On Target

April' 2022

Aoteara College of Diabetes Nurses Committee			
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Website	Belinda Gordge	Christchurch	
Committee members	Anne Waterman Solita Rose		
Newsletter Coordinator	Vacant	**This could be you?**	

Newsletter Coordinator –

Only requires 1 hr input 4 times per year

NZNO administrator available for editing.

Inside this issue

Diabetes technology

by Solita Rose

Diabetes technology continues to develop at a rapid pace. These past few months have seen the release of Medtronic's 780G system and Tandem's Control IQ in Aotearoa. Both automated insulin delivery (AID) systems require a different lens to assess glucose profiles and different methods of adjusting insulin delivery to maximise the AID algorithm. Understandably the release of each system will further drive the diabetes community's cry for funded continuous glucose monitoring (CGM) for all.

Interestingly, we find ourselves in a state of limbo where some people will transition to 780G or Control IQ while others may be caught with an incompatible pump and/or CGM awaiting the renewal of a special authority or paid subscription before being able to move to their preferred AID systems. And of course, there remains the vast majority of people who cannot afford approved CGM and will continue using capillary glucose monitoring, Freestyle Libre or DIY glucose monitoring options with or without a pump.

Currently there are limitations with approved AID systems in terms of which pumps and CGM options are compatible along with cloud platforms that can be used to review the data. However, with the #wearenotwaiting movement, increasing open-source technology and partnership between device companies we will see more collaborations in the future, Eg. Dexcom CGM + Medtronic Pumps + Tidepool Cloud to facilitate looping.

There has been some great education delivered by Medtronic, Tandem & NZSSD for each of the new, approved AID systems. Another useful place to explore is the Panther Programme's tools and resources for patients and clinicians. Here you will find management acronyms and material for optimising these systems (keep in mind they are based on the 770G, Control IQ and Omnipod systems). Another useful resource is the CARES framework for advanced diabetes devices, which stands for Calculate, Adjust, Revert, Educate, Sensor/Share and can be applied to any system / combination of devices.

While the Omicron surge continues to place pressure on the healthcare system and limit our capacity to attend education and get confident working with each system, clinicians may find the Panther Tools along with retrospectively reviewing education useful. In addition, this table outlines some of the more common combinations of devices and cloud platforms you may encounter.

Pumps available in NZ	Pump paired with CGM Options + AID options	Cloud platform/s typically used
Medtronic Paradigm	Paired with different CGM options is being used for **DIY AID**	Carelink Nightscout Tidepool
Medtronic 640G	Paired with Guardian 3 Sensor = Smartguard predictive low glucose suspend (PLGS)	Carelink
Medtronic 770G	(Typically upgraded to 780G if using G4 sensor) but can run an **approved AID** system with G3 sensor	Carelink

Medtronic 780G update	Paired with Guardian 4 sensor = 780G **approved AID**	Carelink
Tandem with Basal IQ update (This update should be installed on all existing / new tandem)	Paired with Dexcom G6 = Basal IQ predictive low glucose suspend (PLGS)	Diasend
Tandem with Control IQ update	Paired with Dexcom G6 = Control IQ **approved AID**	Diasend
Dana RS / Dana	Paired with different CGM options is being used for **DIY AID**	Nightscout Tidepool
Ypso Pump	Paired with Dexcom G6 is being used for **DIY AID** + future prospects of approved AID – Mylife Loop	Mylife App Diasend

Common cloud based platforms used in Aotearoa NZ:

- Libreview – Libre sensors with data coming from Libre Link app or uploaded from reader
- Diasend – Tandem insulin pump + Dexcom G6
- Carelink – Medtronic Paradigm, 640G, 770G & 780G pumps + Medtronic G3 or G4 CGM
- Dexcom Clarity – Dexcom G6 CGM (most often used by people on MDI / not on Tandem pump, or in addition to Diasend for people on Tandem – nice reporting to look at)
- Nightscout – Huge variety of pumps / CGM / DIY systems can be transmitted to Nightscout
- Tidepool – Huge variety of pumps / CGM / DIY systems can be transmitted to Tidepool
- Smartlog Clinic – (Coming to NZ one day soon) Caresens meter +/- Smartlog app, this would replace the server based Smarlog 2 software & enable remote review of capillary glucose monitoring if people were using the smartlog app (similar to Libreview)

