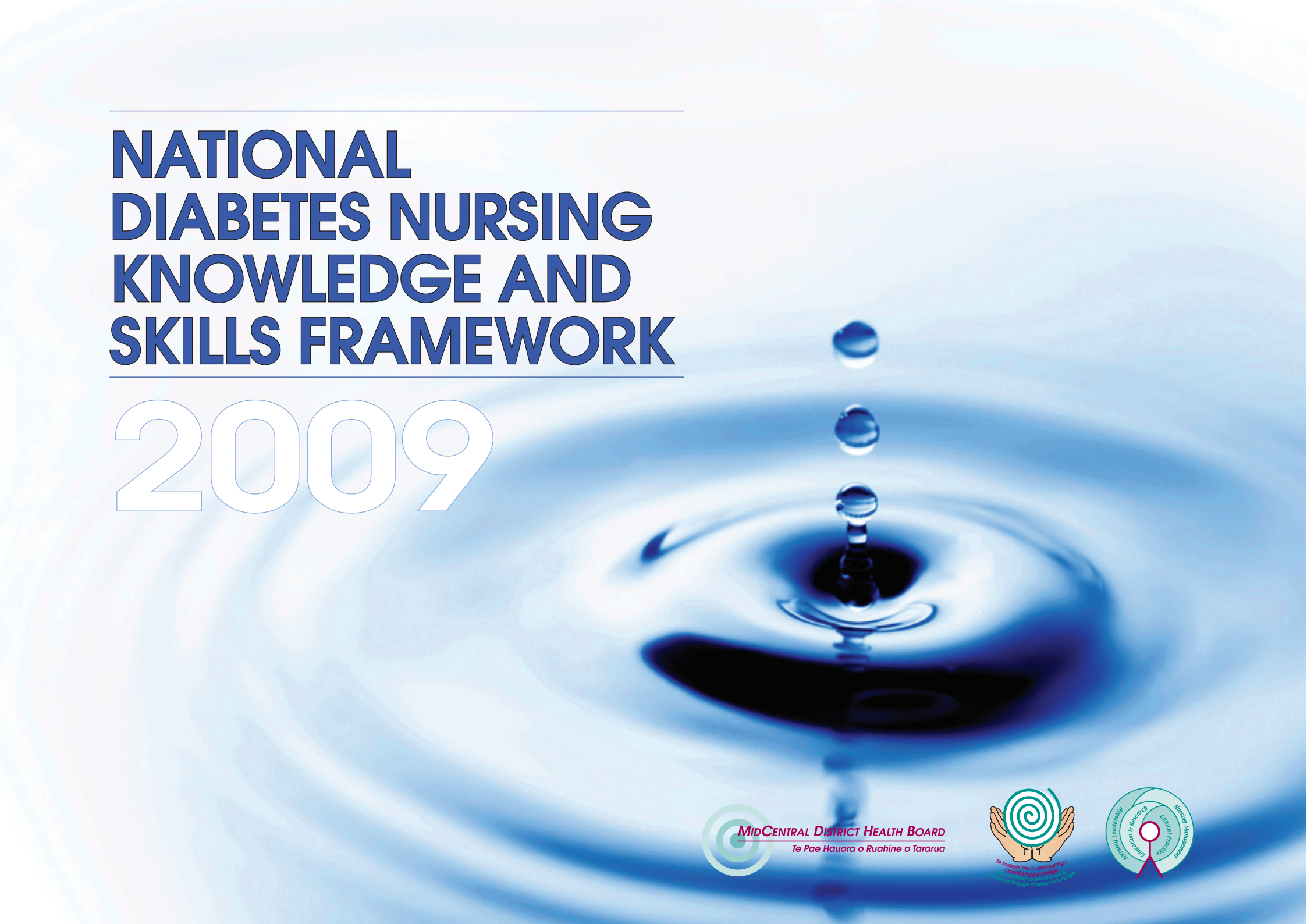
NATIONAL DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK

2009



MidCentral District Health Board
Te Pae Hauora o Ruahine o Tararua

DIABETES NURSE SPECIALISTS
Section of New Zealand Nurses' Organisation

The Diabetes Nurse Specialist Section of the New Zealand Nurses Organisation (DNSS NZNO) is dedicated to ensuring its members provide the best possible service to people with diabetes in New Zealand. This can only be achieved with suitably qualified and experienced diabetes nurses. This DNSS NZNO endorsed National Diabetes Knowledge and Skills Framework identifies relevant knowledge and skills for all registered nurses caring for people with diabetes across all practice settings.

COLLEGE OF NURSES AOTEAROA NZ

The College of Nurses Aotearoa (NZ) fully supports the National Diabetes Nursing Knowledge and Skills Framework. This evidence based framework, developed within the New Zealand context provides clear guidelines for Registered Nurses undertaking professional development in the area of caring for people with diabetes.

