Submission to the
Joint Select Committee on Preventative Health:

Preventative health care and diabetes in Northern Tasmania

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Preamble

This submission has been prepared in response to the following objective of the Committee:

> *To enquire into and report upon-*
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> *2) The challenges to, and benefits of, the provision of an integrated and collaborative preventative health care model which focuses on the prevention and early detection of, and intervention for, chronic disease*

Diabetes is a common complex chronic disease that has a significant impact on the health and wellbeing of the individual and major implications for health care expenditure[1].

The aim of this document is to inform the Committee of the following issues:

1. Why the North/North West of Tasmania is an area of particular need regarding diabetes services
2. The current state of diabetes services in the North /North West
3. Intervention in diabetes care at the Launceston General Hospital (LGH): current programs and future perspectives
4. Proposal for a viable and sustainable diabetes service for the North/North West

1. Why the North/North West of Tasmania is an area of particular need regarding diabetes services

It is important to note the following in relation to diabetes care in Tasmania:

- Diabetes is a common chronic disease with higher prevalence in areas of lower socioeconomic status. People living outside major cities are more likely to have diabetes than those living within major cities[2]. Thus, in the northern half (North/North West) of Tasmania, there are 1200 (13905 vs 12704) more cases of diabetes than the south of the state, predominantly more type 2 diabetes[3]. Not only is diabetes more common in the North/North West, but diabetes centres in this region manage a high volume of moderate to high acuity cases[4] (see following points).

- Tasmanians with diabetes who are considered to be significantly socioeconomically disadvantaged are of high prevalence in the following local government areas; Burnie, Devonport, West Coast, Central Highland, and Break O'Day, and very high in the Georgetown area when compared to the national average[5, 6].

- The Australian Institute of Health and Welfare (AIHW) report *Australian Hospital Statistics 2004-2005* indicated that Tasmania had the third highest rate of preventable hospitalisations for diabetes complications in Australia. The THO–North West had the highest rate of preventable admissions for diabetes in Tasmania and nationally[7]. This AIHW 2005 report identified that this region accounted for 40.2% of these occasions and the northern half of Tasmania combined 76.3%. It should be noted that in the years since this survey (2004-2005), there have been significantly *less* endocrinologists employed in

the Launceston area, so the preventable admissions for diabetes would be expected to be even greater currently.

Regarding hospital admissions of patients with diabetes, research from the UK has shown that people with diabetes were ~1.6-fold more likely to occupy a hospital bed than expected from their prevalence in the community, had significantly longer hospital stays compared with those without diabetes, and a mean cost of care 50% higher than patients without diabetes[8]. The implications for health care expenditure are clear, but there is evidence that better diabetes management in the community can prevent hospitalizations.

- A study of the foot-health of adults with diabetes in regional Australia (the PODFAR study; unpublished data) has demonstrated that residents of the North/ North West of Tasmania have triple the odds of worse foot morbidity (OR 3.21, 95%CI 2.23-4.83) than comparable patients in regional Victoria[9].

- The East Coast of Tasmania is an area characterized by high diabetes prevalence[5] along with high turnover of general practitioners. The diabetes patients from the East Coast are some of the most complex seen at the LGH endocrine service i.e. multiple diabetes complications and related co-morbidities.

- Access to private endocrinologists is minimal in the North/ North West. In contrast, there are two endocrinologists in private practice in Hobart. As a rural/regional area, it is important to note that there are also very limited allied health services[10] and/or credentialled Diabetes Educators in the private setting[11]. Thus, what is provided by the public sector constitutes the majority of specialist diabetes services within the North/North West.

- Future demands on inpatient and outpatient diabetes services are likely to increase statewide. This is primarily due to increasing prevalence of type 2 diabetes, driven by an aging population and rising rates of obesity. It should be noted that the mean BMI of a patient with type 2 diabetes attending the North West Regional Hospital (NWRH) Diabetes Centre is 45 kg/m^2 [12].

2. The current state of diabetes services in the North /North West

Endocrinologists

There are currently four (4) Endocrinologists in THO – North/ North West in DHHS-funded positions, all of whom are accredited by the Specialist Advisory Committee (SAC) in Endocrinology of the Royal Australasian College of Physicians (RACP). **The total endocrinologist workforce in the north of the state comprises 1.33 full-time equivalent (FTE) positions, constituted as follows:**

Two (2) endocrinologists in THO-North, comprising 0.33 FTE

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Two (2) endocrinologists in THO - North West, comprising 1.0 FTE. (Note: One of the endocrinologists (Dr Chandran) in THO – North West (0.5 FTE) has recently resigned and a physician is acting in this position as a short-term locum. There is no guarantee that a 0.5 FTE

endocrinologist will be appointed to fill Dr Chandran's position. If this is the case, the total endocrinologist workforce in the north of the state will be **0.83 FTE**).

It should be noted that LGH has not had a permanent full-time endocrinologist since 2003.

By way of comparison, the endocrinologist workforce in the south of the state comprises **3.7 FTE** in the public system.

