



Comparing the Proportions of Home and Away CMG Applicants: Interview Offers and Ranking

October 2020

1 Overview

Data

We investigate three groups of Canadian medical graduates (CMGs) participating in the first iteration of the R-1 match:

1. **Home CMGs:** Graduates that apply for residency at the school where they did their medical studies.
2. **Away CMGs:** Graduates that apply for residency at schools where they did not do their medical studies.
3. **All CMGs:** Home CMGs + Away CMGs.

Analysis

We investigate key metrics in two areas:

1. **Interviews offered** (Section 1.1): We explore the number and proportion of CMG applications that resulted in interviews being offered to the home and away groups¹.
2. **Ranking Behavior** (Section 1.2): We examine applicant and program ranking behavior by scenario² - for all CMGs applicants - focusing on differences between the home and away groups.

¹We have thus far only accumulated data for 2020 and are therefore not yet able to provide information about trends over time.

²Ranking behavior by scenario divides CMG applicants into *mutually ranked*, *mutually not ranked*, *applicant did not rank/program did rank*, and *applicant ranked/program did not rank* categories.

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1.1 Interviews offered

In the first iteration of the 2020 R-1 match, a higher proportion of the total *home* CMGs were offered interviews than the total *away* CMGs. This result was prevalent across all regions (See Table 1 and Figure 1), faculties (See Figure 2), and disciplines (See Table 2).

Table 1: Proportion of CMG applicants offered interviews - by region

Medical School Region	Home (%)			Away (%)			All (%)		
	Offered	Not Offered	Total	Offered	Not Offered	Total	Offered	Not Offered	Total
Eastern	97.67%	2.33%	100%	62.6%	37.4%	100%	70.7%	29.3%	100%
Quebec	96.30%	3.70%	100%	72.2%	27.8%	100%	81.1%	18.9%	100%
Ontario	91.63%	8.37%	100%	73.2%	26.8%	100%	75.8%	24.2%	100%
Western	92.53%	7.47%	100%	64.7%	35.3%	100%	71.1%	28.9%	100%
All	94.08%	5.92%	100%	69.5%	30.5%	100%	75.2%	24.8%	100%

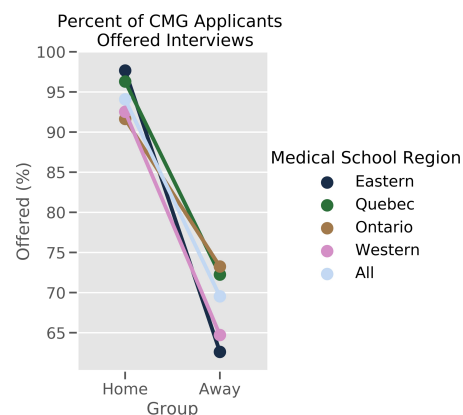
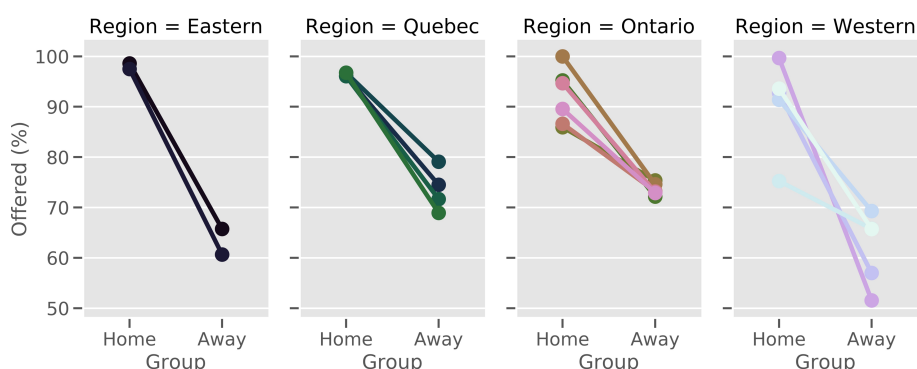


Figure 1: Percent of each group offered interviews by region

A downward slope for a particular region depicts a preference for *home* applicants, while an upward slope indicates a preference for *away* applicants. The steeper the slope - either positive or negative - the larger the preference for the group with the higher proportion of offered interviews.

A higher proportion of *home* applicants were offered interviews than *away* applicants across all regions.

