

## Introduction

- Glomerulonephritis or GN, is a group of kidney diseases that primarily affects the glomerulus.
- It is a rare disease with an average of only 267 patients diagnosed each year in British Columbia.
- Most GNs are autoimmune. Targeted immunosuppression therapy may reduce the risk of kidney disease progression but they are relatively expensive.
- Statistically, 1 in 10 Canadians cannot afford the medicines their doctors prescribe.<sup>1</sup>
- With 8% of Canadians skipping prescriptions due to cost vs. 2% of the population in the UK, Canada has one of the worst rates of access to medicines amongst comparable countries.<sup>2</sup>
- If left untreated, GN can result in end-stage renal disease requiring a kidney transplantation or dialysis, which can cost up to \$72,000 per patient year.
- The same immunosuppressant therapy used to treat GN is fully funded for patients after a kidney transplant.

## Objective

- To improve and ensure equitable evidence-based use of life or organ saving medications for patients with kidney disease irrespective of whether they have a native or transplant kidney and irrespective of the type of kidney disease.

Required medications for the treatment of GN:

- Prednisone, azathioprine, mycophenolate, cyclosporine, cyclophosphamide, tacrolimus and rituximab.

## Intervention

### Reduce costs:

- The BC Renal Agency used its provincial bargaining power through Health Shared Services BC to obtain an average discount of 64% on immunosuppressant (IS) medications.

### Improve access:

- The BC Renal Agency purchases IS medications directly from the manufacturer and dispenses them to patients via pharmacy partners when prescribed by a nephrologist.
- Patients do not pay for any GN formulary medications, thereby eliminating cost as a barrier to treatment.

### Ensure accountability:

- The formulary is funded through cost-savings generated via a reduction in erythropoiesis-stimulating agent usage through the protocolization of anemia treatment (an HEABC Golden Apple Award winning initiative).
- An application form collecting key data for outcomes evaluation must be completed annually for coverage.
- For very expensive medications such as rituximab, an adjudication committee approves each treatment course.

