

# Too many of them and not enough of us – an innovative solution to management of diabetes in a rural area

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The Riverland Region is located three hours North East of Adelaide along the River Murray in South Australia. It is home to approximately 35 000 people from approximately 52 cultural backgrounds of which around 6000 (17%) access the diabetes services from their General Practitioner (GP), Diabetes Educator, Dietitians or Podiatrists. There are five main towns in the Riverland and several smaller communities that are serviced by the collaborative partnership between the Riverland Division of General Practice Inc (RDGP), the five Medical Practices, Riverland Community Health Services (RCHS), the Riverland Health Authority (RHA) and the five acute hospitals in the region.

In partnership, the health sectors have developed an effective working model for the management of diabetes and pre-diabetes that has proved to be successful despite the limited number of health professionals and the growing population of new cases.

The Riverland Division of General Practitioners (RDGP) currently represents 35 GPs within the General Practices, and six of the practices financially supports a Diabetes Nurse in each main town. Riverland Community Health Services (RCHS) currently employs 3 Full Time Equivalent (FTE) Podiatrists, 2 FTE Dietitians and 1 FTE Diabetes Educator. The known prevalence of diabetes in the Riverland is much higher than the national average. Factors thought to contribute to this include:

- diabetes has been a major priority for health providers for the past five years. It is believed this has increased the rate of diagnosis above the widely accepted “normal” 50% mark
- population trends and projections highlight an aging population in the Riverland. As age is a major risk factor for NIDDM, it is logical that the prevalence rates would mirror this trend
- the Riverland is home to a large number of culturally and linguistically diverse groups, particularly those known to exhibit higher diabetes prevalence rates (Aboriginal, Greek, Italian, Sikh Indian and Vietnamese)

## BACKGROUND

In 1999 the RDGP received federal funding for a six month project (supported by the University of Adelaide) to develop a region-wide database to record standard assessment details of patients with diabetes and pre-diabetes and to set up an automatic annual recall system to remind patients to return to their Doctor for their yearly check up. The grant funding for the database has since ceased, but the Riverland Division of General Practice have committed resources to sustain the outcomes of the initiative and meet an identified need for a regional database.

In 2001, Riverland Regional Health Service Inc (RRHSI, encompasses both RCHS and the Berri and Barmera Hospitals) received money to employ a project officer to develop a best practice working model for collaborative practice in relation to diabetes and pre-diabetes within the Riverland region.

## **THE RIVERLAND DIABETES MODEL**

The RDGP and RRHSI projects were amalgamated to develop a comprehensive Riverland Diabetes Model. Six main aspects underpin the success of the model.

### **1 Diabetes Practice Nurse**

The GPs of the region clearly indicated that they wanted a region wide Standard Assessment to be performed annually on clients with diabetes and pre-diabetes. The RDGP initiated, developed and supported 'mini diabetes clinics' in six of the seven Medical Practices in the region. These 'mini clinics' are run by Registered Nurses (RN) who are trained to make an assessment (see Box 1), give preliminary education and perform follow up assessments. Clients are followed up within 10 days of their GP appointment, and are referred on to allied health and other services if required. Held once a fortnight to once a month in each of the five main towns, the 'mini clinics' support quality and continuity of care through this comprehensive review process. . To date 50% of clients identified as having diabetes have chosen to participate in the annual review.

### **2 Diabetes Resource Nurse (diabetes workforce initiative)**

The RRHSI project recommended that acute hospital staff receive updated information about diabetes, to increase their knowledge and skills in diabetes management. A scholarship selection process was used to identify one RN from each of the five Riverland hospitals with a special interest in Diabetes. The RRHSI Diabetes Educator facilitated a Diabetes Specific course for these nurses, who became "Diabetes Resource Nurses" in their workplace. The package consisted of 15 weeks of tutorials and peer-shadowing to update the nurses on a broad range of topics such as symptoms, complications, medications, insulin, diet and lifestyle. The training has increased the profile of diabetes within the acute setting, and built the capacity of each health unit to better meet the needs of people with diabetes during their stay in hospital. The Diabetes Resource Nurses are now able to provide accurate information, support, referrals, and trouble shooting to inpatients and co-workers. More specifically the project has resulted in the nurses providing peer education and influencing changes in hospital practice by implementing quality improvements in both blood glucose monitoring and the introduction of Hypo Kits in two of the hospitals. The ongoing development of this valuable resource has been identified as a regional priority, with Riverland Health Authority allocating funding towards their continuing professional development.