Common glucose monitoring options that may be used with/without pumps

- Capillary glucose monitoring +/- Smartlog app
- Freestyle Libre + Libre Link app or Libre reader
- Freestyle Libre + DIY CGM receiver + app
  e.g. Libre + Miaomiao / Bluecon + an app such as Tomato, Spike, Xdrip
- Medtronic Guardian 3 (G3)
- Medtronic Guardian 4 (G4)
- Dexcom G6 (G5 has been phased out)

Accreditation News 18/3/22

Accreditation numbers – 55 total (excluding May 2022 round):

- 5 proficient RNs
- 45 specialist RNs
- 5 specialist NPs

Accreditation May 2022:

- Seven applications received: x2 initial specialist RNs, x4 maintenance specialist RNs, and x1 maintenance specialist NP.

- Accredited nurses due for renewal in Oct 2022 emailed with a reminder on 17th March 2022. Renewals due: 6 specialist RNs, 1 proficient RN, and 2 specialist NP.

Assessors:

- Currently 11 active assessors. Please shoulder tap any potential assessors that could be recruited into the role.
- Post accreditation round Zoom to begin this year.

Funding Support

ACDN has a grant that may be used to help cover some of the costs of accreditation or for assessor training. Details of the fund and how to apply are on the ACDN website.

Assessors

The College is seeking to grow the pool of approved assessors to assist with assessing accreditation portfolios.

Are you…

An accredited diabetes nurse?

Looking for a new challenge?

Wanting to develop new skills?

Looking to help 'grow' diabetes nursing in NZ?

Perhaps you are already a PDRP assessor?

Then we want to hear from you……..

The College would like to hear from anyone with the following skills:

- ❖ accredited as either a Proficient (level 3) of Specialist (level 4) Diabetes Nurse
- ❖ an approved PDRP assessor, or
- ❖ have completed the NZQA assessment module 4098 or other approved assessment programme, or willing to undertake relevant training (funding support available), and
- ❖ interested and willing to be an assessor.

Assessment of portfolios occurs twice a year. The time it takes to complete an assessment varies but in general you should allow at least 2 hours. Assessors are paid an honorarium for each portfolio assessed.

This is a wonderful opportunity to develop new skills that contribute to your own professional development, to network nationally with other members of the College, and to contribute to the professional development of your colleagues.

Expressions of interest can be directed at any time to Amanda de Hoop, Coordinator for the Accreditation Programme, by email – *amanda.dehoop@midcentraldhb.govt.nz*

Please include:

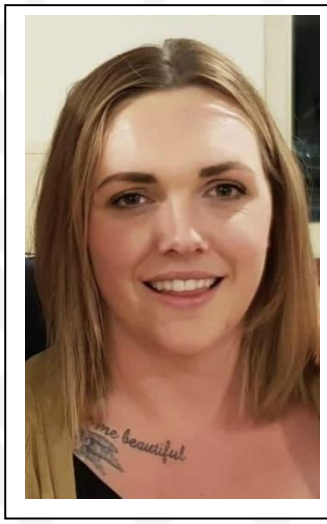
- ❖ your level of accreditation,
- ❖ whether you are willing to undertake the appropriate training, or,

if you are already an approved assessor, evidence of completion of a relevant course (a copy of your 4098 certificate or another approved course).

