From: Michael D"Emden
To: Health and Community Services Committee
Subject: Inquiry into telehealth services in Queensland.
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The Research Director
Health and Community Services Committee
Parliament House
George Street
BRISBANE QLD 4000

Inquiry into telehealth services in Queensland.

Dear Sir/Madam

I would like to make the following submission to the inquiry concerning our experience with the incorporation of telehealth consultation services into the clinical care program which our unit offers to the people of Queensland.

Department Description.
The Endocrine and Diabetes Department at the Royal Brisbane and Womens Hospital provides a tertiary and secondary consulting service to the people of Metropolitan North and also to people residing predominantly in the Central Queensland area. The unit has 2 full time specialist endocrinologists and 6 part-time endocrinologists. We offer a wide range of endocrine services encompassing all clinical endocrine management problems.

Since 2007, the unit has been undertaking Telehealth Consultations in three main areas of Endocrine Practice. These are:-

1) Diabetes in Pregnancy
2) Type 1 and 2 Diabetes
3) General Endocrinology

1) The Diabetes In Pregnancy telehealth clinic
This has been an outstanding success. This has been conducted by Dr Maree Mungomery, a committed endocrinologist with vast experience in the management of diabetes in pregnancy. Diabetes in pregnancy is one of the most important areas of diabetic management. Women with poorly controlled diabetes can have increased mortality, higher rates of infant mortality and peri-natal complications. Improved diabetic control can minimise these risks. Women in central Queensland do not have direct access to specialist medical staff with the required skills and experience to achieve the quality of blood glucose control required in pregnancy. Prior to the introduction of this service, patients essentially muddled through and there were high rates of complications with premature deliveries. We were aware of this as we saw these women when they were transferred to the Royal Womens Hospital for their care.

The Telehealth service was established with funds provide by the Statewide Diabetes Network. The service was promoted to regional and remote areas in the Central Queensland region initially. There was reasonably rapid uptake driven by diabetes educators and midwives in these hospitals who recognised the value of the service. Today, the clinic runs from 11am to 4 pm on a Tuesday with one doctor predominantly but with a second medical registrar when clinical requirements demand additional staff. For example, tomorrow the clinic will see 23 patients who are in Prosperpine, Bundaberg, Hervey Bay, Gladstone, Emerald and Maryborough.

The clinical outcome of this service is spectacular with dramatic improvements in the overall control of the patients' diabetes with the measure of this control (HbA1c) being roughly equivalent to women managed through our Diabetes in Pregnancy clinic at the Royal Womens Hospital. Unfortunately, the HbA1c at the first appointment remains unacceptably high for the commencement of pregnancy due to their relative lack of access to high quality endocrine care in these communities between pregnancies.

This service is highly appreciated by the women involved. All clinics are conducted in Queensland Health facilities using local telehealth equipment with communication occurring over the Queensland Health network inside the firewall. No telehealth consultations occur outside Queensland Health facilities. However, telephone contact may be made between consultations.

2) **Diabetes Telehealth Consultations**
These clinics were established to the Bundaberg Hospital as a result of an initiative by the Statewide Diabetes Network who provided funds to all three "regions" at the time for the establishment of telehealth services. The RBWH received approximately $180K in funding compared with the Southern region based at PAH and GCH which received $230K. Our funds established the Diabetes in Pregnancy Telehealth Service (1) and this Service. The demand for this service was driven by the long waiting list for outpatient consultations that was occurring at the Bundaberg Base Hospital where the average waiting time to see the endocrinologist was certainly longer that 1 year. With this demand, there was the ability to identify patients who were suitable to be seen in the diabetes telehealth service.

To ensure these patients were managed efficiently and effectively, all patients were initially seen by a diabetes nurse educator who completed a structured interview with the patient to identify the management issues. On the basis of this interview, patients were categorised and seen according to clinical need. The clinic runs every Friday morning from 8:30 to 11:30am fortnightly and sees 4 new patients for 45 minutes. In attendance is the diabetes educator and a dietitian at the Bundaberg site, with the Endocrinologist linked in by telehealth from our Department in Brisbane. The issues involved in the management of the patient are discussed and a care plan developed and agreed to by all three health professionals and the patient. The intent is to develop a plan of management that will guide the referring General Practitioner regarding that patient's special needs and care. Occasionally, some patients require to be reviewed. As a result of this service, the waiting times for patients with diabetes in Bundaberg has been reduced.

