

Endocrinologists of Northern Tasmania

Response to the White Paper – exposure draft

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with

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Endocrinology/diabetes services at LGH

1. Tasmanian Role Delineation Framework

We support the recommendation that LGH operates a Level 5 endocrinology service.

2. Endocrinologist workforce at LGH

As detailed in our Response to the Green Paper, the minimum specialist endocrinologist workforce required at LGH is 2.0 FTE. The current workforce is 0.33 FTE. We support the addition of 2.0 FTE i.e. retaining the current 0.33 FTE, resulting in a total of 2.33 FTE.

We wish to raise the following key issues regarding the recruitment and retention of endocrinologists in these positions, taking into account our local conditions.

- Recruiting is likely to be difficult, based on previous experience. Major contributors to this are the current lack of a critical mass of specialist endocrinologist colleagues and a very high clinical load, both of which will be ameliorated as new endocrinologist appointments are made.
- Flexibility in negotiating the endocrinologist positions will be critical. Rigid requirements such as dual credentialing in endocrinology and general medicine and participation in general medicine on-call duties are unlikely to result in successful recruitment. Part-time staff specialist or VMO appointments need to be offered so that appointees can engage in private practice or other professional activities as they wish: this is the case with current part-time endocrinologists at LGH.
- Thus, the additional 2.0 FTE endocrinologist positions will potentially comprise several part-time appointees. There is no reason that an efficient, comprehensive and dynamic endocrine service cannot be provided by several part-time appointees, as is the case with other specialist services at the LGH.

3. **Waiting list/'over boundary' referral statistics for endocrinology/diabetes**

It should be noted that these statistics at LGH represent the 'tip of the iceberg'. They are unlikely to reflect the true demand for patients to be reviewed by a specialist given that for many years, general practitioners have been 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. The same applies to statistics from NWRH.

Endocrinology/diabetes services at NWRH

1. **Tasmanian Role Delineation Framework**

The White Paper has recommended that NWRH operate as a Level 4 service. Our recommendation is that NWRH operate as a Level 5 service: we request that the basis for the NWRH service level be reviewed and we welcome further consultation on this issue. In planning for a viable and sustainable diabetes service for the future, it is important to recognise that, given the increased prevalence and life expectancy of patients with diabetes, and the increasing complexity of care due to new drugs and technologies, the workload of endocrinologists will only increase. The appropriate TRDF service level is determined not only by the complexity of the service, but also the demand for the service – the latter is particularly relevant to diabetes care which is a high-volume service (see summary of basis for TRDF below*).

**Role delineation defines the capacity of a health facility to provide clinical services of a defined complexity. It is based on assessment of:*

- *The number, range and expertise of medical, nursing, and other healthcare personnel in a given discipline to provide a specialized service.*
- *The support services available in that facility, including diagnostic, therapeutic and other clinical disciplines within the facility that influence the capacity of the facility to deliver high quality care in that discipline, and*
- *The volume of activity, usually driven by the population size and likely demand for the service.*

In support of our recommendation, we offer the following a) point-by-point analysis of Level 5 endocrinology services and NWRH and b) specific local factors that need to be considered in determining the level of endocrinology services in the North West.

a) analysis of Level 5 services and NWRH

TRDF: 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: *the NWRH has a regional referral role for the North West and runs diabetes services at MCH.*

On-site diabetes education service: *the NWRH has an accredited diabetes centre. Education services are supported by a Nurse Practitioner in Diabetes, in addition to Diabetes Nurse Educators.*

Formal network linkages with Level 6 Specialist Endocrinology Service: *the NWRH has formal linkage with the Endocrinology Service at RHH.*

An integrated hospital/community diabetes management service; *the NWRH diabetes service has close links with Tas Medicare Local i.e. management of diabetes at primary care level.*

Undergraduate and postgraduate teaching role: *endocrinologists at NWRH have a role in the teaching of undergraduate medical students at the Rural Clinical School at Burnie, and in partnership with LGH, will participate in the training of an advanced trainee in Endocrinology.*

On-site specialist endocrinology allied health services; *the Endocrinology CAG has recommended a 1.0 FTE endocrine RN appointment for the North/North West i.e. 2 appointments with 0.5 FTE at NWRH and at LGH.*

Workforce requirements

Endocrinologist on-site: *2.0 FTE dual trained Endocrinologists/General Physicians will need to be maintained.*