### Reduce variability:

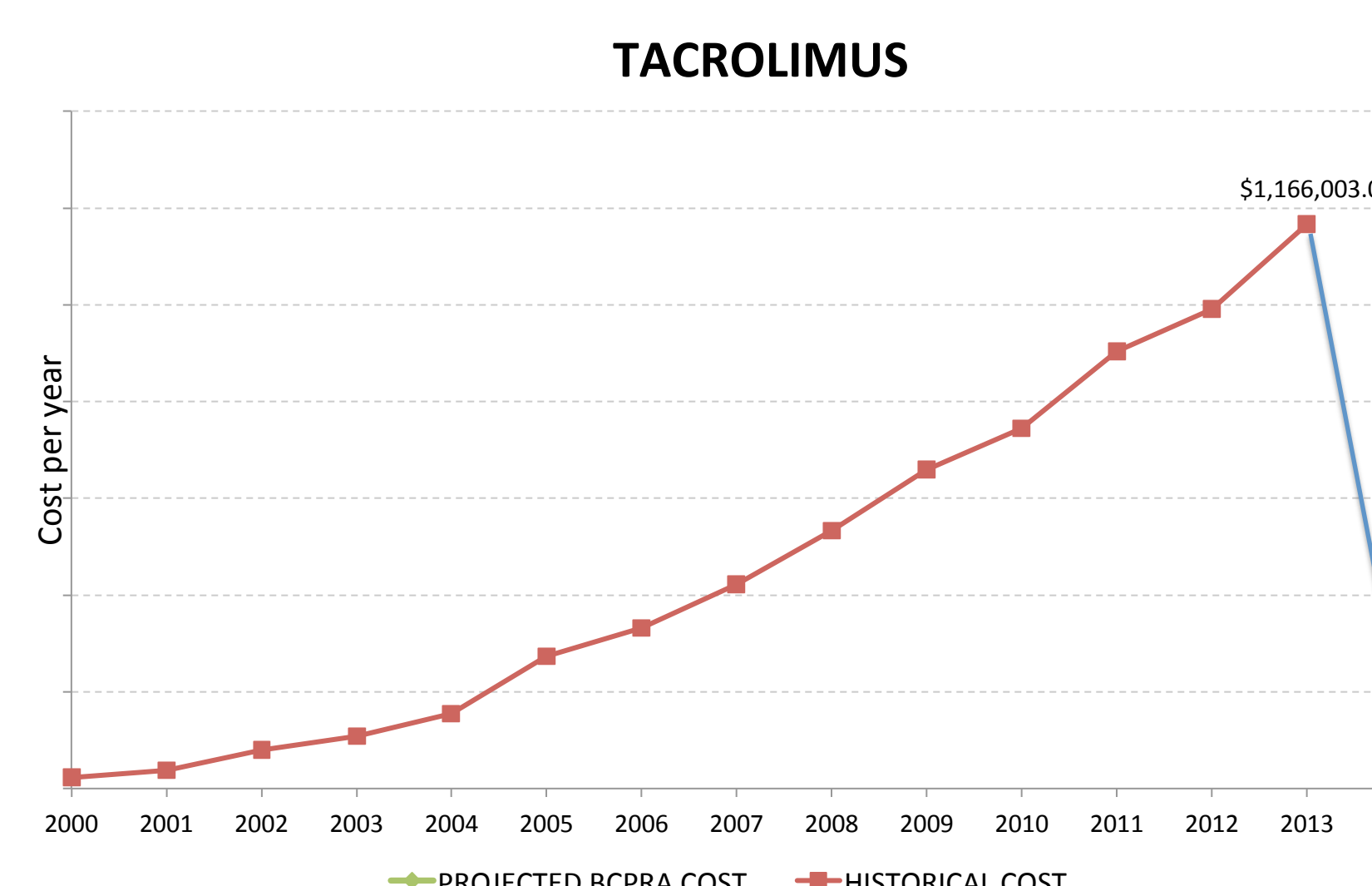
