

UNIVERSITY COUNCIL
ACADEMIC PROGRAMS COMMITTEE
REQUEST FOR DECISION

PRESENTED BY: Len Proctor, Chair, Academic Programs Committee of Council

DATE OF MEETING: June 21, 2012.

SUBJECT: College of Medicine: Change in admission qualifications for out-of-province residents.

DECISION REQUESTED:

It is recommended:

That Council approve the proposal from the College of Medicine to change the admission qualifications for out-of-province residents, effective for 2013 admissions.

PURPOSE:

Under the University of Saskatchewan Act 1995, decisions regarding admission qualifications and enrolment quotas for university programs are to be approved by Council and confirmed by Senate. This motion will be presented to the Fall, 2012 meeting of University Senate for confirmation.

SUMMARY:

This proposal will rationalize the qualifications and numbers of out-of-province applicants so that the college admissions process can deal more effectively with qualified applicants. The proposal requires the admission qualification of a four-year undergraduate degree. The selection criteria applied by the college to qualified applicants will rank them for interviews based on the Medical College Admissions Test scores rather than their GPA so that a broader range of applicants can be considered for interviews. Admission decisions will continue to be based on the interview results.

REVIEW:

At its May 23, 2012 meeting, the Academic Programs Committee discussed this proposal with College of Medicine Director of Admissions Barry Ziola and agreed to recommend approval of this change to admission qualifications.

ATTACHMENTS:

Proposal documentation

At its meeting on May 30, 2012, the College of Medicine approved the following change in admission qualifications for out-of-province applicants:

**REPORT FOR DECISION AT FACULTY COUNCIL
May 30, 2012**

That the following framework be implemented for how out-of-province (OP) residents are allowed to apply to and are selected for study at the University of Saskatchewan (UofS) College of Medicine (CofM):

- (i) application can be made only **during or after the final year of a four-year degree**,
- (ii) if a four year degree is completed prior to application, course-work for the degree must have been started within the 48 months prior to the end of August immediately before application,
- (iii) if in the final year of a four year degree, a minimum of 90 credit units must have been completed in the 36 months prior to the end of August immediately before application,
- (iv) all courses completed towards the four year degree at the date of application will be used for calculation of grade-point-average (GPA),
- (v) the minimum GPA required for application will be 83.0%,
- (vi) the four year degree must be completed by the time study of medicine starts,
- (vii) remaining courses completed for the degree after the date of application must minimally average 83.0%,
- (viii) the Medical College Admission Test (MCAT) must be completed prior to application with the scores on verbal reasoning (VR), physical sciences (PSc) and biological sciences (BSc), totaling a minimum of 30 (no score less than 8), with a writing score minimum of N,
- (ix) selection of applicants invited to interview will be based on the MCAT VR+PSc+BSc total score (MCAT Sum), with the VR score being used to break ties, and
- (x) offer of a seat in medicine out of the ten-seat quota for OP residents will continue to be based 100% on the applicant's performance in the CofM multiple mini interview (MMI).

On behalf of the Admissions Committee,



Dr. Barry Ziola
Director of Admissions

Current process for application by and assessment of OP residents

OP residents currently can apply to the CofM as early as in the third year of study towards a four year degree. For such applicants, their GPA from their first two full years of study (i.e., 60 credit units; CU) is used. For applicants with more than two years of study completed, the GPA for their best two full years is used. The minimum best two-year GPA required for application presently is 80.0%. OP applicants also must have completed the MCAT with a MCAT Sum of at least 26 (no score single score less than 8) and N or better in the writing sample. OP applicants meeting these requirements are then simply ranked by best 2-year GPA and the top 50-60 are invited to attend the CofM MMI in March. Final ranking of OP applicants for offers of admission then is based 100% on their results in the MMI. Any coursework completed after application and prior to start of medical school must show consistency in outcome with prior academic performance or an applicant can be withdrawn from consideration.

Proposed process for application by and assessment of OP residents

The intent of the motion is to require accepted OP applicants to minimally have completed a four-year degree by time they start the study of medicine in our College. All coursework completed (minimum 90 credit units) as of the date of application will be used for calculation of an applicant's GPA and the minimum GPA needed for an application to be acceptable will move from 80% to 83%. All OP applicants will continue to complete the MCAT prior to application, but now a minimum MCAT Sum of 30 (minimum of 8 in each section) and N in the writing sample will be required for an application to stand. Provided these requirements are met, the MCAT Sum then will be used to select the 50-60 OP applicants invited to our MMI each year. In the event of applicants having the same MCAT sum, the VR score will secondarily be used for selection. OP applicants will be offered seats based 100% on their MMI performance (as is now the case). OP applicants offered a seat who have not yet completed their four year degree must maintain an 83% average in the courses used to complete the degree after the date of application.