Figure 2: Proportion of each group offered interviews - by region and school



A downward slope for a particular school depicts a preference for *home* applicants, while an upward slope indicates a preference for *away* applicants. The steeper the slope - either positive or negative - the larger the preference for the group with the higher proportion of offered interviews.

For all schools, a higher proportion of *home* applicants were offered interviews than *away* applicants.

In the first iteration of the 2020 R-1 match, the proportion of total *home* CMGs offered interviews also generally exceeded the proportion of total *away* CMGs offered interviews at the discipline level (See Table 2). There were a handful of exceptions to this rule in 2020 (for example, Neuropathology).

Table 2: Proportion of total number of CMG applicants offered interviews - by discipline

Discipline	Home (#)			Away (#)			All (#)			Home-Away (%)
	Offered	Not Offered	Total	Offered	Not Offered	Total	Offered	Not Offered	Total	Offered
CARD-SURG	93.8%	6.2%	100%	54.3%	45.7%	100%	58.6%	41.4%	100%	39.5%
OPHTHAL	67.8%	32.2%	100%	28.6%	71.4%	100%	32.5%	67.5%	100%	39.2%
PLASTIC-SURG	81.6%	18.4%	100%	44.0%	56.0%	100%	48.3%	51.7%	100%	37.7%
INTERNAL MEDICINE	87.5%	12.5%	100%	51.7%	48.3%	100%	57.1%	42.9%	100%	35.8%
NEUROL-PED	83.9%	16.1%	100%	48.7%	51.3%	100%	52.9%	47.1%	100%	35.2%
DERM	77.1%	22.9%	100%	42.6%	57.4%	100%	47.9%	52.1%	100%	34.6%
OBS/GYNE	83.3%	16.7%	100%	49.6%	50.4%	100%	53.3%	46.7%	100%	33.7%
PSYCH	92.3%	7.7%	100%	59.0%	41.0%	100%	64.5%	35.5%	100%	33.3%
DIAG-RADIOLOGY	93.4%	6.6%	100%	61.4%	38.6%	100%	65.5%	34.5%	100%	32.0%
EMERG-MED	60.7%	39.3%	100%	30.3%	69.7%	100%	34.9%	65.1%	100%	30.5%
ANESTH	78.1%	21.9%	100%	49.4%	50.6%	100%	52.8%	47.2%	100%	28.7%
PEDS	74.8%	25.2%	100%	50.1%	49.9%	100%	53.3%	46.7%	100%	24.7%
All	94.1%	5.9%	100%	69.5%	30.5%	100%	75.2%	24.8%	100%	24.5%
MED-MICRO	100.0%	0.0%	100%	76.2%	23.8%	100%	79.2%	20.8%	100%	23.8%
PHPM/FM	83.3%	16.7%	100%	61.0%	39.0%	100%	63.7%	36.3%	100%	22.3%
PM&R	97.7%	2.3%	100%	76.0%	24.0%	100%	78.6%	21.4%	100%	21.7%
OTOLARYN	78.9%	21.1%	100%	57.9%	42.1%	100%	60.6%	39.4%	100%	21.1%
VASC SURG	89.5%	10.5%	100%	70.3%	29.7%	100%	73.1%	26.9%	100%	19.2%
GEN-SURG	81.3%	18.7%	100%	62.9%	37.1%	100%	65.1%	34.9%	100%	18.4%
NEUROL	85.4%	14.6%	100%	68.2%	31.8%	100%	70.4%	29.6%	100%	17.3%
ORTHOPEDECS	95.2%	4.8%	100%	78.0%	22.0%	100%	80.1%	19.9%	100%	17.2%
UROLOGY	97.4%	2.6%	100%	80.9%	19.1%	100%	83.0%	17.0%	100%	16.5%
FAM MED	97.5%	2.5%	100%	83.3%	16.7%	100%	87.5%	12.5%	100%	14.3%
NUC-MED	92.0%	8.0%	100%	79.6%	20.4%	100%	83.8%	16.2%	100%	12.4%
MED-GENETICS	100.0%	0.0%	100%	87.8%	12.2%	100%	89.4%	10.6%	100%	12.2%
RAD-ONC	88.9%	11.1%	100%	77.7%	22.3%	100%	79.1%	20.9%	100%	11.2%
PHPM	92.9%	7.1%	100%	84.6%	15.4%	100%	86.8%	13.2%	100%	8.2%
NEUROSURG	95.8%	4.2%	100%	89.2%	10.8%	100%	89.8%	10.2%	100%	6.6%
ANPATH	97.8%	2.2%	100%	92.1%	7.9%	100%	93.0%	7.0%	100%	5.7%
HEMPATH	71.4%	28.6%	100%	76.2%	23.8%	100%	75.0%	25.0%	100%	-4.8%
GEN-PATH	75.0%	25.0%	100%	84.8%	15.2%	100%	82.9%	17.1%	100%	-9.8%
NEUROPATH	50.0%	50.0%	100%	66.7%	33.3%	100%	63.6%	36.4%	100%	-16.7%