By Amanda de Hoop
Coordinator - ACDN (NZNO) Accreditation Programme
Email: amanda.dehoop@midcentraldhb.govt.nz

Introducing committee member

Solita-Rose Walker



Kia ora koutou,
I am currently employed as a Diabetes CNS at Waikato DHB and have been working in the community between Hamilton, Matamata and the Coromandel for the past five years. Prior to this I worked as a practice nurse in Hamilton. Having grown up in the Coromandel-Hauraki area, I am passionate about rural nursing and reducing inequities for rural people living with diabetes and other long-term conditions. My other keen interests include diabetes technology, developing patient resources and supporting Designated RN prescribing. I have been an RN Prescriber since 2019 and am a member of two RN prescribing peer groups, one specifically in diabetes and the other in primary health and specialty teams.
I am in the process of completing my masters with aspirations of being a NP however this is temporarily on hold as my partner and I will be welcoming a new member to our family, due in April. I am excited to join the ACDN committee, contribute to diabetes care and build relationships with people working in diabetes throughout Aotearoa.
Ngā mihi,
Solita

NZSSD WEBINAR MARCH 2022

TYPE 1 DIABETES AND TECH. **by Sue Talbot**

Dr Martin de Bock hosted an excellent webinar looking at **how technology can improve time in range (TIR) and reduce the burden of living with type 1 diabetes**. Speakers included;
Professor Ben Wheeler talking about Medtronic 780G/AHCL and patient experiences,
Dr Carl Peters sharing 10 things to know when starting CGM (on MDI) and
Dr Craig Jeffries discussing Control IQ.
Prof Ben Wheeler gave an overview and illustrated experiences with Medtronic 780 AHCL. Review of basal BSL of people on insulin pumps highlighted constant change in basal rates of at least 40% and need for automated systems such as the 780G/AHCL. Basal target for corrections can be 5.5, 6.1 or 6.7. Real world data showed after 54 days of 780G use, 74.9 % of users met the TIR of >70% without an increase in hypoglycaemia. Prior to 780G use, the percentage was 34.6%. 780G is well tolerated by consumers with increase in quality of life. The best results have been seen to be in those with the most to gain – youth and young adults in particular, along with those with a lot of glycaemic variability. Guardian 3 does require more calibration but Guardian 4 addresses this.
Limitations of the 780G/AHCL include the fact that you can't beat a highly motivated consumer or parent. If TIR is already achieved there may not be the same degree of overall increase in control, however burden of diabetes will be reduced. Ben recommends early Transition to 780G/AHCL prior to development of adaptive behaviours. Consumers do tend to find the sensor difficult to insert, the sensor needs an integrated transmitter and still requires occasional calibrations. Weight gain has been seen to be a trend if people increase their amount of refined carbohydrates.
Those already on an insulin pump who transition to 780G should see a reduction in diabetes burden and hypoglycaemia with an improvement in glycaemia. People on an MDI regime who transition to the 780G/AHCL are best to progress to full automation in 48-72 hours after starting pump therapy. The biggest gains are in auto-mode as variability of lifestyle is a major influence on glycaemia. Three main things to consider is the target, generally 5.5 unless there is a history of high blood glucose levels or the older adult, where a target of 6.7 may be more suitable, active insulin time (AIT) can be 2-3 hours, and to use as few carbohydrate ratios as possible. Ben suggests setting the low alert in

the low 3s and consider not setting a high alert initially to avoid 'alert fatigue'. He also recommends a bolus increment of 0.025 units.
He also shared some case studies highlighting the benefits of the 780G/AHCL and recommends focussing on those with the most to gain, starting early and not to prejudge who will do well. He also suggests mastering carbohydrate counting is less important when using the automated system.

Dr Carl Peters took us through the three CGM systems, Medtronic Guardian, Freestyle Flash and Dexcom. He discussed 10 important things to know when starting CGM (on MDI)

