in an unintentional urban selection bias as it may be that “medical school admission committee members tend to give high ratings to those students whose backgrounds, values and orientation are similar to their own” (Urbina C 1994)

   b. Most medical schools do not have a policy or strategy for rural admissions

Comment: In the 2003 survey, of Canadian medical school admission associate deans, only 3 indicated their schools had a specific policy or strategy for admission of rural origin students. Given Canada’s continuing worsening shortage of rural physicians, this reflects an unfortunate lack of attention to the lack of equity in numbers of rural background students being admitted to medical school as well as a lack of attention to issues that can directly impact on career choice relevant to the needs of society. Moreover, the trend to higher and higher GPAs, MCAT scores and rapidly rising tuition fees may put admission to medical school beyond the reach of all but a very few Canadian rural origin students.
8. Positive change is possible

a. The number of rural origin students in Australia increased from 10% in 1989 to 25% in 2000 as a result of policy changes and funding support

Comment: This change in Australia has come about from a whole series of initiatives including bursaries, scholarships and admission policy changes including new reserved rural origin spots. (Dunbabin 2003)

In the United States,” more than 60% of responding medical schools offered extra consideration at some point in the admissions process to candidates likely to enter primary care and rural applicants were frequently listed as one of these groups.” Moreover, at one representative medical school there would be a “marked reduction [to less than half] in the proportion of rural applicants offered admission interviews if additional consideration and score adjustment were not applied.” (Basco 2002)
Recommended Strategies and Rationale

Medical schools will need to take the lead and work with universities, governments and other stakeholders to develop, coordinate, and support programs to achieve the goal: **A fair and equitable number of rural origin students admitted to Canadian medical schools**.

1. EDUCATION INITIATIVES

Objectives:

To increase the number of rural high school graduates who go on to university programs with an interest in medicine as a possible career

To increase the number of rural-origin university students who are interested in a career in medicine and able to meet the entrance requirements to medical school

Recommended Strategies:

1.1. Rural High School Education

1.1.1. **University-high school outreach program to students and guidance counsellors involving medical students and local physicians**

*Rationale:* Local physicians can be powerful mentors and role models to encourage rural students to go on to higher education including medical school. More medical schools are sending medical students to rural communities for parts of their education. Medical students can share their stories of why they chose medicine, the steps they took to get into medical school and answer questions from the perspective of someone not that much older. Medical students can be particularly powerful role models in their home communities, giving other students something tangible to aspire to. The Canadian Federation of Medical Students’ Outreach Program (CROP) is an excellent student-led initiative that needs more medical school support to be sustainable and more successful.

1.1.2. **University-high school education opportunities for rural students to attend science and health-related summer programs**

*Rationale:* Rural high school students often lack the opportunities to access the enrichment activities that can turn on students to a career in science and health. A few medical schools and the larger university science faculties have taken a leadership role in providing exciting summer enrichment activities, particularly for rural high school students.
1.2. University Education

1.2.1. Introduce rural components into Health Sciences courses and programs

**Rationale:** An increasing number of students are enrolling in health sciences programs at universities in Canada often as their premed degree. Some universities have successfully introduced rural components into their programs and courses that not only include the rural health context, but provide opportunities for students to do rural-related projects that may include rural community involvement. This highlights rural health as an important issue and generates student academic interest and involvement.

1.2.2. Establish pre-med rural student clubs and mentoring system

**Rationale:** Student interest, when shared and supported by mentors, can be infectious and become a very positive factor in increasing student interest and applications.

1.2.3 Establish counseling and support system for rural students

**Rationale:** This is particularly important for some rural students as rural students do not have the option, as urban students do, of attending university in their own home town, and for some the transition from rural to urban and the distance away from their usual family and support structures can be very challenging. In addition, course and career counseling can be particularly important in helping with the bewildering choices they face, often combined with a lack of adequate counseling from their own rural high schools.

1.2.4 Provide “Premed” summer school programs for rural students

**Rationale:** A variety of summer programs could be set up for rural origin university students who have an interest in medicine as a career. This could be as short as an overview weekend or a month or more that could include experiential learning. Students would learn about the complicated but doable journey to become doctors - from premed preparation and admissions process to the medical school experience and costs, to residency training, licensure and practice.

