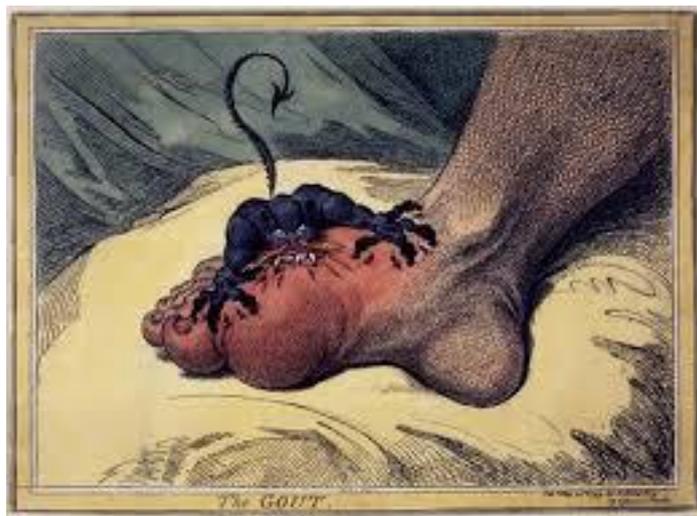


# UNIVERSITY OF AUCKLAND

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THE DOCTOR BYPASS STUDY:  
A road towards streamlined gout management



THE ROYAL NEW ZEALAND COLLEGE OF GENERAL  
PRACTITIONERS

SCHOLARSHIP IMPACT REPORT

SYLVIA GILES

3 March 2017



## Thank You and Summary

I would sincerely like to thank the Royal New Zealand College of General Practitioners; without their support I would have been unable to contribute to the Doctor Bypass Study. Along with the guidance of my supervisor, Professor Bruce Arroll, I've become a convert to the cause of gout prevention in the primary care setting. The clinical setting of this study also exposed me to the excellent work of the Greenstone Family Clinic, and the drive and passion for innovation amongst its staff. Each and every member of staff has been an excellent role model to me, at the dawn of my own clinical career. Further, this research scholarship has taught me that being a good clinician sometimes means considering the possibility you are, in fact, getting in the way between a patient and a good outcome. And, if you are, not being too proud to start looking around for a better solution.

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## Input

The Royal New Zealand College of General Practitioners contributed \$5 000 towards the Doctor Bypass Study, which allowed me to contribute to this project on a full-time basis over summer. Additionally, a big thank you is owed to the Greenstone Family Clinic, which contributed valuable resources; including the expertise of its staff, as well as valuable office equipment and space.

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## Research Activity

The original hypothesis at the genesis of the trial came from Greenstone Family Clinic GP Dr Tana Fishman. She saw that a number of young Māori and Pacific Island men – who have a higher prevalence of gout, presenting at an earlier age due to genetic predisposition<sup>1</sup> – were having difficulty getting time off work in order to get to their GP's clinic for an appointment every three months, to keep up-to-date with their gout preventer medication. The worry was that instead, these men were opting for over-the-counter pain relief (i.e. NSAIDs such as ibuprofen) from their local pharmacy, which can have adverse effects and don't address underlying joint damage from reoccurring gout.

This led to the idea that perhaps the well-meaning GP was more of a hindrance than a help. The clinic began a nurse-led case management approach with patients, where repeat scripts could be faxed directly to the pharmacist when patients rung the clinic. About this time, pharmacies got the ability to test serum uric acid on site via a skin-prick test, and the scene was set for a "one-stop shop" for gout patients: they could ring the clinic for repeat prescriptions, a nurse could then fax prescriptions to the pharmacy where, after a quick check of the patient's uric acid levels, they could adjust the dose accordingly on the spot. Information could also be fed back to the nurses, who are tracking the progress of patients, and who can talk to the patient's GP about any difficulties or complications. The patient still has the full support of the health care team behind them if they need it, but once they are set up there is only one streamlined point of contact for the patient: the pharmacy. As patients were being signed up for this intervention it was the perfect point to also collect data for their clinic's auditing purposes, and to conduct short one-on-one phone interviews about the new programme amongst those who declined it.