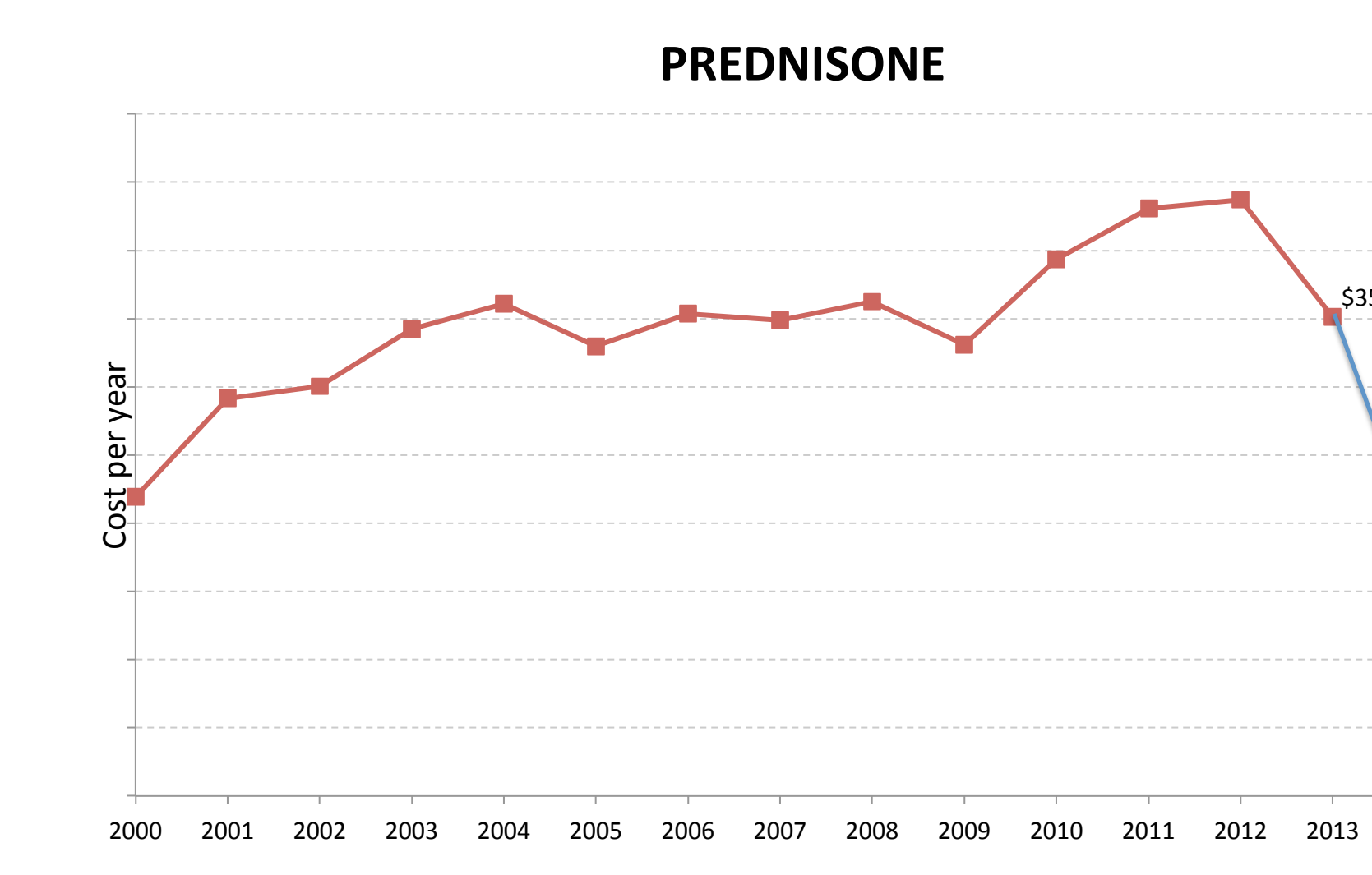
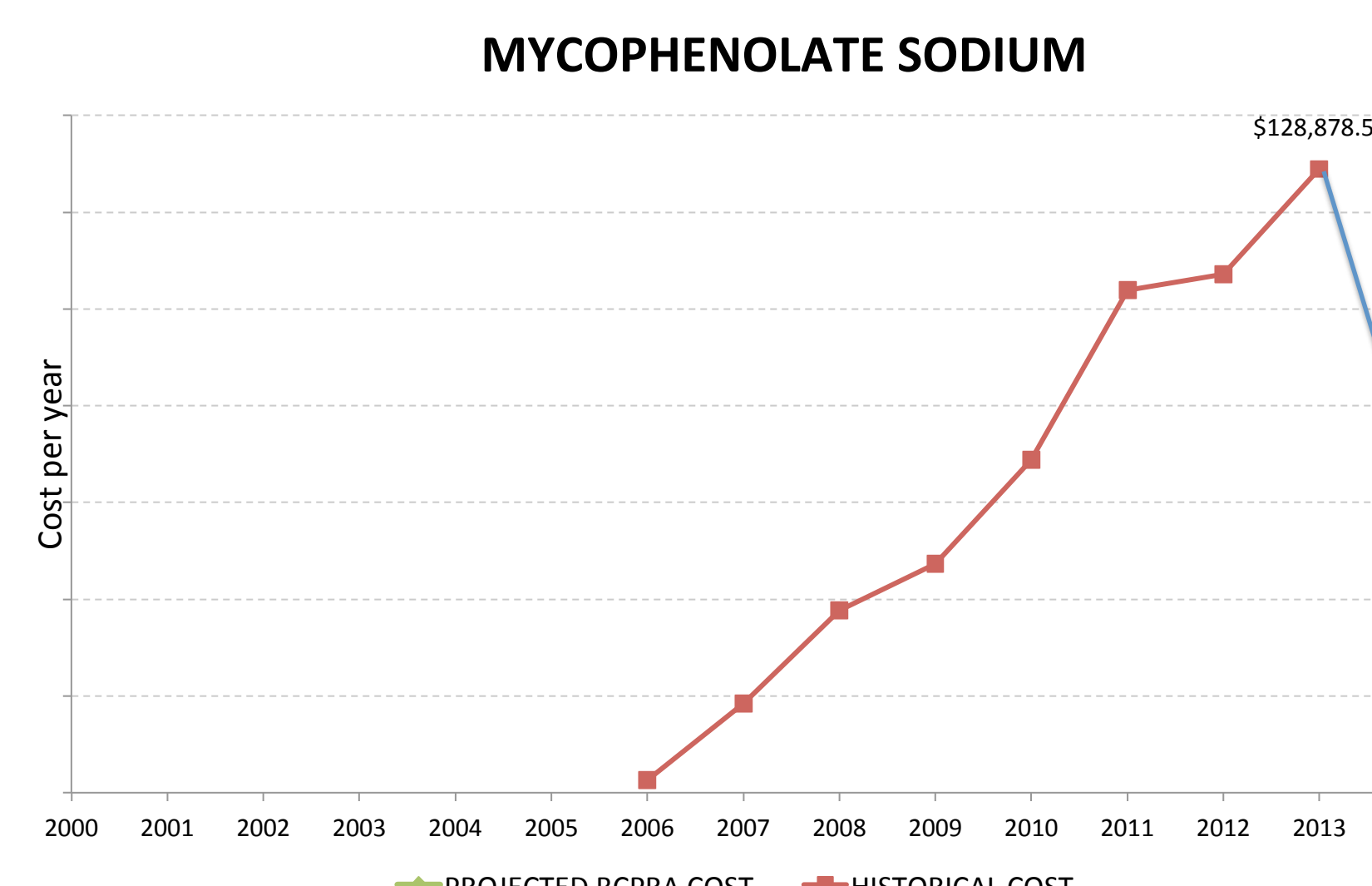