Based on the success of this clinic and the ability of the clinic to initially access case conferencing medicare item numbers to provide additional funding, a Type 1 Diabetes Telehealth Clinic has subsequently started running every other fortnight at the same time. All Diabetes Telehealth clinics are conducted by Dr Amanda Love in Brisbane. They have the same structure and format although there is a higher ratio of review consultations.

3) **Endocrine Telehealth Clinics**.
The original face to face clinics involved a considerable total time commitment due to travel time. Essentially, nearly 6 hours of the day is involved in travel to and from the airport in addition to the flight itself That is not to mention flight delays, bad weather etc. There were the additional costs of travel to consider. There was loss of productivity if patients didn't turn up as the endocrinologist was away from their office. A face to face clinic has the advantage of establishing a good working relationship with the staff and patients in Bundaberg. The clinic load had been shared by Professor Robin Mortimer and Dr Michael d'Emden but when Dr Mortimer retired in 2010, there existed an opportunity

to convert some of the clinics to telehealth clinics. Thus one telehealth clinic is now held each fortnight lasting 3 hours which provides an equivalent time commitment as the 6 hours face to face clinics held monthly. As face to face clinics continue to be held every three months, additional consulting time has been created without any increase commitment required by the consultant.

To maximise the use of time, the Endocrine Telehealth clinics are predominantly review clinics. Some new patients are seen in these clinics but these are patients whose case has been triaged by the Consultant in Brisbane and enough clinical material is provided and the specific problem is of a nature where it is thought that clinical examination isn't required. On the other hand, the face to face clinics which are now held every third month are predominantly for new cases; review appointments now being predominantly conducted as telehealth consultations.

At the end of each clinic, the cases for the following clinic are reviewed and any pathology or radiological investigations that are deemed necessary are requested to maximise the effectiveness of the telehealth consultations.

The staff required for this clinic is just an enrolled nurse at the Bundaberg end to assist the patient, obtain faxed request forms etc to enable the efficient conduct of the clinic. Medical students and overseas trained doctors requiring assessment have participated in this clinic. The consultations are conducted by Dr Michael d'Emden.

In summary, the telehealth services conducted by our department have become an integral part of the consultative services we provide to patients in rural and remote areas of Central Queensland, although predominantly Bundaberg. Patients often move seamlessly between fact to face clinics conducted in Brisbane or Bundaberg to the telehealth services and vice versa. Our administrative staff are involved in the booking arrangements, all appointments are made on OSIM, all patients have a chart at both hospitals and all patients have letters written to the referring doctors keeping them informed of management decisions. Once established, these clinics are offering our patients great convenience without any reduction in quality of care. Indeed, because we have been able to increase our consultation times in Bundaberg, these clinics have had a very positive effect on our long waiting times. They offer substantial time savings to our patients who may have travelled to Brisbane and provide an opportunity to receive care to patients who cannot or will not travel.

With respect to specific issues of concern to the inquiry I would like to make the following comments.

1. **Expenditure and Budget**.

The telehealth services that were developed were initially established using seed fundiung for pilot programs developed for the management of type 2 diabetes. As patients with gestational diabetes may develop type 2 diabetes, the care of patients with diabetes in pregnancy was in scope. These monies covered the costs of staff required in the peripheral sites as well as the medical staff in Brisbane delivering the service.

Since the advent of Commonwealth Medicare Item numbers for Telehealth consultations, the Type 1 and Type 2 diabetes clinics and the Endocrine Telehealth clinics have been bulk-billing the Commonwealth for these services. Revenue raised is returned to the Bundaberg Base Hospital to eet their costs and the RBWH bills the BBH for the cost of Medical Services. The very busy Diabetes in Pregnancy Telelhealth clinics are conducted by a VMO and haven't been bulk-billed up to now.

Once a service is established, the fees generated cover the cost of service delivery if the

costs of intra-structure is not considered. Our clinics are conducted in normal outpatient facilities at the receiving hospital and are conducted within our own departmental offices so now additional infra-structure is actually required, apart for the cameras. There is some duplication of administrative activities due to the need to generate a chart at the receiving and consultions ends of the service. This will not be necessary once Q Health have completed the move to a State-wide Electronic Health Record.

2. Governance arrangements.
The governance arrangements that we have established are essentially no different to a normal fly-in clinic. The receiving hospital undertakes the activity and is responsible to the conduct of the service. The consultations are source from the RBWH. Clinical governance essentially rests with the RBWH as we receive the referrals, categoriose the patients and advise Bundaberg and the other hospitals of appointment times etc.

