

# Current practice trends in mitral valve surgery in Canada: A national survey

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## Background

- Surgical techniques and knowledge of the pathophysiology of mitral valve disease has greatly improved over the past few decades
- Mitral valve surgery has the highest mortality and morbidity rate out of all the cardiac surgery operations, thus, identifying the surgical trends would be useful to create a guideline for the management of these patients in Canada
- Changes in surgical practice of cardiac surgeons over the past few years

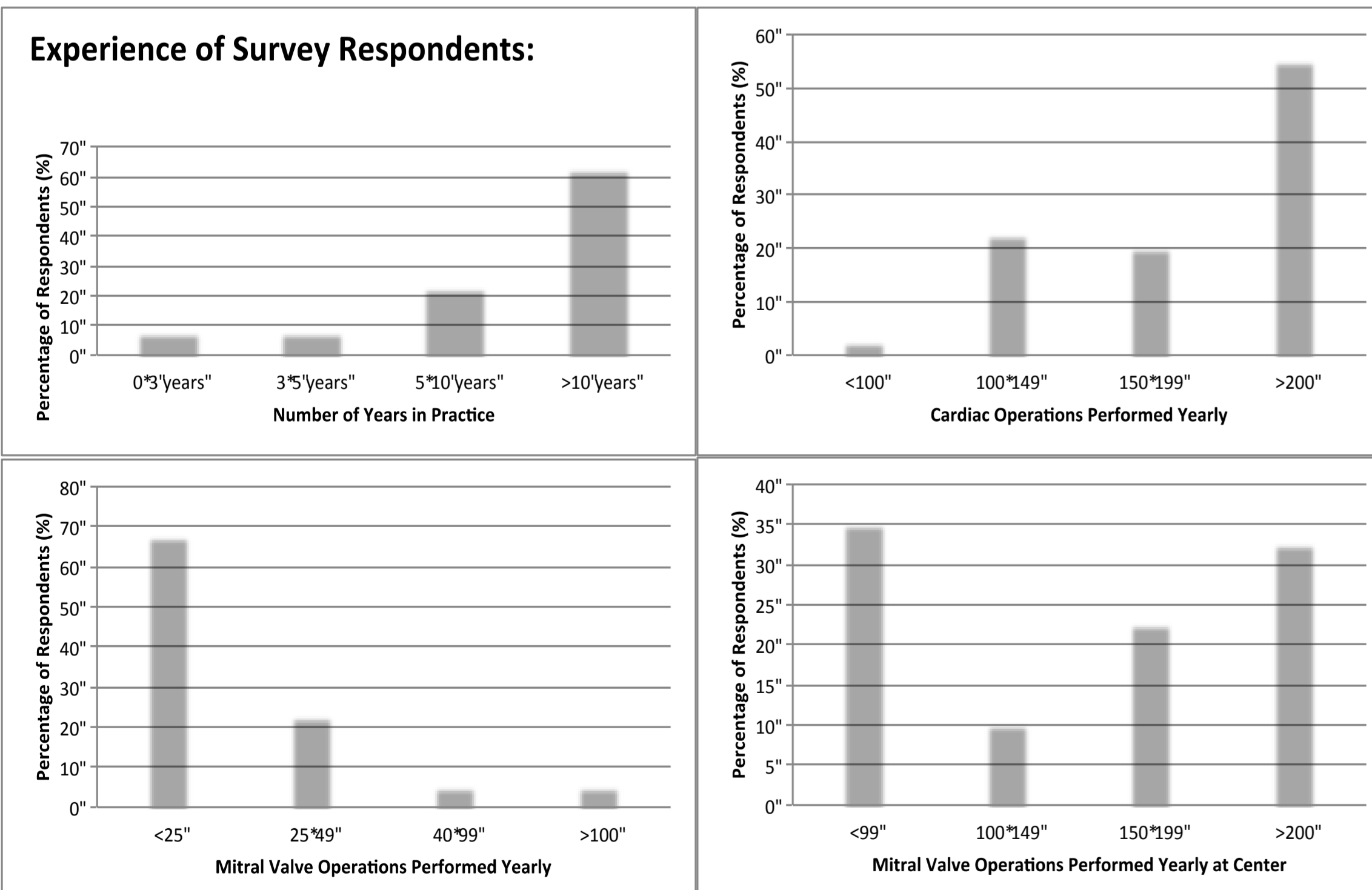
## Objective

- The objectives of this study were to identify the mitral valve surgical practices of cardiac surgeons who perform mitral valve operations in Canada, as the current practice has not been described in Canada yet
- Characterizing the current climate and trends of mitral valve surgery in Canada can help in establishing a collaboration and general management of mitral valve disease and aid in the future research in this field of study