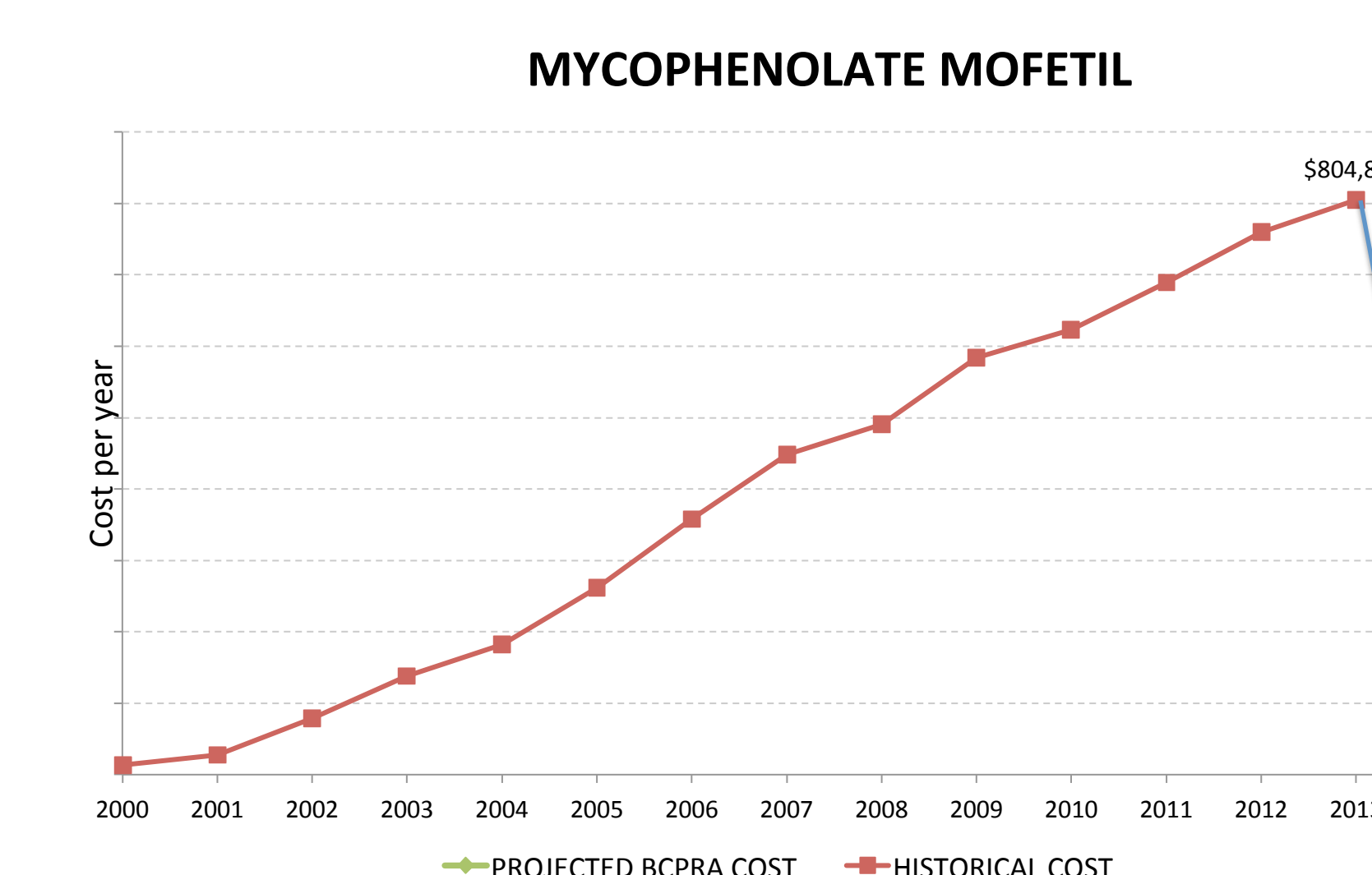
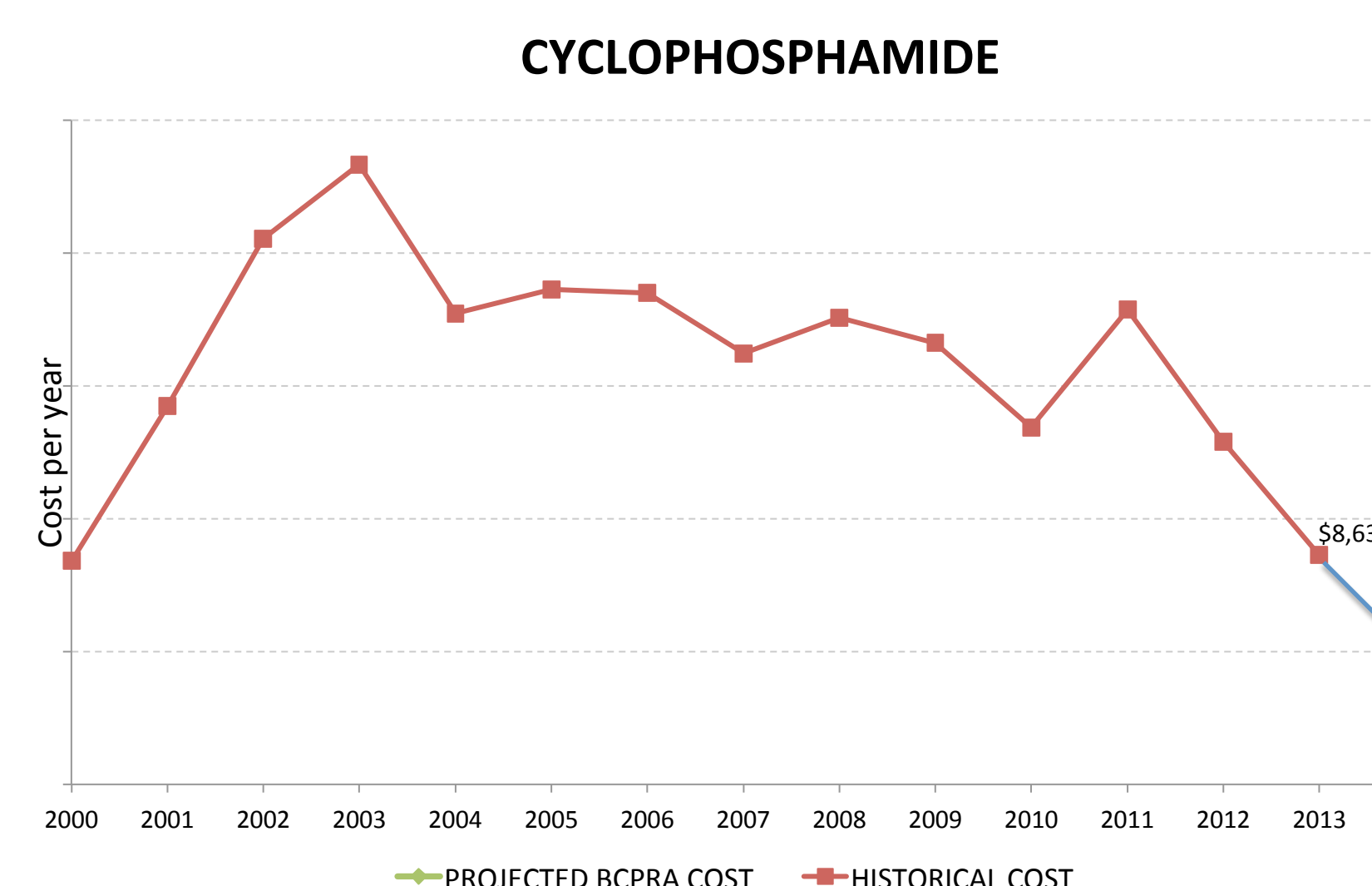
