SUPERVISOR/S: Lynne Chepulis and Ross Lawrenson

PROJECT TITLE: Evaluating the initial use of new type two diabetes medications.

FIELD: health, diabetes

DIVISION/SCHOOL: HECS - School of Health

PROJECT LOCATION: Hamilton

PROJECT ABSTRACT:
Type 2 diabetes (T2D) affects over a quarter of a million people in NZ including a disproportionate number of Māori and Pacific. Good disease management requires keeping blood glucose levels as close to target (53 mmol/mol) as possible, and minimizing the risk of developing additional cardiovascular and renal disease. Effective disease management requires input from both the clinicians (eg GPs and diabetes nurses) and from the patient and whānau themselves, and treatment consists of diet and exercise interventions, as well as medications as required to keep glucose as close to target at possible.

Metformin is the usual first-line medication used for T2D, though for those with cardiovascular and/or renal risk factors, the therapies of choice are sodium-glucose cotransporter 2 inhibitors (SGLT2i; e.g. empagliflozin) and glucagon-like peptide-1 receptor agonists (GLP1RA; e.g. dulaglutide). These medications are preferred as they reduce the development of cardiovascular and renal disease independently of their effects on glycaemic control and they do not cause hypoglycaemia or weight gain. However, whilst these medications have been funded and used overseas for many years, they have only been approved for use in New Zealand since February 2021. Further, due to the high cost of these drugs, they are only available via a special authority application – this requires patients to meet a number of key criteria (elevated HbA1c, established renal / cardiovascular disease, Māori/Pacific ethnicity) to be eligible for full funding.

Thus, this study is designed to evaluate T2D patient data from the three Waikato primary healthcare organisations (PHOs; Pinnacle, National Hauora Coalition, Hauraki) to evaluate how quickly emagliflozin and dulaglutide therapy have been initiated in primary care, and to explore how uptake / use of these medications differs by age, gender, ethnicity and the type of general practice (e.g very low cost access (VLCA) or not).

STUDENT SKILLS:
- Some knowledge of diabetes and healthcare in NZ
- Good computer skills
- Cultural awareness as it relates to health
- Confidence interacting with primary care to facilitate data collection
- A good level of data analysis skills (including excel, python, R or similar)
- knowledge of survey development and use

PROJECT TASKS:
- Liaise with the three PHO within the Waikato region to extract data from their ‘diabetes dashboards
- Evaluate the uptake of empagliflozin and dulaglutide since funding approval in February 2021, including what proportion of patients are eligible for these medications how initiation of therapy differs by age, gender, ethnicity, VLCA / Māori health provider status of the GP practices etc.
- Support other diabetes analyses as required based on the aforementioned PHO dataset.

EXPECTED OUTCOMES:
- Student’s Research Poster (as per clause 6 of the Scholarship regulations)
- peer reviewed publication
- presentation at diabetes research conference