## Methods

### DEMOGRAPHIC DATA OF SURVEY RESPONDENTS

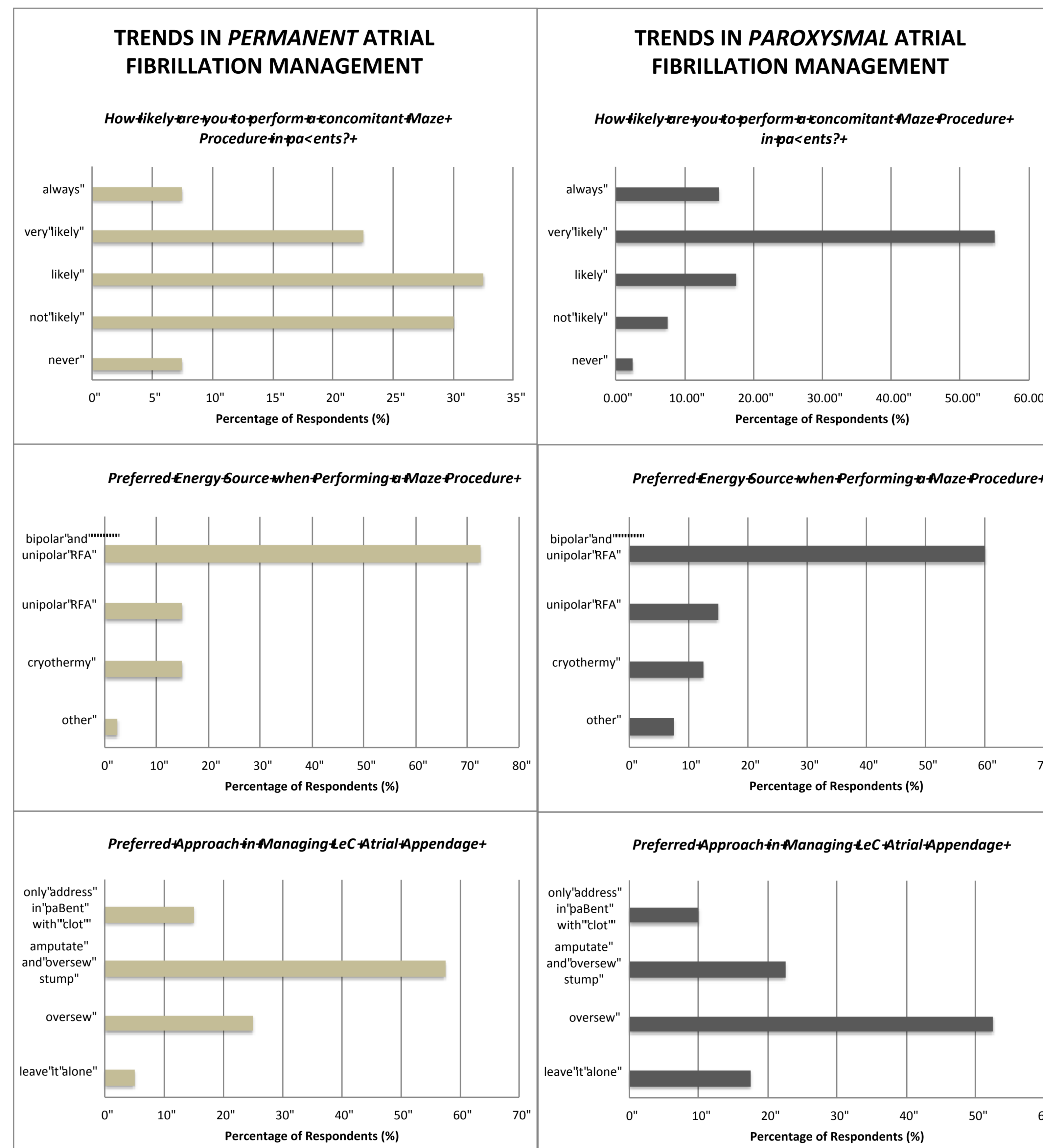
Province	Respondents	
	Number	Percent (%)
British Columbia	5	12.5
Alberta	4	10
Saskatchewan	1	2.5
Manitoba	3	7.5
Ontario	17	42.5
Quebec	5	12.5
New Brunswick	4	10
Nova Scotia	1	2.5
	<b>40</b>	



- A detailed practice survey was sent to all currently practicing Canadian cardiac surgeons across 20 cities and 31 centers in Canada.

- The survey consisted of 37 questions in total, with 8 clinical vignette questions and 29 questions divided into general surgical practice, management of patients with functional mitral regurgitation (excluding endocarditis), and repair of organic mitral regurgitation (MR)