1. Wear the CGM as much as possible.
2. Maintain reasonable expectations for your CGM – It is not perfect, so capillary testing may still be needed at times. The sensor seems to work best if started in the morning (the sensor could be inserted in the evening but not start it until the morning).
3. Look at your glucose frequently. Know the direction the BSL is heading to help to avoid lows and check carbohydrate counting accuracy and insulin dosing.
4. Alerts and alarms are your guide and gives the opportunity to think about what led to it and what you can do about it now and in the future. Turning off the 'high alert' at the beginning of use can help reduce 'alert fatigue'.
5. Share CGM results – don't keep private. Share successes and frustrations.
6. Reflect on your past decisions and actions. Review trends and patterns to help understand what worked well or what to do differently. Review every 24 hours.
7. Know your personal glucose goals and take action to reach them. My personal target is _____ mmol/L and my post meal target is _____ mmol/L.
8. Have a plan for preventing and responding to low glucose levels. Don't panic or overreact. Follow your hypo treatment. It takes 15 minutes for the rapid carbohydrate to act. Use finger pricking to monitor a low blood sugar, not CGM due to the delay time of the CGM. If glucose is falling but the blood sugar is in the low normal range – act. Reflect on what happened and why.
9. Use CGM trends to improve your mealtime insulin dosing decisions.
10. Respond to high glucose between meals but avoid 'stacking' insulin. If glucose is still trending up two hours after a meal it is safe to take extra insulin as agreed with your health professional, but you need to remember to keep an eye on your blood sugars.

Dr Craig Jefferies gave a presentation on 'What we would do if we got this tech?' Control IQ is not available in New Zealand yet and he raised questions including who should have access to this technology and will there be funding? Craig discussed the history of diabetes management technology and reminds us that monitoring blood glucose is only one component of diabetes management. Consumers using pump and CGM technology who are highly motivated have better glycaemic outcomes. Progress in insulin pump therapy and CGM technology have seen improved accuracy, TIR and reduced hypoglycaemia.
The speakers then took time to answer questions submitted from the audience. Once again this was an excellent webinar from NZSSD and I would highly recommend further webinars.

A "Supporting chronic kidney disease management in primary care"

Webinar on March 21st presented by Dr Andrew Salmon, Consultant Nephrologist at Waitemata DHB
Synopsis by **Vicki McKay**

The points of interest for me were:
* CKD is stronger risk factor for CVD than diabetes.

* Risk factors for progressive CKD: 1) presence of albuminuria 2) uncontrolled hypertension 3) uncontrolled diabetes
* Ethnicity - Pasifika have double incidence of CKD than NZ Europeans. Maori also have a greater risk of CKD than NZ European.
* SGLT2i (empagliflozin) is more effective than ACE/ARBs in slowing CKD progression - potentially a 15 year delay in reaching ESKD. Those not meeting the Special Authority criteria could self-fund (approx $85 a month - this cost could be reduced by prescribing the higher strength tablets and the patient cutting the tablets in half).
* If patient is on an SGLT2i, and eGFR declines over time to <30mL/min, don't stop the SGLT2i - refer the patient to DHB Renal Service and leave decision to nephrologist.
* ACE/ARBs - don't prescribe both classes at the same time! When treatment is initiated, expect a reduction in eGFR, then stabilisation. However, if eGFR decreases by >25%, cease the ACE/ARB.
* Lifestyle factors to slow progression:
- reduce salt intake
- maintain/reach healthy weight
- be physical active
- stop smoking
- alcohol intake within recommended limits

A useful resource for patients and healthcare professionals is Kidney Health NZ, https://www.kidney.health.nz/
Under the 'Professionals' tab, check out the 'Tools for Health Professionals' tab - it contains lots of useful information including a risk calculator, a general practice guide, and eLearning/webinar links.

The webinar will be available to view, along with a variety of interesting health webinars, on https://myhealthhub.co.nz/webinars/

Research Project

A patient care quality improvement project using continuous glucose monitoring systems post total pancreatectomy surgery: A nursing prospective.

Please find below the abstract for my dissertation research project which I am completing this year. I would be so interested to hear from nurses who have had experiences using CGMS in the hospital setting, particularly on post-surgical patients. However, any experiences and any literature you may know of related to this topic.

Please email me at: Belinda.gordge@cdhb.health.nz I look forward to hearing from you.