Throughout this document, discipline-level results are shown only for disciplines offered at more than one school. Anesthesiology - Clinician Investigator Program (ANESTH-CIP), Pediatrics - Anesthesiology - Clinician Investigator Program (ANESTH-CIP), Pediatrics - Clinician Investigator Program (PEDS- CIP), Plastic Surgery - Clinician Investigator Program (PLASTIC-CIP), Psychiatry - Research Track (PSYCH-RESEARCH), Family Medicine integrated Care of the Elderly (FM INT ELDERLY), and Family Medicine integrated Emergency Medicine (FM INT EMERG) are therefore not reported in any of the discipline-level tables or plots.

1.2 Ranking behavior - all applicants

Based on first iteration R-1 results averaged over the years 2014 to 2020, CMGs applicants were mutually ranked more often at their *home* school than at *away* schools. This result is prevalent across regions (See Table 4 and Figure 3), and extends to all faculties (See Figure 4) and disciplines (See Table 5 and Figure 5).

Tables 3 and 4 show the proportion of CMG applicants by ranking scenario in each region for the total group and within the *home* and *away* groups respectively.

Table 3: Proportion of CMG applicants by ranking scenario in each region - total

Region	Total (%)				Total
	Mutually ranked	Mutually not ranked	Applicant did not rank / program did rank	Applicant ranked / program did not rank	
Eastern	56.84%	19.81%	2.06%	21.3%	100%
Quebec	61.37%	19.45%	5.34%	13.8%	100%
Ontario	57.13%	16.66%	2.23%	24.0%	100%
Western	55.08%	17.01%	1.83%	26.1%	100%

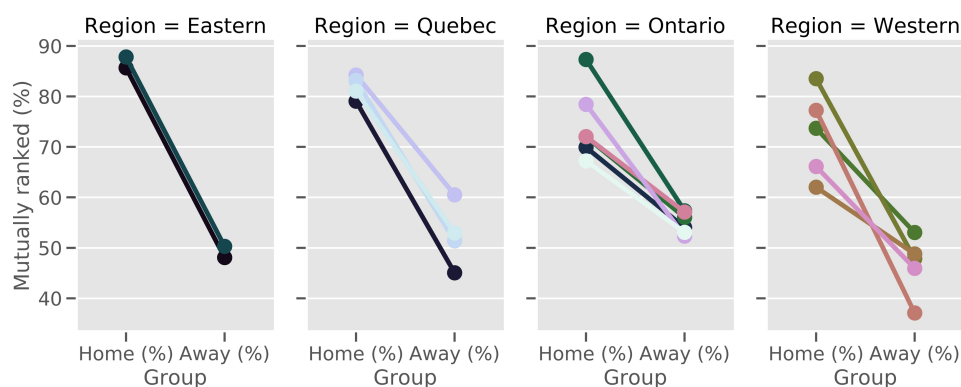
The results above are averaged over the years 2014-2020.

Table 4: Ranking profiles of CMG applicants by region - home versus away

Region	Home (%)					Away (%)				
	Mutually ranked	Mutually not ranked	Applicant did not rank / program did rank	Applicant ranked / program did not rank	Total	Mutually ranked	Mutually not ranked	Applicant did not rank / program did rank	Applicant ranked / program did not rank	Total
Eastern	86.2%	3.19%	2.89%	7.7%	100%	48.80%	24.36%	1.83%	25.0%	100%
Quebec	83.0%	4.41%	6.61%	5.9%	100%	51.03%	26.61%	4.75%	17.6%	100%
Ontario	72.6%	5.03%	1.82%	20.6%	100%	54.37%	18.77%	2.30%	24.6%	100%
Western	78.5%	5.31%	1.81%	14.4%	100%	48.18%	20.47%	1.84%	29.5%	100%

The results above are averaged over the years 2014-2020.