## Results



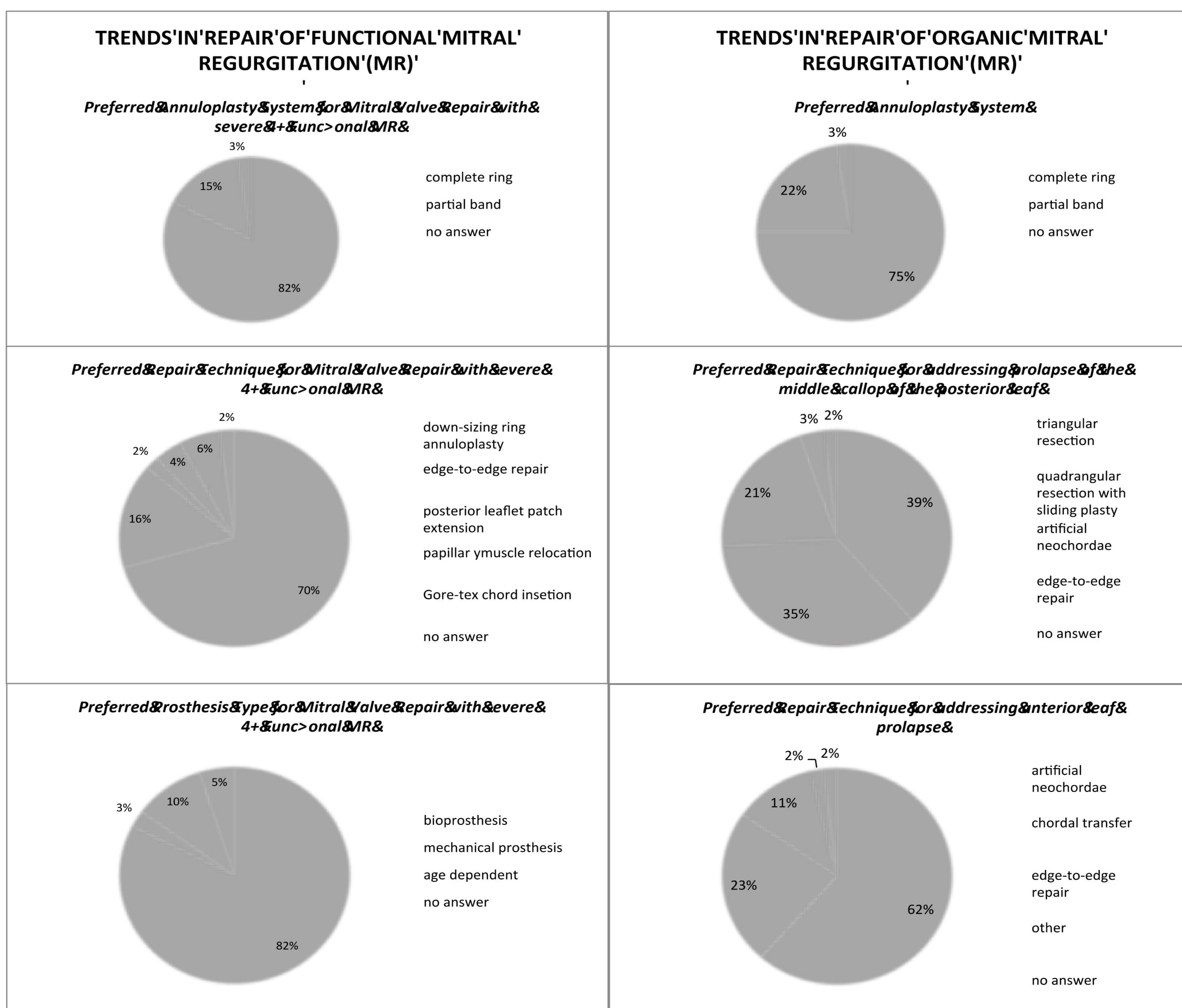
- 40 responses were received (response rate of 71%)
- Most respondents had over 10 years of practice (62.5%) and performed over 200 cardiac operations (55%)
- A majority of surgeons performed less than 25 mitral valve operations each year (67.5%) and most institutions performed less than 99 mitral valve operations each year (35%)

### Permanent and Paroxysmal Atrial Fibrillation

- Most surgeons were willing to perform a concomitant Maze Procedure in patients with either permanent atrial fibrillation or paroxysmal atrial fibrillation undergoing mitral valve surgery (62.5% and 87.5%, respectively)
- The preferred energy source with permanent atrial fibrillation was bipolar and unipolar RFA (72.5%) and in patients with paroxysmal atrial fibrillation, it was bipolar RFA alone (60%)
- For both groups of patients, the preferred approach in managing the left atrial appendage was to amputate and oversew stump (57.5% and 52.5%, respectively).

### Repair of Functional and Organic Mitral Regurgitation (MR)

- For functional MR, the most common repair technique used was down-sizing ring annuloplasty (90%), and the most preferred prosthesis type in this patient was bioprosthesis (82.5%)
- For the repair of organic MR, majority of surgeons preferred to use a complete ring as the annuloplasty system (75%) and artificial neochordae as the repair technique for addressing anterior leaflet prolapse (80%)



## Discussion and Conclusion

- There is a general agreement among the cardiac surgeons who perform mitral valve operations in Canada with regards to management of mitral valve surgery with permanent and paroxysmal atrial fibrillation
- Surgeons had similar practice across the country for the management of functional MR of varying severity and use of repair techniques
- Although there is an agreement in the annuloplasty system and repair technique of the anterior leaflet for organic MR, there is variability with the repair technique for the posterior leaflet.
- This study can help in establishing a collaboration and general management of mitral valve disease in Canada and aid in the future research in this field of study.

## Acknowledgements

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