1.2.5 Provide medical school application preparation assistance

**Rationale:** Providing information and help sessions on medical school applications, MCATs and interview skills could help rural medical school applicants.

2. **Funding Support**

**Objective:**

To reduce the financial barriers for rural origin students enrolling and completing medical school

**Recommended Strategies:**

2.1 Fund rural education initiatives
**Rationale:** The recommendations listed under “Education Initiatives” will need specific funding in order to be successfully implemented. In addition to program development and implementation costs, funding should be provided to reduce the travel and accommodation and other cost barriers for rural students to attend.

### 2.2 Major scholarships for rural origin students

**Rationale:** A major increase in scholarships for rural origin students is needed to offset the perception and reality for many rural students that medical school is just too expensive. This will require a significant funding commitment by government similar to that in Australia. (Dunbabin 2003) In addition, community and private donors can play an important role in supporting students from their own areas who pursue higher education, including medical school.

### 2.3 Medical school tuition relief for rural-origin students

**Rationale:** Appropriately funded and timed return of service agreements could both benefit rural origin students and encourage rural practice. Unfortunately, some of the tuition relief programs so far demand a commitment to a return-of-service that is difficult for students to make early in medical school before they’ve had the opportunity to see the full variety of career possibilities. Return of service agreements have not been highly rated by residents or practising doctors (Rourke 2003) possibly because the relatively large return required for small amount of financial support and the requirement to commit to a career choice too early in the medical education cycle.

### 2.4 Financial need-based bursaries for medical students

**Rationale:** Financial need-based bursaries at medical schools are important overall and could be particularly important for many rural-origin students as rural family income in Canada is significantly lower than urban family income. In addition, costs are higher for rural origin students who do not have the opportunity of living at home while attending medical school in their home community.

### 3. ADMISSIONS PROCESS CHANGES

**Objective:** To admit a fair and equitable number of rural origin students to medical school

**Recommended Strategies:**

#### 2.1 Rural physicians and rural community members on admission committees

**Rationale:** Every medical school in Canada serves a large population which includes rural communities. This should necessitate the inclusion of rural physicians and community members to help shape the admissions policy and process.

#### 3.2 Rural physicians and rural people as interviewers

**Rationale:** There is an increasing positive trend of admissions interviewers reflecting community diversity. This should be extended to include a fair number of rural physicians and rural community
members as part of the admissions examiners. This may require some compensation to reduce the travel and accommodation cost barriers.

3.3 Ensure rural origin students are not disadvantaged by the admissions process

Rationale: All admission committees should apply a “rural lens” to the admissions process. This should include examining what is looked for at every stage: screening, scoring, essay questions and interviews to ensure there are no unintentional barriers to rural origin students. In fact, “rural” could be regarded as one of the positive or desirable candidate attributes to be considered in the selection process.

2.4 Rural adjustment factor

Rationale: A rural bonus or adjustment factor should be used to offset rural student education and other disadvantages and help correct the under-representation of rural origin students in Canadian medical schools. Medical schools that use grade point averages and MCAT cut-offs to narrow the applicant pool may need to apply a rural bonus or adjustment factor to grade point averages and MCATS. This could ensure a fair and equitable number of rural candidates are included in the groups that go on to further assessment steps, including the interview phase. Grade point and MCAT adjustments and other bonuses are already used successfully by a number of Canadian medical schools for special groups of applicants. One province (Quebec) has instituted a rural bonus based on location of high school attended. In one Quebec medical school for example, 7 additional rural students were offered a position in September 2003 due to the rural bonus, and 4 of them chose that school. (Frenette J) Similar policies could be implemented by medical schools or provinces across Canada. It may be best to focus on where the candidate lived during their adolescent or high school years as these are the most important formative years. (See Appendix 1) Bonuses or adjustments should be temporary measures while inequities are being addressed.