Endocrinologist or physician practicing in general medicine with dual training in endocrinology on-call 24 hours: *in partnership with LGH, the endocrinologists of NWRH will provide the Northern Tasmanian Endocrinology on-call service.*

Access to subspecialist surgeons with thyroid/parathyroid surgical expertise: *this access is available at LGH and RHH.*

Medical registrar on-site 24 hours; *this service is currently available at NWRH.*

Specialist endocrinology registered nurses (RNs): *see Service Requirements above.*

b) specific local factors that need to be considered in determining the level of endocrinology services in the North West

- People living outside major cities are more likely to have diabetes than those living within major cities. 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 diabetes¹. It is important to note that diabetes is a common chronic disease with higher prevalence in areas of lower socioeconomic status - the majority of the North West Tasmanian population falls within the socially-disadvantaged group (as per SEIFA) where prevalence of chronic disease is highest^{2,3}.
- Not only is diabetes more common in the North/North West, but the Diabetes Centres in this region manage a high volume of moderate/high acuity cases. Many patients with diabetes have multiple complications that include one or more of the following; end stage renal failure, retinopathy, hypoglycaemic unawareness, neuropathies including autonomic neuropathy (especially gastroparesis and intractable diarrhoea), and psychological disorders such as depression and anxiety. In addition, it is common for patients with type 1 diabetes to have the comorbidities of coeliac disease and other endocrinopathies (often thyroid disease, rarely Addison's Disease). In addition we manage patients with diabetes secondary to cystic fibrosis, pancreatitis, and steroid administration (commonly for inflammatory conditions such as asthma and also as a routine component of chemotherapy regimens in the treatment of malignancies). Moreover, the North West has high numbers of cases per capita of pregnancy complicated by diabetes and diabetes in the paediatric population.

In summary, both the volume and complexity of diabetes cases across the North/North West is high.

- Poorly managed diabetes and obesity are leading contributors to other diseases that are highly prevalent in the North West of Tasmania; for example, cardiovascular disease (up to 50% of cases), end stage renal disease (> 50% of cases), and common

cancers including oesophagus, pancreas, colon and rectum, breast, endometrium (lining of the uterus). Thus, better management of diabetes/obesity is vital to reduce the risk of multiple other conditions that increase the morbidity and mortality of the people of the North West.

- Patients with diabetes comprise ~25% of adults admitted to hospital⁴. High glucose levels in hospital are associated with increased infection rates, poorer wound healing, and increased mortality. Patients with diabetes have significantly longer hospital stays than those without diabetes. The Australian Institute of Health and Welfare has estimated that hospitals spent \$649M on inpatient care of patients with diabetes in 2008-09, almost doubling the figure from 2004-5.⁵ Studies have shown that when hyperglycaemia is promptly and appropriately managed, length of hospital stay is reduced, and there are significant cost savings. At NWRH (as at LGH), there is limited availability of diabetes nurse educators to support inpatients with diabetes and virtually no availability of an endocrinologist to advise on complex cases.

In summary, significant savings in health care expenditure can be achieved by high quality care of patients with diabetes both in outpatient and inpatient settings.

2. Endocrinologist workforce at NWRH

As detailed in our response to the Green Paper, the endocrinology workforce at NWRH until recently comprised 2 physicians with dual training in endocrinology and general medicine, each working 0.5 FTE in endocrinology i.e. total of 1.0 FTE. With the resignation of one endocrinologist, the workforce is now 0.5 FTE with no guarantee that a new endocrinologist will be recruited. We strongly recommend that the endocrine workforce remain at a minimum of 1.0 FTE.

Recruitment of an endocrinologist for NWRH is likely to be difficult. The same considerations regarding the recruitment process apply as for the LGH (see above).

Diabetes allied health services in the North/Northwest

The White Paper has given minimal attention to the roles of allied health professionals: this oversight will potentially have a significant negative impact on the provision of quality care for people with diabetes. Allied health professionals play a key role in the development and delivery of multidisciplinary, consumer-focused services that improve the health outcomes of people with diabetes in the North/Northwest. In the following paragraphs, we will outline the specific roles of allied health professionals and the implications of lack of access for patients with diabetes.

