

## Background

- Canadian medical students differ significantly from the general population<sup>1</sup>
  - More likely to come from urban and high income areas
  - More likely to have well-educated, professional parents
- This skew may influence access to care in under-served regions of Canada
  - Rural physicians are 4 to 5 times more likely to come from rural backgrounds<sup>2</sup>
- To serve the health care needs of patients from many geographic and socioeconomic backgrounds, it has been suggested that medical students should reflect this diversity<sup>3</sup>
- Evidence shows that rural applicants are just as likely as urban applicants to be offered admission once applications are in<sup>2</sup>. Thus, some students may be perceiving barriers to medical education that are causing them to self-select out of applying to medicine<sup>4</sup>
- Few studies have looked at barriers or enabling factors experienced by students, particularly in smaller communities, prior to their application to medical school

## Objectives

- To identify perceptions of medical education among high school students from rural and under-served areas
- To identify factors which may encourage or discourage high school students from considering a career in medicine

## Methods

### Study Population:

- High school students selected to attend the Southwestern Ontario Medical Education Network (SWOMEN) MedQUEST program
  - MedQUEST is a 5-day camp for high school students interested in health care
  - Programs were located in Leamington, Sarnia, Mount Elgin, Seaforth, Chippewa First Nations and Chatham.

### Questionnaire:

- An anonymous survey, consisting of predominantly closed answer questions, targeted:
  - Demographics and socioeconomic status
  - Knowledge about health professions
  - Perceived barriers to attending medical school
- Socioeconomic status assessed using:
  - Highest education level completed by each guardian
  - Occupation of each guardian
  - Employment status of each guardian (i.e. part-time, full-time or unemployed)

## Results

### Respondent Demographics:

- 106 respondents from the five MedQUEST locations
  - Female: 77% (n=82)
  - Male: 22.6% (n=24)
- 76% (n=81) were interested in becoming a physician
  - Not significantly affected by having a parent with a health care occupation

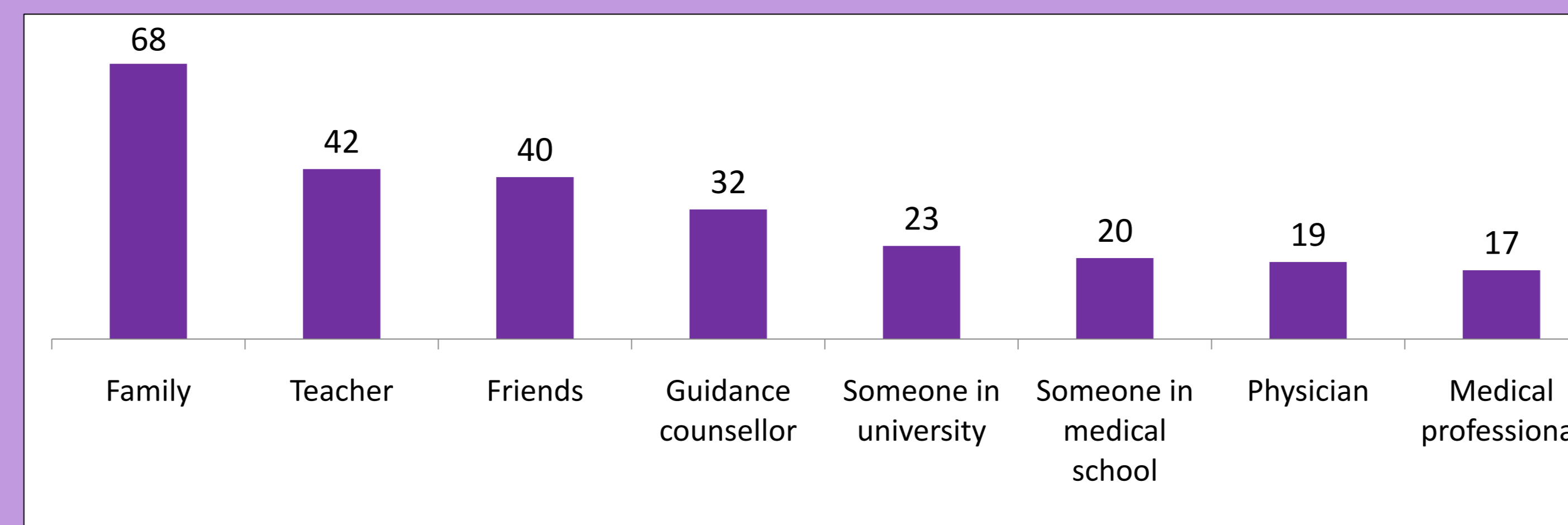
### Parent Demographics:

- 77% (n=82) had at least one parent who had **completed university**
- 14% (n=15) had at least one parent who **did not graduate high school**
- 26% (n=27) had at least one parent who **worked in a health field**

### Encouragement:

- Of those interested in going to medical school, students reported being most encouraged by their family (84.0%), teachers (51.9%) and friends (49.4%)

**Fig. 1 Groups of people who have provided encouragement to students interested in medical school**



### Discouragement:

- 16.1% (n=13) had been discouraged from going to medical school by family, teachers and friends
- The most common reasons cited for discouragement by others included:
  - "Poor lifestyle" (n=8)
  - "Takes too long" (n=8)
  - "Expense" (n=4)