Diabetes Centres/ Allied health staff

Diabetes Centres accredited by the National Association of Diabetes Centres (NADC) are on-site at LGH and NWRH. Both Diabetes Centres also have on-site dietetic and psychology services. The NWRH Diabetes Centre operates outreach services to the MCH: there is no on-site diabetes education service at the MCH.

Waiting times for outpatient appointments with an endocrinologist

Is should be noted that these referral statistics are unlikely to reflect the true demand for patients to be reviewed by a specialist: general practitioners are aware that the waiting times are long for all except the most urgent cases, and are therefore less likely to refer patients unless they have severe disease.

Present waiting times at LGH for an adult patient with diabetes:
New patient:
Category 1: up to 91 days,
Category 2: up to 290 days
Category 3; up to 483 days.

Review appointment:
Average 6 months

Present waiting times at NWRH for an adult patient with diabetes:
New patient: 7 months (14 months if Dr Chandran's position is not filled)
Review appointment: 9 months (18 months if Dr Chandran's position is not filled)

Characteristics of patients referred to diabetes services at LGH and NWRH

Due to the long waiting times for specialist appointments, the diabetes services at LGH and NWRH provide service essentially only for patients with a) type 1 diabetes, b) complex patients with type 2 diabetes, and c) women with diabetes in pregnancy. Complex patients with type 2 diabetes include those with poor diabetes control despite being treated with insulin, major diabetes-related complications or significant co-morbidities. An exception is patients with non-complex type 2 diabetes who require specialist review for approval to hold a commercial/heavy vehicle drivers licence.

In contrast to the situation in major urban diabetes centres, in the north of Tasmania, patients with type 2 diabetes who require insulin (a common outcome several years after diagnosis of type 2 diabetes), are expected to be managed by their general practitioner without specialist referral. Significant resources have been invested in education of general practitioners to support this process. The NWRH and LGH in partnership with Tas Medicare Local have been involved in supporting the role of the GP in the care of people with diabetes; as a result of this the uptake of GP Management Plans is high[13].

3. Intervention in diabetes care at the LGH: current programs and future perspectives

There are currently several intervention programs in operation at the LGH with the aims of limiting the long-term impact of diabetes and keeping people with diabetes out of hospital. The purpose of informing the Committee about these programs is to illustrate how preventative care is currently being delivered to specific high-risk patient groups and to explain what services are still required in order to deliver a high-quality diabetes service.

The common theme in the preventative programs currently in operation is that of committed medical and allied health professionals working in an environment characterized by significant under-resourcing in the setting of high patient demand. The Committee should be aware that with adequate resourcing, much more could be done to improve outcomes for patients with diabetes. Although the intervention programs discussed here are based at LGH, the NWRH has similar (or in some areas, such as foot care) greater requirements.

Current programs

Multidisciplinary high risk diabetes foot clinic

Target patients: severe foot complications e.g. ulcers, infections especially osteomyelitis, Charcot arthropathy.

Clinic personnel: podiatrists, wound care RN, endocrinologist, infectious diseases physician, orthotist.

Clinic objective: to treat serious foot complications; to avoid hospitalization where possible; and to avoid amputation.

Service limitations and requirements: the clinic runs only every 3rd week as there is no endocrinologist available at other times: ideally the clinic should run weekly. Input from a vascular surgeon/registrar is urgently required but has not been possible due to Department of Surgery staffing constraints.

Diabetes in pregnancy service

Target patients: women with gestational diabetes or pre-existing type 1 or type 2 diabetes in pregnancy. The incidence of gestational diabetes has increased several-fold over the last few years, with now more than 1 in 8 pregnancies at LGH complicated by GDM, and around 50% of affected women requiring insulin.

Clinic personnel: the most complex patients are seen at a clinic with endocrinologist/obstetrician/diabetes nurse educator/dietitian/midwife every third week with less complex patients seen in other clinics: even with stratification of clinics according to the complexity of the patients, the clinics are often are very large i.e. up to 40 patients booked.

Clinic Objective: to achieve the best outcomes for both mother and baby. Since this multidisciplinary diabetes in pregnancy service was established in 2006, the admission rates of babies of diabetic mothers to the neonatal care unit has dramatically decreased, as has the incidence of fetal-death in utero.

Service limitations and requirements: these clinics are very overbooked with frequently long waiting times for patients. Ideally the clinic for the most complex patients should be run weekly – currently this is not possible as there is no endocrinologist available except on every third week.

Outpatient insulin initiation/stabilization service

Target patients: patients with newly diagnosed type 1 diabetes and severe type 2 diabetes but who are not yet ill enough to mandate hospital admission.
Clinic personnel: endocrinologist, diabetes nurse educator, dietitian.
Clinic objective: to avoid hospital admission by offering comprehensive outpatient care. This involves frequent visits to the Diabetes Centre for care and education over a few days plus close follow-up by telephone. In addition to saving the cost of a hospital admission, most patients prefer outpatient treatment. A recent example of the benefit of this service is that of a young adult with intellectual disability who presented with newly-diagnosed type 1 diabetes but hospital admission (which would have caused the patient significant distress) was able to be avoided.
Service limitations and requirements: there is no full-time endocrinologist at LGH so this service can be offered only when the endocrinologist is available, meaning that on most occasions, the patient is admitted to a medical ward for treatment.