New Zealand Society
NZSSD
for the Study of Diabetes

NZSSD is the national advisory board on scientific and clinical diabetes care and standards. NZSSD's objectives are to promote the study of diabetes and the best standards of care of diabetes in New Zealand.

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FOREWORD

Nurses across many practice settings are key providers of diabetes clinical care and education. It is imperative that they are adequately prepared to ensure best possible outcomes. In August 2003, MidCentral District Health Board (MDHB) established the Primary Health Care Nursing Development Team (PHCNDT). This team identified the need to identify and articulate the knowledge and skills that nurses require to care for people with diabetes. Work commenced on this project following my appointment to the team.

The local project team has consisted of Sue Wood (Director of Nursing and Project Sponsor), Chiquita Hansen (Director of Nursing – Primary Health Care), Yvonne Stillwell (Nurse Leader Education) and Delwyn TeOka, Kaiwhakarite, MDHB. Anne Russell, Professional Development and Recognition Programme (PDRP) Co-ordinator, has also provided considerable expertise in aligning the Knowledge and Skills Framework with Nursing Council of New Zealand competencies for registration. Nationally, a small group of Diabetes Nurse Specialists have provided ongoing valuable critique and guidance, namely Bobbie Milne, Maggie Wilson, Susie Ryan, Andrea Rooderkerk and Louise Farmer. The development of the framework was greatly assisted by the generosity of the UK Diabetes Nursing Strategy Group who gave permission for its recently published Integrated Career and Competency Framework to be used as a foundation for this document.

During the development of this framework, the project team have consulted widely and repeatedly both locally and nationally, in particular with Diabetes Manawatu and the Manawatu, Horowhenua, Tararua Diabetes Trust, the Diabetes Nurse Specialists section (DNSs) of NZNO, and the New Zealand Society for the Study of Diabetes. The DNSs of NZNO has endorsed this Diabetes Nursing Knowledge and Skills Framework as a national document. They see it as providing an important platform for nurses to demonstrate their level of knowledge in diabetes nursing practice, and one that should be used in conjunction with their national accreditation process.

On behalf of the project team, I would also like to acknowledge and thank all of the people who have provided expertise and constructive feedback during the development stages.

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1. NATIONAL DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK

All nurses deliver care to people with diabetes. This National Diabetes Nursing Knowledge and Skills Framework (NDNKSF) has been developed to assist all registered nurses to demonstrate that they are adequately prepared to provide the required care and education for the person with diabetes and related co-morbidities, whatever their practice setting. To promote best practice the NDNKSF is linked to national guidelines, standards of practice and the Nursing Council of New Zealand's competencies for registration.

1.1 RATIONALE AND APPROACH

Diabetes is an important health problem in New Zealand (Ministry of Health,1999; Ministry of Health, 2002). It is one of thirteen population health objectives and one of three disease priority areas identified in the 2000 New Zealand Health Strategy (Ministry of Health, 2000). While there are no recent diabetes prevalence data for New Zealand, it is estimated that the overall prevalence of diagnosed diabetes is 3 to 4% (Health Funding Authority, 2000). The prevalence of diagnosed diabetes is higher among Maori (5–10%) and Pacific Island adults (4–8%) than among New Zealand Europeans (3%) and those of Asian origin (4%) (Ministry of Health,1997; Ministry of Health,1999). In 2000, the estimated number of people in New Zealand with known diabetes was 115,000, and this was predicted to increase to over 160,000 by 2021 (Health Funding Authority, 2000). Diabetes is a major contribution to inequalities in life expectancy, cardiovascular outcomes and diabetes specific health outcomes for Maori, Pacific peoples and Asian populations.

The size of the gap between recommended best practice and current practice in diabetes care in New Zealand is currently unknown. However, current local and national patient clinical indicator data demonstrate that diabetes care could be significantly improved. Nurses are the largest health workforce group and they play an important role in diabetes care and education. Patients' knowledge of diabetes and its management depends, to a large extent, on the adequacy and effectiveness of the diabetes-related care they receive. A major prerequisite for nurses to provide up to date diabetes care and education, wherever they practice, is a fundamental level of knowledge, competence and confidence. The application of this knowledge should promote the provision of consistent evidenced-based practice, and contribute to improved health outcomes.