Figure 3: Proportion of all CMG applicants mutually ranked at each school by home and away groups averaged over the years 2014-2020



A downward slope for a particular school depicts a preference for home applicants, while an upward slope indicates a preference for away applicants. The steeper the slope – either positive or negative – the larger the preference for the group with the higher mutually ranked percent.

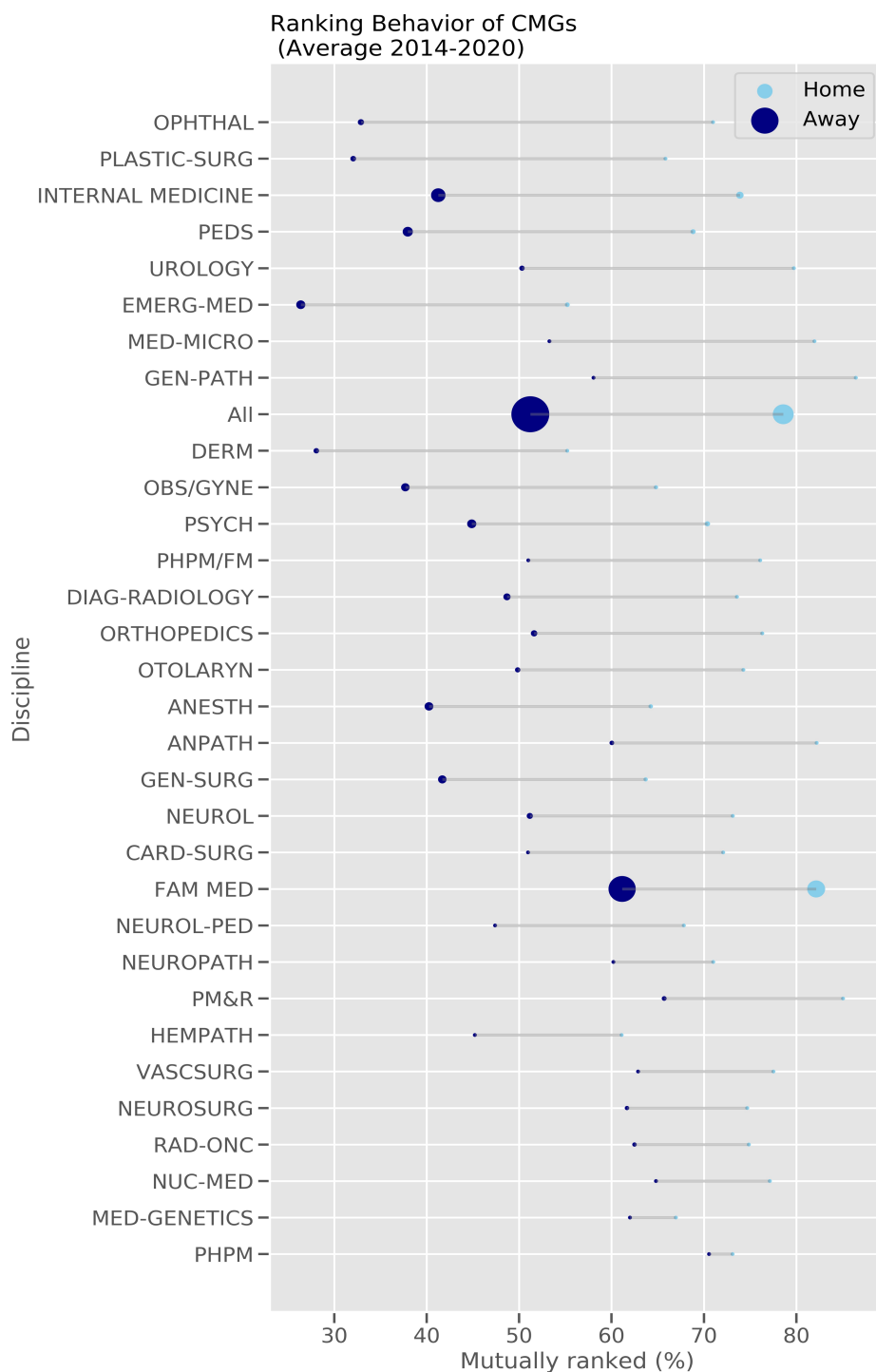
Table 5 shows the proportion of CMG applicants by ranking scenario for each discipline, sorted by the *home-away* difference in mutually ranked.