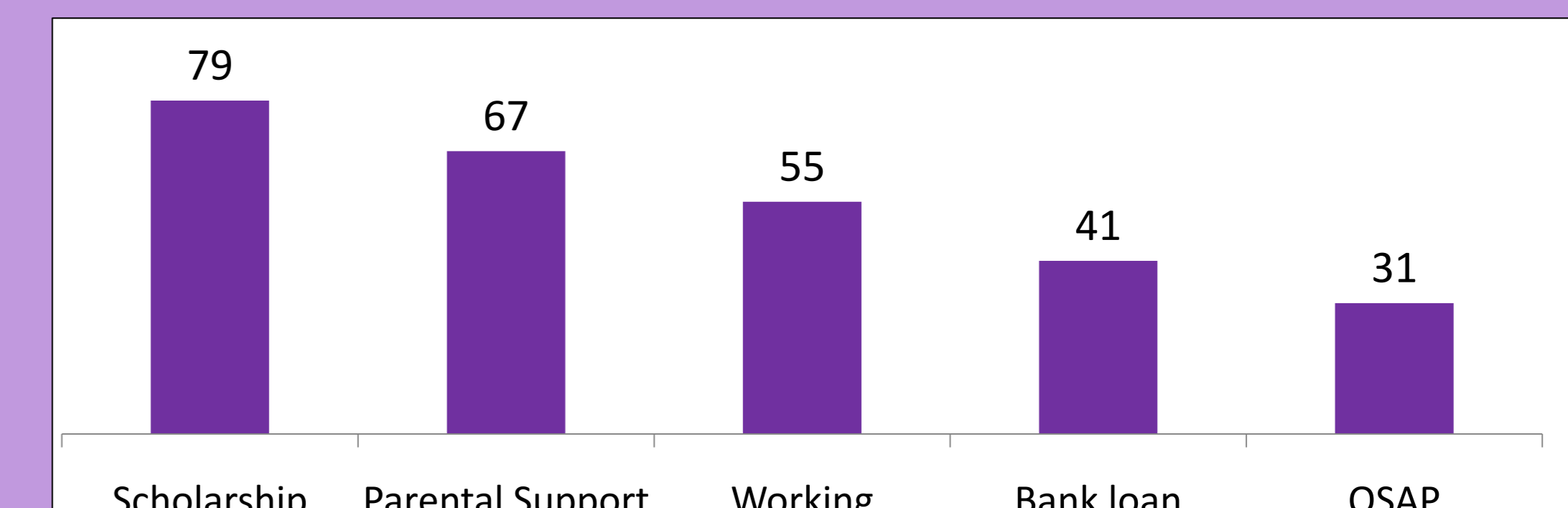
### Perceived Barriers:

- The most common self-perceived barriers to attending medical school included:
  - Competitiveness of applicants (n=54)
  - Low grades (n=40)
  - Affordability (n=31)

### Financial Considerations:

- Perception of cost of medical school tuition ranged from \$5000 - \$50,000 per year
  - 45% (n=48) responded within a reasonably correct range of cost
  - 29% (n=31) were unsure about tuition cost

**Fig 2. Expected financial support for medical education**



- If at least one parent had a post-secondary education, 70% expected their parents to pay vs. 21% if neither parent had a post-secondary education (p<0.05)
- All participants who had physicians as parents expected their parents to pay
- If neither parent had a post-secondary education, 29% reported being unsure how they would fund their education vs. 7% who had a parent with post-secondary education (p<0.05)

## Conclusion

- Perceptions about medical school are shaped in high school, perhaps even earlier
- Family, friends and teachers are the main sources of guidance for these students
  - May significantly affect whether students view medicine as a career that is available to them
- Misconceptions regarding cost of a medical education are common
- Affordability was a frequently cited self-perceived barrier and is associated with parental education level
- It is important to identify and eliminate barriers that cause students to believe medical school is out of their reach
- These results are relevant to future endeavors that aim to ensure access to care in rural and under-served communities, like those represented by the MedQUEST locations

## Future Work

- Repeat survey at subsequent MedQUEST programs to increase power
- Administer follow-up survey at the completion of the MedQUEST program to determine how perceptions may have changed after exposure to medical students
- Extend study to a larger cohort of students (not just those attending MedQUEST)

## References

- Dhalla IA, Kwong JC, Streiner DL, Baddour RE, Waddell AE, Johnson IL. Characteristics of first-year students in Canadian medical schools. CMAJ 2002; 166(8):1029
- Hensel JM, Shandling M, Rendelmeier D. Rural medical students at urban medical schools: Too few and far between? Open Med 2007; 1(1):e13-e17.
- AFMC Project: The Future of Medical Education in Canada (FMEC): A Collective Vision for MD Education. Available online at [www.afmc.ca/fmec/pdf/collective\\_vision.pdf](http://www.afmc.ca/fmec/pdf/collective_vision.pdf)
- Collishaw NE, Grainger RM. The process of selecting students at Canadian medical schools, 1969-1970. CMA Journal 1971; 105:1083-1086.