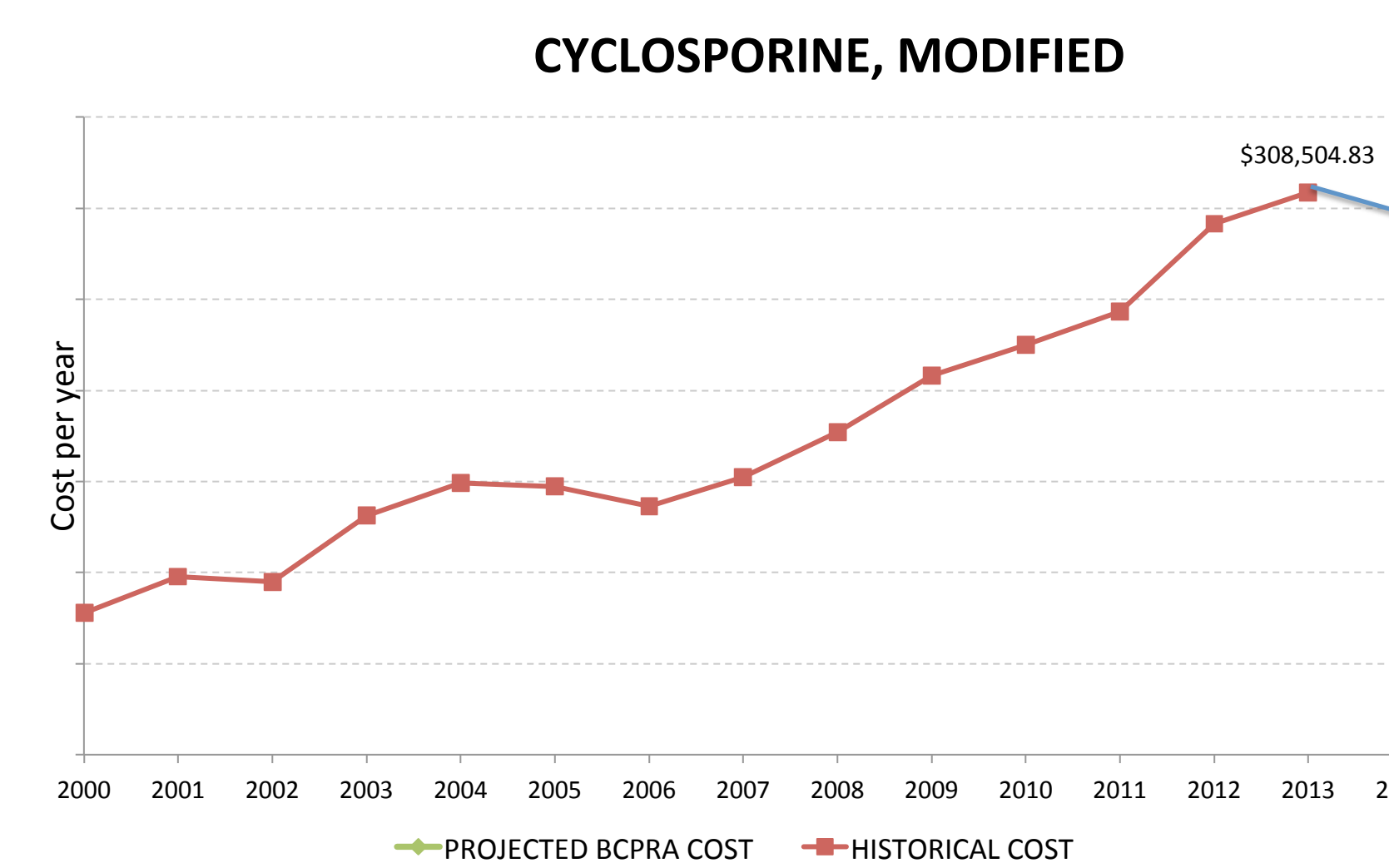