1.2 NATIONAL DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK – INTRODUCTION

New Zealand Registered Nurses are required to demonstrate their competence within the requirements of their practising certificate. While the National Diabetes Nursing Knowledge and Skills Framework (NDNKSF) is explicitly linked to the New Zealand Nursing Council's competencies for registration and local PDRPs, it does not cover all aspects of a nurse's practice. This framework is explicitly focused on supporting nurses to deliver high-quality care to people with diabetes across the health care continuum. Registered Nurses In New Zealand incorporate the articles of the Treaty of Waitangi and follow the principles of partnership, participation and protection, as outlined in He Korowai Oranga, Maori Health Strategy (2002), in their practice. The NDNKSF is about identifying the diabetes specific knowledge and skills a registered nurse requires to deliver and evaluate care to all people, including Maori. Through active partnerships, people with diabetes and their whanau will be supported to meet their specific health needs and wellbeing through delivery of care that is both culturally appropriate and culturally responsive.

Diabetes is a complex disease of multi-pathology requiring a diverse array of interventions, consequently impacting on almost every facet of a person's life. The management of diabetes is relatively unique in that the majority of care is delivered by the person with diabetes through self-care. As illustrated in Figure 1, their lives, and therefore their capability to actively engage in self-care activities, is influenced by many factors at the individual, social and wider community levels and by the broader determinants of health.

The nurse-patient relationship is central to patient experience and a major determinant of health outcomes. Nursing is committed to advancing the health of New Zealanders through nursing leadership, partnerships in health care delivery, the advancement of clinical expertise across **all aspects of diabetes care**, and achieving a high standard of **practice, service, clinical and health outcomes** as illustrated in Figure 2 on the next page.

People with diabetes have differing health care needs relating to their diabetes: risk reduction, early identification and diagnosis of their diabetes; ongoing predictable health needs; being at high risk for disease progression and complication development; and experiencing highly complex problems. **'All nurses' and 'generalist nurses'**, regardless of their area of practice, are likely to have contact with people with diabetes and will therefore require some level of capability in diabetes nursing care.

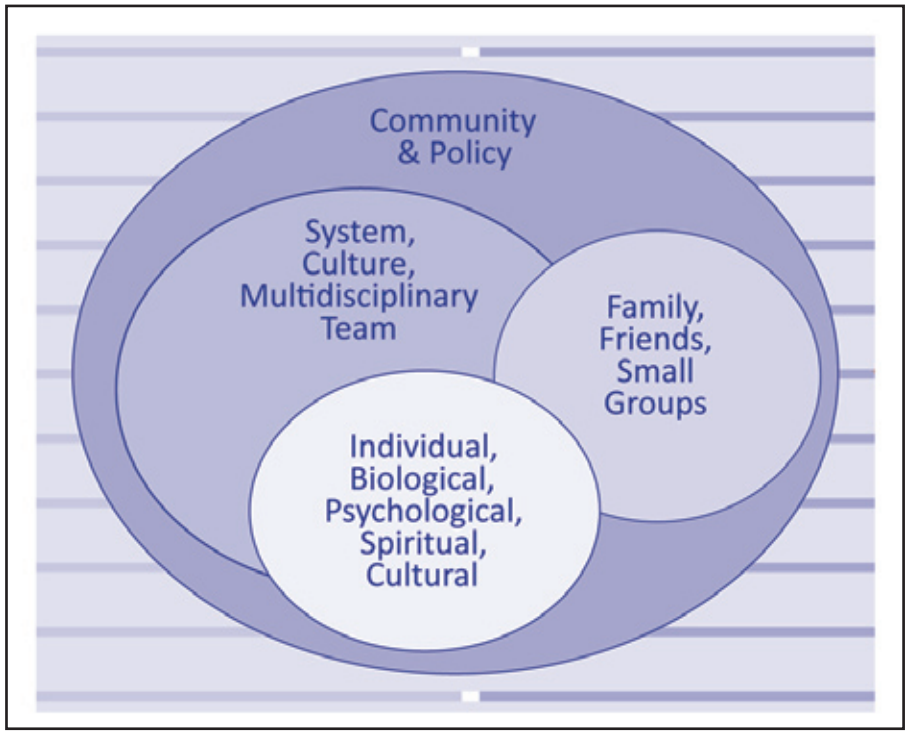

Figure 1: Multiple factors influencing the person with diabetes.