Table 5: Ranking Profiles of CMG Applicants by Discipline - Home versus Away

Discipline	Home (%)					Away (%)					Home-Away (%)
	Mutually ranked	Mutually not ranked	Applicant did not rank / program did rank	Applicant ranked / program did not rank	Total	Mutually ranked	Mutually not ranked	Applicant did not rank / program did rank	Applicant ranked / program did not rank	Total	Mutually ranked
OPHTHAL	71.0%	8.1%	0.59%	20.4%	100%	32.9%	27.2%	0.64%	39.3%	100%	38.1%
PLASTIC-SURG	65.8%	8.4%	0.77%	25.0%	100%	32.1%	30.8%	0.43%	36.8%	100%	33.8%
INTERNAL MEDICINE	73.9%	7.8%	2.70%	15.6%	100%	41.3%	28.1%	1.56%	29.1%	100%	32.6%
PEDS	68.8%	14.9%	2.22%	14.1%	100%	38.0%	32.7%	0.99%	28.3%	100%	30.9%
UROLOGY	79.7%	3.0%	0.77%	16.5%	100%	50.3%	21.7%	2.29%	25.7%	100%	29.4%
EMERG-MED	55.2%	18.8%	0.82%	25.2%	100%	26.4%	44.1%	0.39%	29.1%	100%	28.8%
MED-MICRO	82.0%	6.2%	1.19%	10.7%	100%	53.3%	18.6%	3.89%	24.3%	100%	28.7%
GEN-PATH	86.4%	2.9%	0.00%	10.7%	100%	58.1%	14.0%	1.18%	26.8%	100%	28.4%
All	78.6%	4.9%	3.28%	13.3%	100%	51.2%	21.0%	2.51%	25.3%	100%	27.4%
DERM	55.2%	17.8%	1.12%	25.9%	100%	28.1%	35.3%	1.27%	35.4%	100%	27.1%
OBS/GYNE	64.8%	10.7%	1.54%	23.0%	100%	37.7%	31.4%	1.40%	29.5%	100%	27.1%
PSYCH	70.4%	7.9%	2.63%	19.1%	100%	44.9%	24.7%	2.09%	28.3%	100%	25.5%
PHPM/FM	76.1%	9.3%	0.00%	14.6%	100%	51.0%	19.5%	3.80%	25.7%	100%	25.1%
DIAG-RADIOLOGY	73.6%	7.6%	0.70%	18.1%	100%	48.7%	24.0%	1.10%	26.2%	100%	24.9%
ORTHOPEDICS	76.3%	6.8%	3.01%	13.9%	100%	51.6%	26.9%	2.60%	18.9%	100%	24.7%
OTOLARYN	74.3%	6.9%	1.42%	17.4%	100%	49.8%	25.6%	1.88%	22.7%	100%	24.4%
ANESTH	64.2%	10.6%	0.91%	24.2%	100%	40.2%	24.4%	0.88%	34.4%	100%	24.0%
ANPATH	82.2%	4.9%	1.82%	11.1%	100%	60.0%	15.8%	2.55%	21.6%	100%	22.2%
GEN-SURG	63.7%	12.8%	1.11%	22.4%	100%	41.7%	29.8%	1.46%	27.1%	100%	22.0%
NEUROL	73.1%	9.0%	2.47%	15.4%	100%	51.2%	21.9%	2.80%	24.1%	100%	22.0%
CARD-SURG	72.1%	5.7%	0.00%	22.2%	100%	51.0%	26.0%	1.65%	21.4%	100%	21.1%
FAM MED	82.1%	2.7%	3.79%	11.3%	100%	61.1%	13.3%	3.57%	21.9%	100%	21.0%
NEUROL-PED	67.8%	12.0%	3.93%	16.2%	100%	47.4%	24.1%	2.64%	25.9%	100%	20.4%
NEUROPATH	71.0%	5.0%	4.00%	20.0%	100%	60.2%	15.9%	2.32%	21.6%	100%	20.0%
PM&R	85.0%	2.7%	1.52%	10.8%	100%	65.7%	13.3%	2.92%	18.0%	100%	19.3%
HEMPATH	61.1%	18.7%	0.00%	20.2%	100%	45.2%	14.4%	0.00%	40.4%	100%	15.9%
VASC SURG	77.5%	4.3%	2.34%	15.9%	100%	62.9%	14.5%	1.26%	21.4%	100%	14.6%
NEUROSURG	74.7%	2.9%	5.13%	17.3%	100%	61.7%	11.3%	4.32%	22.7%	100%	13.0%
RAD-ONC	74.9%	6.2%	1.47%	17.5%	100%	62.5%	12.5%	1.93%	23.0%	100%	12.4%
NUC-MED	77.1%	6.4%	0.95%	15.5%	100%	64.8%	11.7%	2.71%	20.8%	100%	12.3%
MED-GENETICS	67.0%	10.3%	7.10%	15.6%	100%	62.0%	16.6%	1.88%	19.5%	100%	5.0%
PHPM	73.1%	7.8%	4.86%	14.2%	100%	70.6%	14.0%	4.98%	10.4%	100%	2.5%