2.5 Rural targets

Rationale: The regional, provincial and national rural population and the need for rural physicians presents a compelling national and provincial interest for setting fair and equitable targets for admission of rural origin students to Canadian medical schools. In other countries, increased funding and increased medical school class size has been tied by governments to rural origin student support and admissions. In Canada, medical school social responsibility values of fairness and equity combined with the need for more rural doctors should lead to implementation of strategies to increase admission of rural origin students to Canada’s medical schools. Broader educational initiatives at high school and university as well as government and foundation funding for rural scholarships and bursaries will also be needed to reach the target of a fair and equitable number of rural origin medical students.
Appendix 1  Statistics Canada and Other Data

A) Definition of Rural


Statistics Canada provides 6 definitions of rural which include from 22.1% to 38.2% of Canadians as rural (1996 census).

Statistics Canada comments:
- If we were to recommend one definition as a starting point or benchmark for understanding Canada’s rural population, it would be the “rural and small town” definition. This is the population living in towns and municipalities outside the commuting zone of larger urban centres (i.e. outside the commuting zone of centres with population of 10,000 or more).

By that definition 6,169,008 or 21% are rural (2001 Census). See Table 1 for provincial breakdown and Table 2 for demographic information. Note that this Statistics Canada definition includes the smallest percentage of Canadians as rural because it excludes people living rural communities within the commuting zone of larger urban centres. See also Rourke (1997), Leduc (1997), and Pong (2001).

B) Definitions of Rural Origin

As with rural, there are many ways to define rural origin or rural background students. (Pong, Rourke)

These vary from where one was born to parent’s mailing address. Some universities use the “permanent” address given as a proxy. This is prone to misuse and misinterpretation. It may be best to focus on where the candidate lived during their adolescent or high school years as these are the most important formative years.

Dhalla et al (2002) defined rural origin as “lived in a rural area at high school graduation”.

The Ontario Medical School Application Service (OMSAS) 2002 definition was “Adolescent years spent in communities less than 10,000.”

Rourke et al (in press) defined rural origin as students who “lived in a rural area during their high school years”.

Easterbrook et al (1999) defined rural as “any community with a population less than 10,000”. Hometown was defined as “the community in which the physician spent the greater part of his or her childhood”.

Note: All of these definitions have a larger base than the Statistics Canada “Rural and Small Town Canada” rural definition. For example, using communities <10,000, approximately 30% of Canadians are rural. (Statistics Canada 1997)

Although it is more restrictive, the Rural and Small Town (RST) definition is very useful as it only includes rural Canadians who are outside of the commuting zone of larger urban centres. This ties in with the finding that considerably fewer students from outside of the commuting distance to universities actually go to university.
C) Rural Demographic Factors:

i. University Education Gap


Rural Canadians are poorer and less well educated than their urban counterparts (Table 2). In addition, distance adds a further disadvantage.

After controlling for family income, parental education, and other factors associated with university participation, students who live more than 80 km from a university are only 58% as likely to attend university as students who live within 40 km from a university. (Table 3A) In general, university participation is greater among students from upper income families, students with at least one parent with a university degree, and females; however, the extent to which these students have an advantage in university participation is highly dependent on distance to school. (Tables 3B, 3C) After controlling for income, students with a university-educated parent are just as deterred by distance as students without a university-educated parent are.

For Canada as a whole, 20% of Canadian students live out-of-commuting distance (80km or more).

The university participation gap between students living within and out-of-commuting distance is considerably larger than the participation gap that exists between urban and rural dwelling students (20% of urban dwelling students attend, while 17% of rural dwelling students attend). The difference is largely explained by the fact that many students in small urban areas are not served by a university at all...while some students in rural areas are actually close to a university.

In summary, rural Canadian students are significantly disadvantaged when it comes to 3 important measurable factors associated with university attendance: economic, parental education, and distance. These disadvantages can be enormous barriers to medical school entry and are reflected in the much smaller proportion of rural students compared with urban students who do get into medical school.

ii. Internet Technology Gap


“Living in rural parts of Canada itself appears to be an independent constraint on household Internet use, according to a new study.” “New developments in ICT, such as the growth of Internet use, has been portrayed as an innovative medium of information that provides new opportunities to Canadians in rural and remote areas. However, recent studies have shown that fewer rural Canadians were using the Internet compared to urban Canadians. Our research indicates that although factors such as an older population with lower educational attainment and lower income tend to constrain Internet use by rural Canadians, rurality appears to be an independent constraint on Internet use.