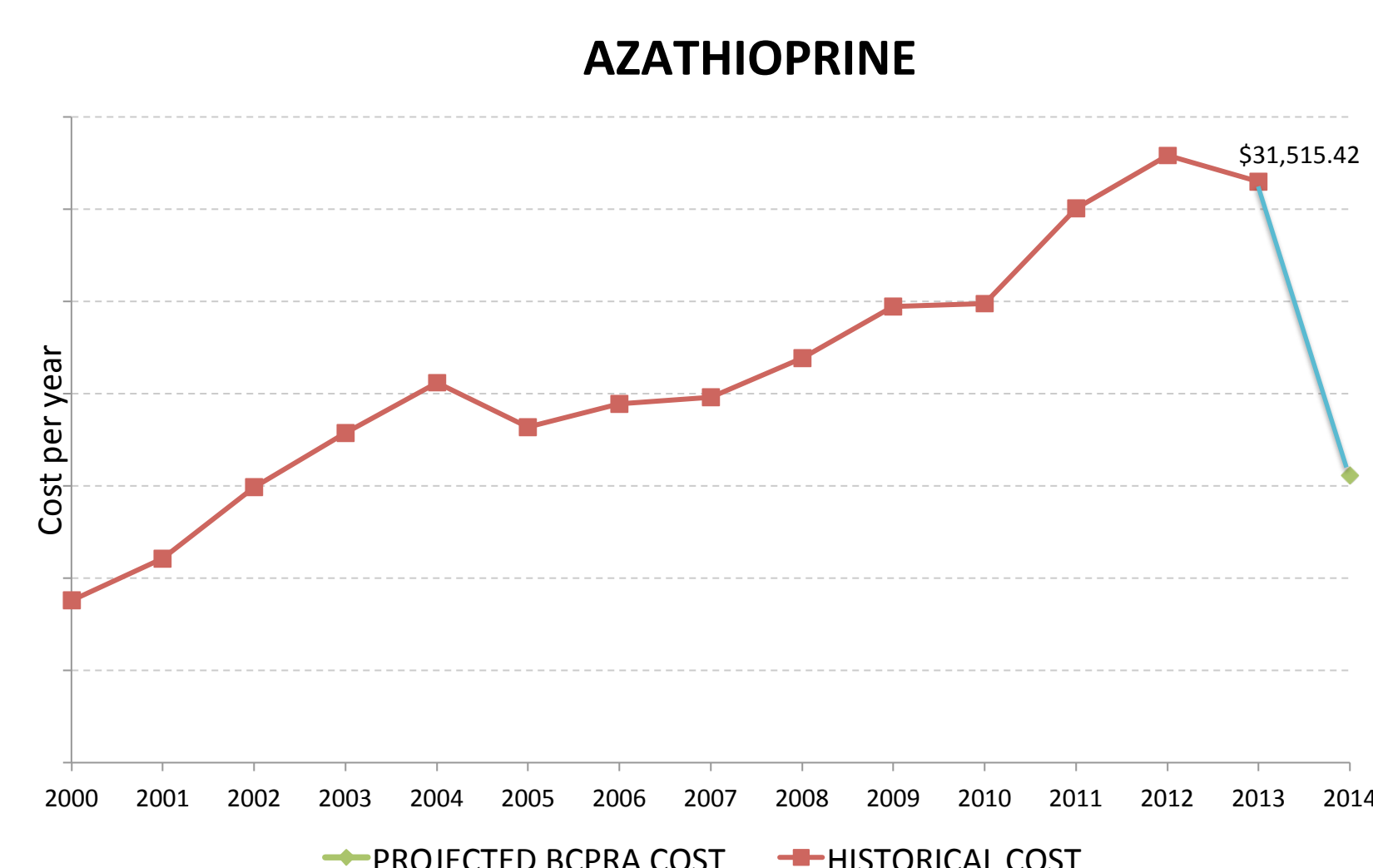
- Develop and implement pre-printed treatment protocols for use by physicians based on best available evidence.