## Box 1

### The RN assessment in the 'mini clinics' cover:

- Year of diagnosis
- Type of diabetes
- CALD/ ATSI
- Treatment type
- Exercise Frequency
- Alcohol intake
- Medications list updated
- Date Health Professionals seen in last 12 months eg. Ophthalmologist, Endocrinologist, Diabetes Educator, Dietitian, Podiatrist.
- Major Complications in last 12 months: CVA, MI, Amputation, Renal Failure, Retinopathy, Other
- Body Mass Index and Waist to Hip ratio
- Blood pressure check
- Vision: corrected and uncorrected
- Foot care: ulceration, deformity, active lesion, sensory loss, amputation, pulses.
- BSL Testing: self monitoring, technique satisfactory
- Hypos
- Urinalysis: blood, protein, glucose, ketones, microalbumin
- Blood test:
  - Total cholesterol
  - HDL
  - LDL
  - Triglycerides
  - HbA1c
  - Liver function
  - Kidney function
  - Fasting

### 3 Local training and support

The Diabetes Educator and Dietitians have actively supported several key groups that work with people who have diabetes.

- They support the Aboriginal Health workers to increase their knowledge and skills in diabetes, working in collaboration to meet the needs of the Indigenous population of the region, and to achieve Diabetes Educator qualifications.
- There are approximately 35 children in the region with diabetes. The Dietitians and Diabetes educators facilitate training and support for service providers working with children with diabetes, including school teachers, child care workers, support staff and parents.
- Hospital nursing, catering and general practice staff receive diabetes specific in-services and ongoing support.
- The people who work with Culturally And Linguistically Diverse (CALD) groups receive ongoing support from RCHS. Regular meetings of the elderly CALD population through the ethnic Day Activities Centre enables RCHS to access this group and support them directly.
- Diabetes specific education has been provided to interpreters who work with Greek, Italian, Turkish and Punjabi speaking clients. This has resulted in greater understanding of the issues, increased referrals, increased attendance at clinics and improved adherence to recommended lifestyle modifications.
- As part of the Diabetes Resource Nurse project, one of the participating nurses was employed to research and collate an up-to-date resource of printed information about diabetes and pre-diabetes in a range of languages. A copy of the resource was provided to each hospital, Medical Practice and community health worker.
- They have ongoing input into the regions Enrolled Nurses course at TAFE, the Graduate Nurse Program and the Parallel Rural Curriculum Course for the Flinders University Medical Students at the campus in Renmark.

### 4 Diabetes information groups

RCHS outpatient clinics were previously struggling with the growing number of cases of people newly diagnosed with diabetes/pre-diabetes or people requiring an update in their diabetes knowledge. Diabetes Information Groups were commenced that allowed room to grow for fluctuations in client numbers, decreased waiting lists, enabled quicker access to correct information and dispel myths. Client feedback indicates that the groups provide an effective forum for information and support.

A group setting provides an efficient way to educate clients with a greater range of effective resources and more practical methods. The groups are spread over two sessions, a fortnight apart, allowing clients to return with queries and to reiterate messages learnt. It also ensure the session remain brief so that the clients aren't overloaded with new information. The content involves pictorial means of describing the action of diabetes and pre-diabetes, food models for teaching dietary recommendations, and pedometers are loaned to emphasise the importance of physical activity. To further aid the practical application of newly acquired knowledge blood glucose monitors are loaned to clients to test their own blood glucose levels in the intervening fortnight.