Background and Rationale

Over the current and the past five admissions cycles, and excluding OP Self-declared Aboriginal applicants, the C of M has received an approximate average of 450 applications from OP residents per year (e.g., 458 in 2010-2011; 443 in 2011-2012; 480 in the current cycle). In selecting the 50 or so OP applicants to invite to our MMI, the best two-year GPA cut-off involved has been well above 90% for the past six cycles (e.g., 92.3% for 2010-2011, 92.5% for 2011-2012, and 93.0% for the current cycle). These absurdly high GPA cut-offs for an interview offer firstly mean we receive many declines (in many instances right before the interview weekend). It secondly means that those applicants that do interview are highly competitive and, as they generally apply to several schools, result in our not filling our OP reserved seats in most years, despite making sequential offers to the 30 or more applicants who score in the top 60% of MMI performances each year.

The current proposal aims to have better academically prepared OP applicants (must be at least in the final year of a four year degree), with those chosen to interview selected not on two-year GPA, but on MCAT Sum. The comparisons of MCAT Sum to two-year GPA for the two most recent application cycles (2010-2011 and 2011-2012) are found on appended pages **A** and **B**. The arrows on the two graphs indicate the GPA cut-off that was used for invitation to interview (92.3% giving 55 applicants and 92.5% giving 52 applicants), the MCAT Sum minimum which would have given approximately the same number of applicants to interview (36 giving 51 applicants and 35 giving 57 applicants), and the proposed minimum GPA of 83% needed to apply. The solid vertical line on each graph shows the impact of moving the MCAT Sum requirement from 26 to 30.

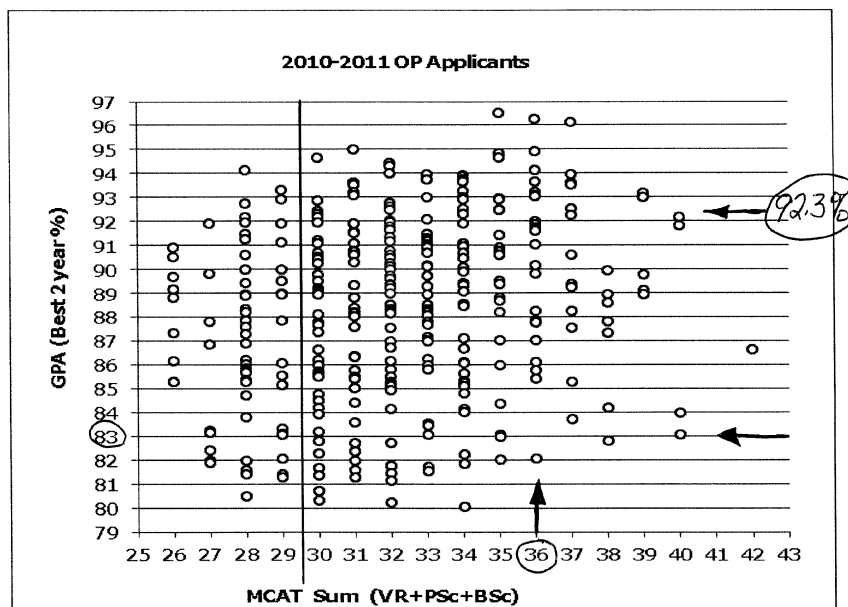
Appended page **C** summarizes the two GPA/MCAT Sum data sets graphed on pages **A** and **B**. It should be noted that moving to MCAT Sum to select OP applicants to interview does not displace all applicants who would have been invited based on the GPA cut. Approximately 30-35% of applicants are found in both the high GPA and the high MCAT Sum groups; hence, they would have been invited to interview using either selection process. The analyses of the past two years of data show that using the high MCAT Sum process to select OP applicants to interview would result in a cohort with a 2-3% drop in median GPA, but with a corresponding increase of essentially 3 in the median MCAT Sum. Using the MCAT Sum selection process would select applicants with a widened GPA range, with conversely a narrowing of the MCAT Sum range.