## Measurement

Below is a comparison of historical costs vs. projected costs for each formulary medication:

- Historical cost were calculated for each formulary drug by obtaining Pharmanet data of all GN patients diagnosed by kidney biopsy between the year 2000 and 2013 and then multiplying the quantity of medication dispensed by its retail price.
- The projected BCPRA cost was calculated using the same population of GN patients and the same quantity of medications dispensed according to Pharmanet. However, the quantity was multiplied by BC Renal Agency contract prices.

Note: exact drug costs cannot shown due to contractual requirements.



## References:

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## Lessons Learned

- The projected annual cost of the GN Formulary is significantly less than its historic cost. If this formulary was implemented in the year 2000, British Columbia would have saved over \$5.8 million dollars to date.
- In 1964, the Royal Commission on Health Services recommended that a universal drug insurance plan be established for all Canadians. The National Health Forum (1997), the Romanow Commission (2002) and the Kirby Report (2002) have all repeated this call.<sup>2</sup> The BC Renal Agency's GN Formulary demonstrates that a publically funded drug insurance plan for outpatients can improve access to treatment while reducing costs in the Canadian setting.

\$14.5 billion dollars could be saved every year if Canada spent the same amount on pharmaceuticals as the UK (who has a universal drug insurance plan). With \$14.5 billion dollars, we could do any of the following:<sup>3</sup>

- Double the number of family physicians in Canada
- Increase the number of nurses by 50%
- Provide daycare to all children aged 1 to 4
- Pay all post-secondary tuition fees for Canadian students
- Build 18 state-of-the-art hospitals across Canada every year

## Conclusion

- Despite having a universal health care system in Canada, funding for prescription drugs remains a combination of out-of-pocket expenses, private and public insurance coverage.
- For expensive medications, costs can be a barrier to treatment, but not using them may result in the need for more expensive therapies such as dialysis.
- The BC Renal Agency's GN Formulary is a non-traditional quality improvement initiative that results in the right patient, receiving the right treatment at the right time. Importantly, it also ensures that the treatment is provided at the right price.
- Through provincial bargaining power, formulary medications are obtained at a significant discount. Although patients no longer pays user fees, the health care system still saves money.
- Based on the same principals as the BC Renal Agency's GN Formulary, implementing a universal drug insurance plan in Canada would save billions of dollars while ensuring equitable evidenced-based access to care.

## Acknowledgments:

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