The second session commences with discussions about messages learnt and findings from the loan equipment. Further pictorial resources are used to explain the action of complications, and foot-care details are discussed with examples of appropriate self treatment options and a hand-on approach to suitable footwear. The Medical Practices 'mini clinics' are explained, regular follow up with their GP is encouraged and future access to RCHS services is discussed.

Clients of CALD background or who prefer not to attend group education have the option of individual appointments.

## 5 Riverland diabetes advisory service group

The Diabetes Advisory Services Group was established to facilitate ongoing collaboration between the partners, and to provide a forum for professional development, support and trouble-shooting of diabetes-related issues across the region. Quarterly meetings are attended by a GP representative from each practice, Aboriginal Health Workers, Diabetes Educator, Dietitians, Podiatrists, Diabetes Practice Nurses, Diabetes Resource Nurses, Community Health Nurses and a Pharmacy representative from the region.

## 6 National Diabetes Services Scheme (NDSS)

In 2003 a NDSS trial was conducted in the Riverland through RCHS. This involved the part-time employment of an Enrolled Nurse to facilitate increased utilisation of the NDSS scheme, particularly by the elderly and culturally and linguistically diverse groups. The NDSS Nurse promoted the scheme, assisted people to complete their registration and order forms, facilitated easy payment options and supported clients to access correct diabetes supplies at subsidised prices. This improved accessibility of diabetes supplies to the region but specifically the CALD, elderly and low literacy population who previously struggled with the Order forms. Whilst many aspects of the trial proved successful, this model has since been abandoned by Diabetes Australia SA in preference for a local Pharmacy operating as a sub-branch. The opening of the sub-branch has relieved the pressure on the Diabetes Educator who previously found a large part of her role involved assisting people to fill in order forms to access the correct equipment and supplies.

## DISCUSSION

With the prevalence of diabetes growing at such an alarming rate and given the limited capacity of the health sectors to deal with clients on an individual basis, the Riverland region has developed a working model to deal with the increasing load by changing service delivery and becoming more efficient and effective. Collaboration between the RDGP, Medical Practices, RCHS and the hospitals enables clients to access services quickly, referral processes are improved, client confusion reduced and the quality and consistency of information provided to people with diabetes has improved.

Continued investment by the partners will be necessary to ensure the success of the initiative is sustained. For example, ongoing professional development and commitment to support the Practice Nurses and Diabetes Resource Nurses will be necessary to maintain their knowledge and skills. The number of people diagnosed with diabetes in the Riverland has declined in the last twelve months. While this may reflect prevalence trends, it is more likely that more effort is required to raise the awareness of diabetes and encourage greater vigilance by health workers to continue to proactively screen for diabetes.

The region currently lacks effective means to engage clients who, following their diagnosis, fail to engage with the relevant diabetes services. Whilst this is frustrating for the health providers, particularly in recognition that these people are at higher risk of developing complications, clients have the right to exercise their will not to avail themselves of services

The current model does not adequately address the specific needs of the Aboriginal and Torres Straight Islander population, and engagement of this target group has been limited. Service providers are working together to develop appropriate models of practice, but more work is required in this area. Similarly, continued efforts will be required to meet the needs of CALD groups.

## CONCLUSION

Working together as a region towards improved health outcomes for diabetes has been successful in the Riverland but will need to be reviewed and updated to maintain the current high standards.

## PRESENTER

**Tricia Crompton** works as the Senior Dietitian of the Diet and Diabetes Department for Riverland Regional Health Service Inc. The region is located on the River Murray in South Australia and has a large culturally and linguistically diverse population and a larger than usual known population of people with diabetes. The health service employs two dietitians and one diabetes educator to cover the entire region, which means there are far more of them, than there is of us. Apart from diabetes the Dietitians also cover: inpatients (acute and aged care), outpatients, foodservice, community work and health promotion.