Programs in development

Young adults diabetes service

Target patients: patients aged 18-25 years with type 1 diabetes; also small numbers of young patients with type 2 diabetes.
Clinic personnel: endocrinologist, diabetes nurse educator, dietitian, psychologist.
Clinic objective: to offer comprehensive care for young people with diabetes.
Service limitations and requirements: we are currently in the process of attempting to set up multidisciplinary diabetes clinics for young adults. A part-time clinic coordinator (diabetes nurse educator) to aid patients with transition from paediatric care and to improve attendance at routine clinic appointments etc, will be appointed soon, funded by the endocrinologists.

Services that are required at LGH

The following services are key for the delivery of high quality diabetes care, but are not feasible with the current resources.

Inpatient diabetes management service
Patients with diabetes comprise ~25% of adults admitted to hospital[14]. There is limited availability of diabetes nurse educators to support these patients at LGH, and virtually no availability of an endocrinologist to advise on complex cases.

Collaborative diabetes clinics with renal physicians
The most common cause of end-stage renal failure and requirement for renal dialysis is diabetes. For optimal delivery of care to diabetes patients on dialysis, joint clinics with renal physicians are required.

Collaborative diabetes/pre-diabetes clinics with psychiatrists
The risk of metabolic syndrome/pre-diabetes is increased in patients taking modern anti-psychotic medications. In addition, patients with mental illness who also have diabetes often suffer with very poor diabetes control.

Outreach endocrinologist clinics on the East Coast of Tasmania
See Section 1. above regarding need for diabetes services on the East Coast.

4. Proposal for a viable and sustainable diabetes service for the North/North West

The following proposals form the basis of the response to the Green Paper on the reform of the Tasmanian health system, submitted by the endocrinologists of the North/North West (Dr Joanne Campbell (LGH), Dr Anne Corbould (LGH), and Dr Krish Chikkaveerappa (NWRH/MCH). The endocrinologists of the North/North West do not endorse the recommendations of the Endocrinology Clinical Advisory Group, chaired by Professor John Burgess of the RHH. The proposals are presented here in summarized form: for full details, please refer to the One Health System website i.e. stakeholder submissions.

Proposal 1.
In consideration of population needs, both LGH and NWRH should operate Level 5 services[15] (Tasmanian Role Delineation Framework – for detailed description, please see Appendix 1).

Proposal 2.
In order to enable a viable and sustainable service, LGH requires **2.0 FTE** endocrinologists. A minimum of **1.0 FTE** endocrinologists is required at NWRH.

Proposal 3.
The MCH should operate as a Level 3 service as it does currently i.e. has formal linkages with specialist endocrinologist and diabetes educators. The NWRH diabetes service presently provides all diabetes services to the MCH and this would continue.

Proposal 4.
A specialist endocrine RN should be appointed at LGH and at NWRH i.e. two 0.5 FTE positions.

Proposal 5.
Diabetes/endocrine services should be provided through a formal partnership between LGH and NWRH. The partnership would enable the following:

- an on-call roster of endocrinologists
- an on-call roster of diabetes nurse educators to provide diabetes hot-line and afterhours telephone advice for patients, based on protocols. This has operated separately from the diabetes centres at LGH and NWRH for many years.
- training of an advanced trainee in endocrinology (see Proposal 6. below)
- development of consistent management protocols across the North/North West.

Proposal 6.
The North/North West should apply to become a SAC-accredited site for an advanced trainee in endocrinology for Core Clinical Training. The trainee would work across the services of the North/North West, supervised collaboratively by the endocrinologists at LGH and NWRH.

Proposal 7.
A greater role for Diabetes Nurse Practitioners (of which there is only one in the north – at NWRH) needs to be considered to increase the capacity for diabetes services.

Proposal 8.
In view of the unacceptably high morbidity related to foot complications of patients with diabetes in the North/North West, more resources are needed for Multidisciplinary Diabetes Foot Clinics at LGH and NWRH.

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Appendix 1.

Tasmanian Role delineation framework:

Level 5 Endocrinology
Service description
A Level 5 service provides inpatient care by resident endocrinologist with a regional referral role.
Service requirements
Regional referral role On-site diabetes education service Formal network linkages with Level 6 Specialist Endocrinology Service An integrated hospital/community diabetes management service Undergraduate and postgraduate teaching role On-site specialist endocrinology allied health services
Workforce requirements
Endocrinologist on-site Endocrinologist or physician practicing in general medicine with dual training in endocrinology on-call 24 hours *Access to subspecialist surgeons with thyroid/parathyroid surgical expertise* Medical registrar on-site 24 hours Specialist endocrinology RNs.