The aims of the study were threefold. Firstly, to assess the clinic's performance in controlling gout amongst its affected patients, as well as comparing these results to previous audits. Secondly, the study will also serve as a baseline by which to measure the success of the intervention in a year's time. And thirdly, there was the qualitative aspect to the study, nested into the larger dataset. By asking patients who declined the intervention, and thus the daily preventer medication for gout, why that was, we gained greater insight into the clinic's patients with gout.

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## Research Outputs

The overall control of gout within the Greenstone Family Clinic was calculated, in line with previous audits, using the mean of patients' last uric acid level, as a marker of control. The clinic's average serum uric acid level was 0.38 mmol/L (Table 1, appendix), which is an improvement (and closer to the clinical target of 0.36 mmol/L, below which the patient is unlikely to have a gout flare) from a 2012 audit<sup>2</sup> in which the mean uric acid level was 0.41mmol/L. However, breaking the numbers down by ethnicity revealed some masking within result – while overall control in the clinic had improved, only approximately 30% of Māori or Pacific Island patients were likely to have a uric acid level that suggested good clinical control of their gout, compared to 62% of Pākehā (Table 2, appendix).

Having assessed the overall levels in the clinic, the team got to work one-on-one with the patients. Out of an intervention group of 72 (the number of patients in the clinic with sub-optimally controlled gout) 27 signed up to the new nurse-led pharmacy-based intervention (Table 3, appendix). All of these patients had been earmarked for the intervention for reasons such as their uric acid was elevated, because they were known to pick up allopurinol

scripts intermittently, or because they weren't on a preventer at all. Amongst these, the number of patients who signed up to the intervention represents 8% of the clinic's gout population, who hopefully will now have improved gout control and adherence to their regime (the success of which will be assessed next year).

The original premise for the study was that patients were having trouble getting time off work. This group was smaller than expected (Table 3, appendix). The number one reason patients declined the programme was because they preferred to use lifestyle measures, or didn't like taking medication. The secondly most cited reason was because they weren't ready to start medication yet; many patients just said their gout wasn't bothering them frequently enough for them to add a pill to their daily regime. Then, in third place, patients said that getting time off work was difficult for them, which was followed by other access issues such as the cost of prescriptions, or difficulty getting to the laboratory and pharmacy.

## Research Outcomes

While the clinic's net gout control might be seen as improving over time according to the average uric acid level across the clinic, the implication of calculating the percentage at target by ethnicity is that there are persisting ethnic disparities in gout management, and any temptation to relax due to improved clinic-wide performance might be premature.

The clinic also got to know their patients with gout a little more. It might initially seem disappointing that the original hypothesis, and the intervention geared up to solve it, didn't resonate quite as widely with patients as the clinic might have liked. But the clinic now knows more about the motivations of its gout patients when it comes to making decisions about long-term preventer medication.

The research is also a reminder that clinicians can't afford to assume any of its subpopulations, such as those patients who have gout, are a homogenous group with stereotyped motivations. In this case, there was a larger group (27 people) who enthusiastically took up the intervention on offer, and then a slightly smaller group (25 people) to whom messages about prevention and ongoing damage need to be carefully tailored to the solutions that suit that individual. We had assumed this was a population slipping through the crack due to access issues (namely being unable to take time off work). Instead, we found a population who are exercising their autonomy, and not so much slipping through the gap but walking through it.

Conversely, it could be argued, that with a better understanding of these patients and their reasons for declining daily preventer medications, a system more responsive to the needs of Māori and Pacific Island patients

should, at the very least, be able to achieve similar rates of gout control to their Pākehā counterparts.