A. Allied health services: role in diabetes care team

The provision of care for people with diabetes is complex: evidence supports that care is best provided by a multidisciplinary team inclusive of a dietician, psychologist, podiatrist - in collaboration with endocrinologist, diabetes nurse educator/nurse practitioner, obstetrician, paediatrician, vascular surgeon, ophthalmologist, exercise physiologist. In addition to individual consultation for high-risk patients, a number of multidisciplinary services have been developed and/or further enhanced by allied health professionals (or are currently in development at LGH and NWRH). These include:

- Diabetes in Pregnancy Service
- High Risk Foot Clinic
- Paediatric/Transitional/Young Adult Diabetes Services
- Outpatient insulin initiation/stabilization service
- Obesity Clinic
- Bariatric surgery assessment service
- Insulin Pump Clinic
- Pre-admission Diabetes Assessment
- Inpatient Diabetes Management Service
- Specialized education services e.g. Carbohydrate Counting Group for empowering patients with type 1 diabetes to adjust insulin doses appropriately.
- Collaborative clinics with renal physicians for patients with diabetes and renal failure
- Collaborative clinics with psychiatry unit for patients with metabolic syndrome/prediabetes/diabetes

B. Access to diabetes allied health services in the North/North West

The North/North West has limited public podiatry, dietetic and psychology services, all of which are currently characterized by demand far exceeding capacity. It should be noted that there is negligible access to private allied health services in the North/North West of Tasmania; the socioeconomic status of the population, particularly in the North West, generally renders private services non-viable. Thus, what is provided by the public sector constitutes the vast majority of specialist diabetes services within the North/North West.

C. Selected current achievements and future challenges of diabetes specialist podiatry, psychology and dietetic services in the North/North West

Podiatry

- The current clinical staffing is 4.2 FTE podiatrists for the North and 5.3 for the North West: these podiatrists offer services for the entire north of the state, including the East and West Coasts, Flinders Island and King Island. At both the LGH and NWRH Diabetes Centres, there is only 1.0 FTE podiatrist to manage the substantial clinical load of high risk/complex patients and to run the High Risk Foot Clinic.
- In the 2007/08 and 2008/09, diabetes accounted for the majority of all amputations in the North/ North West; 75% and 65.8%, respectively. These procedures accounted for more than 700 hospital bed days with associated significant healthcare costs: the personal costs through reduced quality of life are of course also significant.
- The PODFAR study has demonstrated that people with diabetes living in the North/North West have triple the odds of foot morbidity than comparable patients in regional Victoria⁶.
- Following the appointment of a Diabetes Specialist Podiatrist at the NWRH, amputation rates have been reduced by up to 72% i.e. in the 3.5 years since implementation of the service compared with the previous 4 years.
- In summary, diabetic lower-limb problems result in significant social, medical and economic consequences and are the most common cause of hospitalisation for people with diabetes. It should be noted that foot complications are a very frequent cause of potentially preventable hospital admission – the role of the High Risk Foot Clinics is key.

Psychology

- Although it is well known that psychological morbidity is significantly increased in adults with diabetes, it is less well recognised that children and adolescents with diabetes also have poorer mental health: prevalence rates of psychiatric disorder in

longitudinal Australian studies of young people with diabetes have been reported to be between 37% and 47%. Early evaluation of adolescent psychological issues is essential to reduce risk for poor metabolic control (even to the point of emergency hospital admission for diabetic ketoacidosis) and earlier-than-expected diabetes complications such as retinopathy and renal failure.

- Following introduction of specialist psychological services into the NWRH Diabetes Centre; the following were noted:
 - A 27% reduction in symptoms of depression in people with diabetes, and a 24% reduction in anxiety symptoms.
 - Reduction in HbA1c (a measure of diabetes control) in 68% of individuals following psychology intervention; with 45% showing reductions of greater than 10%.

Dietetics

- In order to meet accreditation standards for a Tertiary Diabetes Centre, the National Association of Diabetes Centres (NADC) requires that a dietitian is member of the diabetes care team.
- Dietitians are intrinsic to all of the specialized services provided in diabetes through the provision of medical nutritional therapy. For example, a Diabetes in Pregnancy clinic introduced in the North West where for the first time women were seen by both the dietitian and diabetes educator, resulted in a 24% decrease in adverse maternal and neonatal outcomes. Further, a basic economic analysis of this new model of care against standard care conservatively demonstrated a cost saving of \$150000 per annum.
- More individuals with diabetes are choosing insulin pump therapy as a treatment option (particularly in the paediatric age group). Dietetic involvement in the management of these patients is key as the patient's knowledge of carbohydrate counting (assessment of the carbohydrate content of all meals and snacks) is essential to the success of their treatment.

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