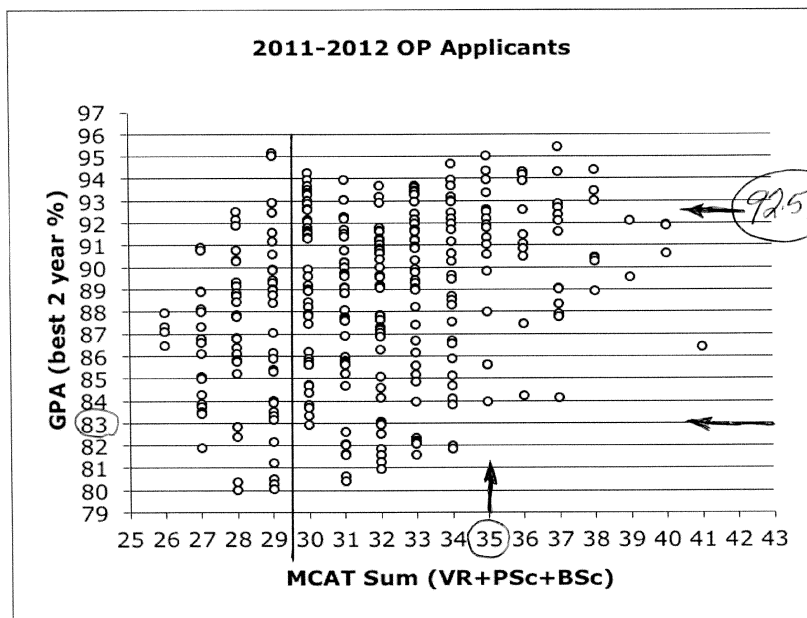
Appended page **D** is a graph showing the MCAT Sum results for the years 2008-2010 (236,806 tests completed). The lines drawn show the current MCAT Sum requirement of 26, the proposed MCAT Sum requirement of 30, and the MCAT Sum of 35 and 36 which would have given a MMI OP applicant invite list of approximately 50 each of these past two years. Assuming a MCAT Sum of 33 or higher will be needed for an invite to interview, OP applicants ultimately offered a seat on our College would be found well within the **top 10%** of individuals writing the MCAT. Selecting based on MCAT Sum, like selecting on GPA, thus assures selection of applicants with excellent cognitive abilities. However, with the GPA range involved now being 83% to approximately 96%, rather than 93% to approximately 96%, the probability should be higher of both having fewer MMI invite declines and, ultimately, more seat acceptances.

Appended page E contains some additional analyses done on the previous two years of OP applicants. As it turns out, most applicants were in their fourth year of study or beyond. As such, requiring a “4 year degree” at entrance on its own would remove only 10-15% of the currently qualified OP applicants each year. Changing the minimum GPA required from 80% to 83% likely will remove approximately another 10% (see pages A and B), and changing the MCAT Sum requirement from 26 to 30 will remove approximately another 25% (again, see pages A and B). All told, the proposed changes are expected to still result in approximately 50% of our recent qualified OP applicant numbers. Starting at approximately 450+ OP applicants and immediately discounting the 100 or so applicants who can not “read” and therefore apply without meeting our qualifications, we will still have an estimated minimum of 170+ qualified OP applicants from which to invite approximately 50 to interview for the ten available seats. This applicant to seat ratio of 17+ is still much higher than the comparable ratio for Saskatchewan residents who apply to study medicine at the UofS (i.e., the ratio is 5.3 for the current year).

Given that approximately 85% of recent OP applicants are already applying in their fourth year of study or beyond, changing our MMI invite from a high GPA to a MCAT Sum selection process should not significantly change the age of OP residents studying medicine at the UofS.

Finally, the proposal includes using the MCAT VR score to break MCAT Sum ties when selecting OP applicants to interview. This is based on the finding that VR scores are significantly higher for applicants who had a high MCAT Sum, but a GPA below the GPA interview cut score as compared to applicants with a high MCAT Sum and a GPA high enough to get an MMI invite the past two years.