3. Models of service delivery.
We believe the models of care that we have developed are very effective and efficient and the success of the clinics relies on the fact that they have become an accepted part of our standard clinical consultative service.

However, to a large extend, the successful uptake of the service has been due to establishing a local footprint in the rural or remote area initially. This especially applies to the Diabetes and Endocrine Telehealth clinics in Bundaberg. That is, developing a fly-in face to face consultative service at a rural and remote hospital or facility develops a relationship with the medical, nursing and administrative staff at that hospital. Once, that clinic is established, the transition of the clinic to a combines telehealth/face-to-face service is relatively easy as everyone involved knows each other. If there are problems, they can be sorted out during a face to face clinic at a later date.

There is no reason my our success in establishing these clinics in Bundaberg could not be repeated in other major central coast Queensland Health facilities which do not have an adequate Endocrine service at the moment.

4. Technology and communication systems capacity and capability.
We are able to conduct satisfactory consultations now with the equipement we currently have available to us.

5. Patients, clinicians and health staff perceptions and experiences of telehealth.
Our perception of Telehealth is that it is just one method of conducting a consultation and it is part of the standard service delivery we provide.

6. The outcomes of trials and pilot projects.
We are a established service and do think that trials and pilot projects are no longer required.

7. Quality of patient care.
There is no doubt that a face to face consultation is the ideal form of a consultation. However, for most review consultations, a telehealth service is probably as effective as a face to face consultations.

For some medical conditions, an initial telehealth consultation can be as effective as a face to face consultation. These are conditions where imaging and pathology results negate the need for a consultation.

In particular, the Diabetes Telehealth consultations probably deliver a better quality

service than our standard consultations in our face to face clinics in Brisbane. This is because all three health professionals are present at the same time in the consultation. Any differences in opinion between the professionals in the care plan of that patient is sorted out and an agreed position is accepted. This consistency of message helps in managing the patient. The patient is receiving sometimes conflicting and therefore confusing messages from the different health professionals involved in their care
We have previously documented a significant improvement in the quality of blood glucose control six months after being seen in the diabetes telehealth clinic.

8. Access to health services, particularly in rural and remote locations.
Our clinics are conducted in Queensland Health facilities and all seem to have adequate telehealth capability although some hospitals do not have enough clinic rooms with capability so that the consultations are conducted in meeting rooms and other places that may be removed from the outpatient area This potentially creates problems regarding making appointments, billing patients etc. Ideally these consultations should be conducted in the normal consultation area.

9. Consider the value for money of the delivery of telehealth services.
The reduction in travel time of specialist medical staff and the decrease in travel costs of the patient must represent value for money. We believe that success in this regard is making the telehealth service part of the standard clinic structure of a Department and not a service that is conducted in a separate part of the hospital with separate staff. Ideally, an outpatient consulting room should be able to receive a telehealth consultation. The only additional cost at the receiving end is having at least an enrolled nurse present to help facilitate the consultation.

10. Examine the factors that support successful implementation of telehealth services
I believe I have discussed these above.

11. Identify any barriers to successful implementation.
It is my experience that the biggest barriers for implementation is the lack of funds at the rural and remove end to purchase the services from our Department. It is getting over the initial hurdle of developing a face to face clinic for patients in the region with Endocrine problems requiring specialist care. At the moment they are seen locally as best they can but clearly are not receiving the same quality of care as patients do in Brisbane. Many patients are bypassing local services and travelling to Brisbane to receive their care either privately or publically and their numbers may not be known to the local health service. Once a service is established, many of these patients can be looked after locally and many others will appear. Once established, face- to face clinics can be converted to telehealth clinics.

12. Consider strategies to address any barriers to successful implementation of telehealth services in Queensland.
If a certain level of consultative care in any speciality was required at rural and remote hospitals but cannot be provided by a local specialist, then funds should be made available to build capacity based on a mixture of face to face and telehealth services purchased from a major service such as ours. Once established, existing payment incentives substantially cover the on-going cost of these services at the remote site.

For example, in our case, the recognition many years ago by the administrative staff of the Bundaberg Base Hospital that there was a need for improved Endocrine Services in that area has resulted in the situation today were there are effective telehealth and face to face services providing high quality care to the people of Bundaberg with much of the increased clinical activity now being funded by bulk-billing item number for telehealth

consultations.

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