Abstract

Pancreatic cancer treatment involves radical surgery. This surgery usually involves the removal of the pancreas therefore the replacement of the enzymes made by this organ is necessary. Science has been able to replicate the production of these enzymes, one of which is insulin. Administering insulin immediately post-surgery, involves blood glucose level monitoring, in the form of finger prick capillary blood testing. Such monitoring is acknowledged as time consuming for nursing staff, and more importantly painful and invasive for the patient. Technology for monitoring blood glucose levels has evolved into using an interstitial sensor known as Continuous Glucose Monitoring System which no longer involves finger pricks. Despite the potential gains of using this technology for patients and staff, it has not so far been widely used in the post-surgical setting in New Zealand. Potential barriers in other countries have been shown to be related to cost and staff training.

This quality improvement project will involve nurses trialling the use of CGMS with three to four patients in the post-surgical context. Nurses experience of, and confidence in using CGMS will be explored through focus group

interviews, the text of which will be recorded and transcribed and then analysed using thematic analysis. In collaboration with the post-surgical team the findings will be used to explore the continuing improvement of post-surgical care for people undergoing total pancreatectomy surgery.

Redeployment Experience

ONCE A NURSE FOREVER A NURSE **by Nana Tweneboah-Mensah**

While in a specialist areas, we concentrate solely on our patients/clients and their specific needs. Yearly update of Fire training and Life support, CPR and resuscitation training are kept up to date.
Covid 19 with the different variants and more hospital admissions has taught us that our basic skills should never be forgotten. During the height of Omicron early this year, some specialist nurses, as well as community nurses, were redeployed to help our colleagues on the wards doing varies task such as

- Taking vital signs and BSLs
- International Rounding on patients
- Weighting patients
- Emptying IDC
- Administering medications
- Taking ECG or SETTING UP FLEXI-MONITORING
- Simple wound cares
- Responding to call bells
- Feeding patients
- Changing, cleaning and making beds
- Restocking and tidying environment
- Supporting patients with hygiene cares
- Pressure area care (turns)
- RN / Patient Attender break relief
- Mobilising and repositioning patients

Much briefing is done for the team to know how and where to support the nurses on the wards. The task I found interesting is the daily cares and patient handling. Though working together with resource nurses I found out that patient handling required the basic skills I had learnt many years back. It was quite interesting when one had to pull together the past experiences. Do we as specialist nurses have to retrain / refresh our mind often for any future redeployment?
After decades off the ward, we must remember our basic nursing skills are not forgotten. It makes you wonder how much training or how many refresher courses community or specialist nurses need to be able to support their colleagues effectively on the wards.
Covid 19 has taught us that the basic nursing skills will always be required in times like these. I believe keeping on our hats of basic nursing cares will help us to be of great support to anyone everywhere.
People always look out for NURSES when there is an emergency on flights, shopping malls, parks, playing grounds, swimming pools etc. The basic nursing training that makes us nurses will always be required to make us **NURSES FOREVER.**
Let us all take care of ourselves to be able to support our colleagues when we are needed to do so.
Nana Tweneboah-Mensah
Auckland DHB nanatm@adhb.govt.nz

ACDN Professional Development Grant

As a member of the College you are eligible to apply for the College Professional Development Grants. These Grants are awarded twice a year. Next due date is July 31st. You can apply for up to $750. More information regarding these grants and the application form can be found either through a link on our College Website or via the NZNO website under the 'Support' tab. A requirement of the grants is that you will submit a report to be published in one of our Newsletters. This is a wonderful way to summarise your learning and share this with others.

ACDN Study day will be virtual and the AGM by Zoom – May 12th International Nurses day. More details to follow

ACDN Draft study day	Aotearoa College of Diabetes Nurses NZNO
Thursday 12 May 2022	

PROGRAMME 2022

TIME	SESSION	SPEAKER
12:30	Introduction and welcome	ACDN committee
12:40	OSA and diabetes Snoring, HUARS, OSA, OHS and Diabetes Or Why your partner hates you!	Dr Andy Veale
13:40	Diabetes and Cardiovascular disease – Current Practice Trends	Dean Kinloch, NP cardiology
14:30	**Afternoon tea for all SIGS – Please do not change this time**	
15:00	Diabetes and Covid	Speaker to be confirmed
16:00	AGM	ACDN committee
16:30		
17:00	**End of day … head to SHED6 for NZSSD registration and industry welcome reception**	

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