APPENDED PAGE B

APPENDED PAGE C

Out-of-Province Applicants

Group (N)	GPA (%) Median	GPA (%) Range	MCAT* Median	MCAT Range
(maximum MCAT sum is 45)				

2010-2011 (total 458, but only 347 had GPA $\geq 80\%$ & MCAT SUM of at least 26+N)

GPA $\geq 92.3\%$ (55 invited to interview)	93.22	92.30 - 96.50	34	28-39
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GPA $\geq 83\%$ MCAT $\geq 36^{**}$ (51)	89.95	83.05 - 96.25	37	36-42
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Overlap: 14 applicants are found in both groups.

2011-2012 (total 443, but only 322 had GPA $\geq 80\%$ & MCAT Sum of at least 26+N)

GPA $\geq 92.5\%$ (52 invited to interview)	93.38	92.50 - 95.40	33/34	29-38
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GPA $\geq 83\%$ MCAT $\geq 35^{**}$ (57)	91.61	83.93 - 95.4	36	35-41
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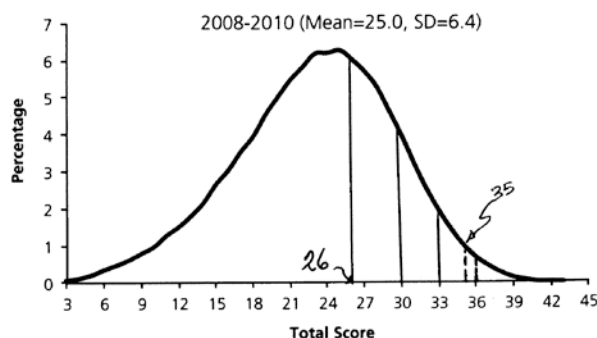
Overlap: 20 applicants are found in both groups.

*Verbal reasoning (VR), physical sciences (PSc) and biological sciences (BSc) are scored on an integral scale, each with a maximum of 15. When the MCAT is used for applying to the UofS CoM, scores in these three sections must total ≥ 26 with no score below 8 (the writing sample must have a score of N or better on a scale that has a maximum of T - writing sample scores are not included in these analyses).

**Along with the 83% GPA requirement, the MCAT cut-off value shown gives close to the same number of applicants that were actually invited to interview in each year, allowing direct comparison of the two groups each year or with combined data over the two years.

REFER TO THE TWO GRAPHS ON THE PREVIOUS TWO PAGES FOR THE FULL DATA SET FOR EACH YEAR.

Figure 1. Distribution of MCAT total Scores for 2008-2010 Examinees (N=236,806)



Score Summary for 2008-2010 Examinees

	2008-2010 (N=236,806)
	Mean (SD)
Physical Sciences	8.3 (2.5)
Verbal Reasoning	8.0 (2.5)
Writing Sample	0
Biological Sciences	8.8 (2.5)

APPENDED PAGE E

OTHER ANALYSES:

[1] For the two combined years, 12 (11.2%) of the 107 “high GPA” and 14 (13.0%) of the 108 “high MCAT” applicants applied during year three of undergraduate study. With a requirement to apply at the earliest during year four of undergraduate study (i.e., minimally a four year undergraduate degree must be completed by start of medical school as proposed in the motion), these applicants would have been ineligible to apply. Consequently, the vast majority OP applicants already have a four year degree completed upon starting medical school.

[2] The combined 108 “high MCAT” applicants had slightly more years of university study completed compared to the combined 107 “high GPA” applicants; however, this was not significant ($p = 0.199$, independent samples Mann-Whitney U test). All told, approximately 85% of OP applicants would have had a four-year degree completed at the point of entering medical school.

[3] There is no statistical difference ($p = 0.95$, independent samples t -test) between the ages of the 107 (55+52) applicants with a “high GPA” and the 108 (51+57) applicants with a “high MCAT”.

[4] When the combined 108 “high MCAT” applicants were separated into those with high GPA (i.e., the 34 “overlap” applicants) and those with GPAs below 92.3% for 2010-2011 and below 92.5% for 2011-2012 (i.e., a total of 74 applicants), the latter group had a significantly higher score on the VR component of the MCAT ($p = 0.012$, independent samples Mann-Whitney U test). No difference was found in PSc and BSc scores.

[5] No obvious difference was found in the program of study for the “high GPA” and “high MCAT” applicants. The vast majority (>95%) of applicants in both groups were in science-oriented degree programs, with multidisciplinary science programs most popular in both cases (approximately 30% of all applicants). The remaining applicants in both groups were distributed over the same range of single subject disciplines. Neither group contains applicants in a program of study unique to that group.