This new study, the first to hold these three factors constant, found that the concept of “rurality” itself was an independent constraint on Internet use. In other words, (young) age, (high) income and (high) education did not overcome the negative influence of living outside (the 15 most populous) urban
centres...Overall, Internet use was higher among higher income households and those with higher levels of educational attainment. However, living outside these urban centres reduced the use of the Internet within each income and education group, even among higher income households and those with higher levels of education.”


“Rurality matters when considering computer ownership and Internet connectivity.”
“...within each age class..within each income class..within each educational attainment class, rural individuals are less likely to own a computer or to be connected to the Internet.”

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Statistics Canada. 2001 Census of Population (www.statcan.ca)

Specifically, Rural and Small Town (RST) refers to the non-CMA/CA population, where a CMA is a census metropolitan area and a CA is a census agglomeration. A CMA has an urban core population of 100,000 and over, a CA has an urban core population of 10,000 to 99,999. CMAs and CAs include all neighbouring municipalities where 50 percent or more of the workforce commutes to the urban core.
Of note, half of all rural Canadians live in Quebec and Ontario (25.2% and 24.1% respectively), even though most people in Quebec, Ontario, and British Columbia are urban.

**Table 2**

<table>
<thead>
<tr>
<th>List of Indicators (1996)</th>
<th>Rural &amp; Small Town</th>
<th>Canada Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Income of economic families (dollars)</td>
<td>47,002</td>
<td>55,986</td>
</tr>
<tr>
<td>Percent of Persons, ages 25-54, with some post-secondary education</td>
<td>51.1</td>
<td>61.8</td>
</tr>
</tbody>
</table>


Note: Of those with “some post-secondary education”, rural people were much less likely to have completed a university degree.

**Table 3A University and non-University Post-secondary Participation by Distance to Nearest University †**

<table>
<thead>
<tr>
<th>Distance</th>
<th>University</th>
<th>Non-University Post-secondary</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-40km</td>
<td>22.7</td>
<td>20.5</td>
</tr>
<tr>
<td>-80km</td>
<td>15.4</td>
<td>28.6</td>
</tr>
<tr>
<td>80 km +</td>
<td>11.1</td>
<td>28.2</td>
</tr>
<tr>
<td>Urban</td>
<td>19.7</td>
<td>22.6</td>
</tr>
<tr>
<td>Rural</td>
<td>16.8</td>
<td>27.5</td>
</tr>
</tbody>
</table>

**Table 3B University Participation by Income Tier and Distance to School †**

<table>
<thead>
<tr>
<th>Income Tier</th>
<th>% Attending</th>
<th>Distance</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top</td>
<td>26.7</td>
<td>0-40 km</td>
<td>31.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-80 km</td>
<td>17.6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 km +</td>
<td>18.4</td>
</tr>
<tr>
<td>Middle</td>
<td>18.0</td>
<td>0-40 km</td>
<td>20.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-80 km</td>
<td>18.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 km +</td>
<td>10.4</td>
</tr>
<tr>
<td>Bottom</td>
<td>9.4</td>
<td>0-40 km</td>
<td>12.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-80 km</td>
<td>*5.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 km +</td>
<td>*3.1</td>
</tr>
</tbody>
</table>

*Estimate should be viewed with caution due to small numbers.
Table 3C

University Participation by Parental Education and Distance to School†

<table>
<thead>
<tr>
<th>Parent with a Degree</th>
<th>% Attending</th>
<th>Distance</th>
<th>Proportion Attending</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>39.2</td>
<td>0-40 km</td>
<td>43.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-80 km</td>
<td>31.0*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 km +</td>
<td>25.8*</td>
</tr>
<tr>
<td>No</td>
<td>15.5</td>
<td>0-40 km</td>
<td>18.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40-80 km</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 km +</td>
<td>9.4</td>
</tr>
</tbody>
</table>

*Estimate should be viewed with caution due to small numbers.

Select References


Frenette, J. [2003] Personal communication.


Kulatunga-Moruzi, C., Norman, G.R. (2002) Validity of admission measures in predicting performance outcomes: a comparison of those who were and were not accepted at McMaster. Teaching and Learning in Medicine, 14, pp. 43-48.