Lastly, having trialed this intervention amongst a smaller subpopulation within the clinic (i.e., those patients with gout but who had suboptimal control for some reason), it can now be rolled out to other patients, including those who already have their gout under control and are picking up regular scripts, but for whom it will make the process even easier.

The outcomes will be presented back to the clinic later in March, in line with the Greenstone Family Clinic's commitment to auditing and problem solving within its community.

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## **Future Impact**

Looking past the immediate goals clinicians have around the control of gout amongst their patients, this study contributes to many wider kaupapa promoted in the clinic's work culture.

Firstly, it is another demonstration of the persisting ethnic disparities in the Aotearoa New Zealand health system, and a reminder of the value of auditing as the first but valuable step that needs to take place in order to help achieve equitable health outcomes. Need cannot be addressed so long as it cannot be seen.

The project is also another way in which the nurses at the clinic are showing leadership and driving innovation. From the beginning nurses formed the backbone of this innovation, and while it is gout today, they have formed a template that could be used with any one of a number of other health conditions tomorrow.

There is an overall trend within healthcare towards encouraging the self-management of chronic conditions amongst patients.<sup>3</sup> Often, it is enabled by new technology and in particular, apps on the patient's smart phone. While the Doctor Bypass Programme would lend itself greatly to an app, perhaps one of its greatest strengths is that it doesn't need one. Any patient who has access to a land-line telephone can have the same access to the service as those with the latest smartphone. The project leveraged both existing and new services to deliver the streamlined model, without any extra cost to the patient. We await further analysis in a year's time to gauge how successful this shift in thinking around gout management has been.

**FOR MORE INFORMATION PLEASE CONTACT:**

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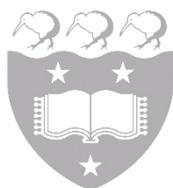
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# APPENDIX

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**Table 1: Uric acid, as a target, by ethnicity**

Characteristic	Number of patients	Mean Uric Acid Level	% at target	Mean age of patient
Total	232	0.38	47.0	60
European/Pakeha	102	0.35	62.2	69
Maori	57	0.42	32.1	52
Pacific Islander	48	0.50	31.1	53
Other	25	0.40	47.8	52

**Table 2: Eligible patients for the bypass study**

Study numbers overall		%
Original search	283	
Patients removed from study	51	
n=	232	
Green	161	69.4
Orange	56	23.7
Red	15	6.9
Eligible (uncontrolled, red and orange groups)	71	
Lost to study	14	21.1
Uptake of Doctor Bypass study	27	38.0
Declined Doctor Bypass study	25	33.8
Case too complicated for Doctor Bypass programme	5	7.0

**Table 3: Reasons for not wanting to do the Doctor Bypass programme n= 25 \***

Reasons	Frequency	% of patients who cited the problem
Desire to use lifestyle measures only/Don't like taking pills	17	73.9
Not interested in prevention at this point	11	47.8
Difficulty in getting time off work	8	34.8
Other	7	30.4
Cost of clinic visit or perscription	4	17.4
Delay getting an appointment	3	13.0
Difficulty getting to laboratory, or pharmacy	3	13.0

- **More than one reason could be given**

## REFERENCES

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- <sup>1</sup> Winnard D, Wright C, Taylor WJ, et al. National prevalence of gout derived from administrative health data in Aotearoa New Zealand. *Rheumatology (Oxford)* 2012;51(5):901-9
  - <sup>2</sup> E. Reaves, B. Arroll. Management of gout in a South Auckland general practice, *Journal of Primary Health care* p 73-78, 2014; 6(1): 73-78
  - <sup>3</sup> Cobum BW, Cheetham TC et al. Rationale and design of the randomized evaluation of an Ambulatory Care Pharmacy-Led Intervention to Optimise Urate Lowering Pathways (RAmP-UP) study. *Comtemporary Clinical Trials*, Volume 50, 1 September 2016, pp 105-115