The results above are averaged over the years 2014-2020.

Figure 4: Proportion of mutually ranked *home* and *away* CMG applicants by discipline averaged over the years 2014-2020



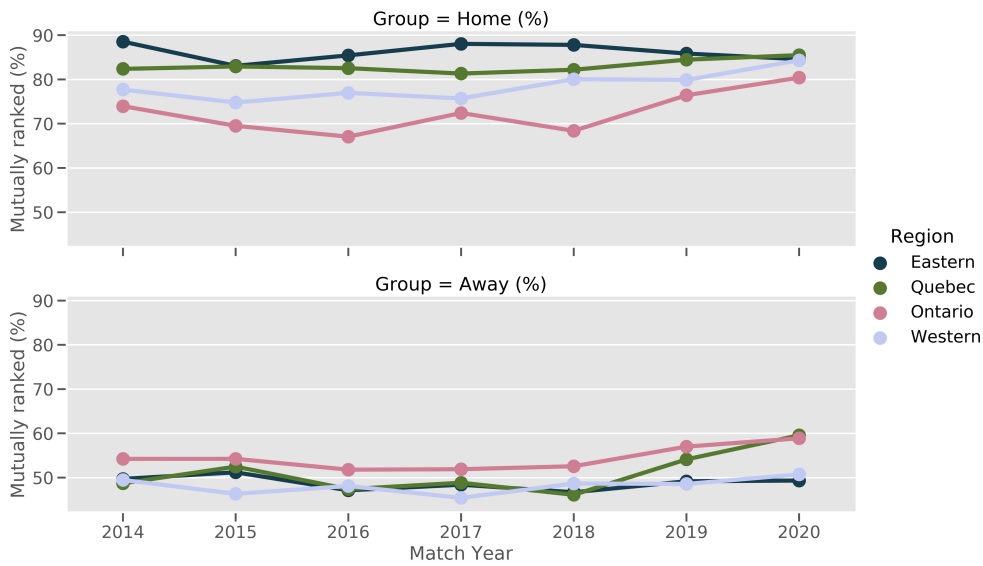
The distance between the *home* and *away* dots for each discipline represents the magnitude of the preference for *home* applicants.

When the *away* dot is to the right of the *home* dot (i.e., the difference is negative), *away* applicants were preferred. Disciplines with the largest differences appear at the top of the plot. The size of the dot represents the size of the contribution of the discipline to the total number of ranking scenarios across both the *home* and *away* groups.

Notice that the *away* dot is generally larger than the *home* dot, representing the larger number of *away* CMGs. It is clear from the plot that there is a significant amount of variation across disciplines with respect to the preference for *home* applicants.

Programs with small quota sometimes have large differences between *home* and *away* proportions, but they have very small contributions to the overall ranking behavior of all CMGs.

Figure 5: Proportion of each CMG applicant group (i.e., *home* and *away*) mutually ranked by region over the years 2014-2020



A higher proportion of *home* applicants were mutually ranked than *away* applicants for all regions over all years.

Appendix

Table 6: Number of CMG Applicants Offered Interviews - By Region

Medical School Region	Home (#)			Away (#)			All (#)		
	Offered	Not Offered	Total	Offered	Not Offered	Total	Offered	Not Offered	Total
Eastern	713	17	730	1,514	904	2,418	2,227	921	3,148
Quebec	5,573	214	5,787	7,159	2,750	9,909	12,732	2,964	15,696
Ontario	2,913	266	3,179	14,091	5,148	19,239	17,004	5,414	22,418
Western	4,632	374	5,006	10,937	5,963	16,900	15,569	6,337	21,906
All	13,831	871	14,702	33,701	14,765	48,466	47,532	15,636	63,168