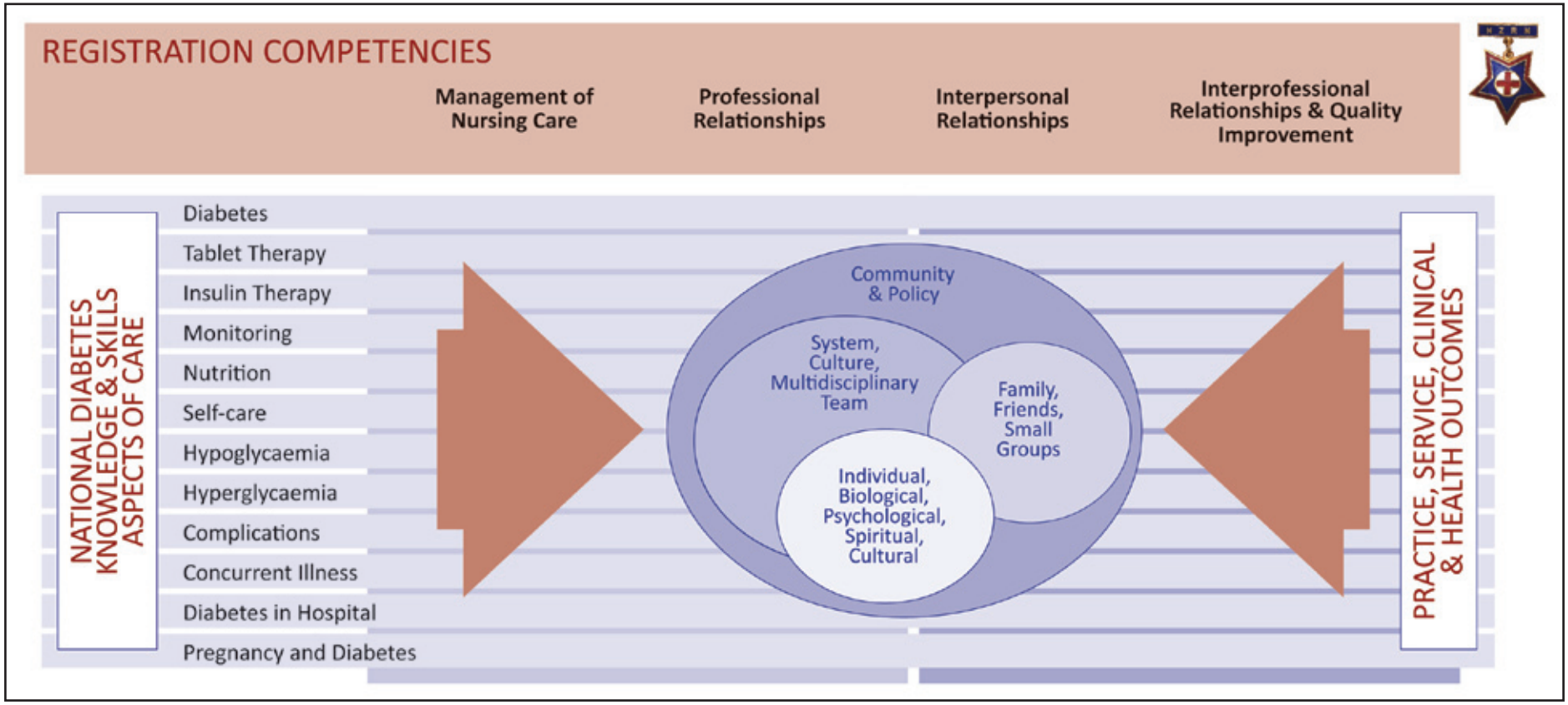

Figure 2: Aspects of diabetes care and outcome measurement.

'Specialty diabetes nurses' require speciality diabetes knowledge and skills to enable them to provide care for people with diabetes who are at high risk for disease progression and complication development. **'Specialist diabetes nurses'** require advanced knowledge and skills in diabetes care as their practice requires them to respond to people with diabetes who have complex health care needs and require episodic care or longer-term oversight of their diabetes management.

These areas of practice do not represent a hierarchy of practice but rather represent the area of practice and associated level of capability required of nurses who work in different contexts. This framework recognises the need for universal services for all people with diabetes. Many of these may be provided by nurses working in non-specialised services and augmented by the specialist services that people with diabetes require at particular points of their life

with diabetes. The areas of practice in the NDNKSF are aligned with respective population groups, and post registration education pathways as illustrated in Figure 3 below.

Nurses require access to ongoing professional development opportunities to enable them to develop the level of knowledge and skills in diabetes care that they require within their area of practice. The nature and scope of the learning experience each individual nurse requires will be determined by the level of capability required.

Regardless of educational level or practice role, all nurses are bound by standards of professional practice in nursing and are expected to work within existing decision making frameworks that guide their scope of practice.

Alongside experiential, clinically based learning and skill development it is expected the nurse will be engaged in ongoing clinically relevant academic study, ranging from short courses to post graduate certificates or diplomas, Masters Degree or PhD, dependent on the requirements of their role and their personal aspirations.

The model presented in Figure 4 on the next page, describes the nurse's varying contributions at all stages of the health care continuum, identifying the minimum diabetes knowledge and skills required of nurses working in different areas of practice, and at different points along the continuum. It is cross referenced to the Nursing Council of New Zealand's competency domains for the registered nurse scope of practice, and the post registration education pathway.

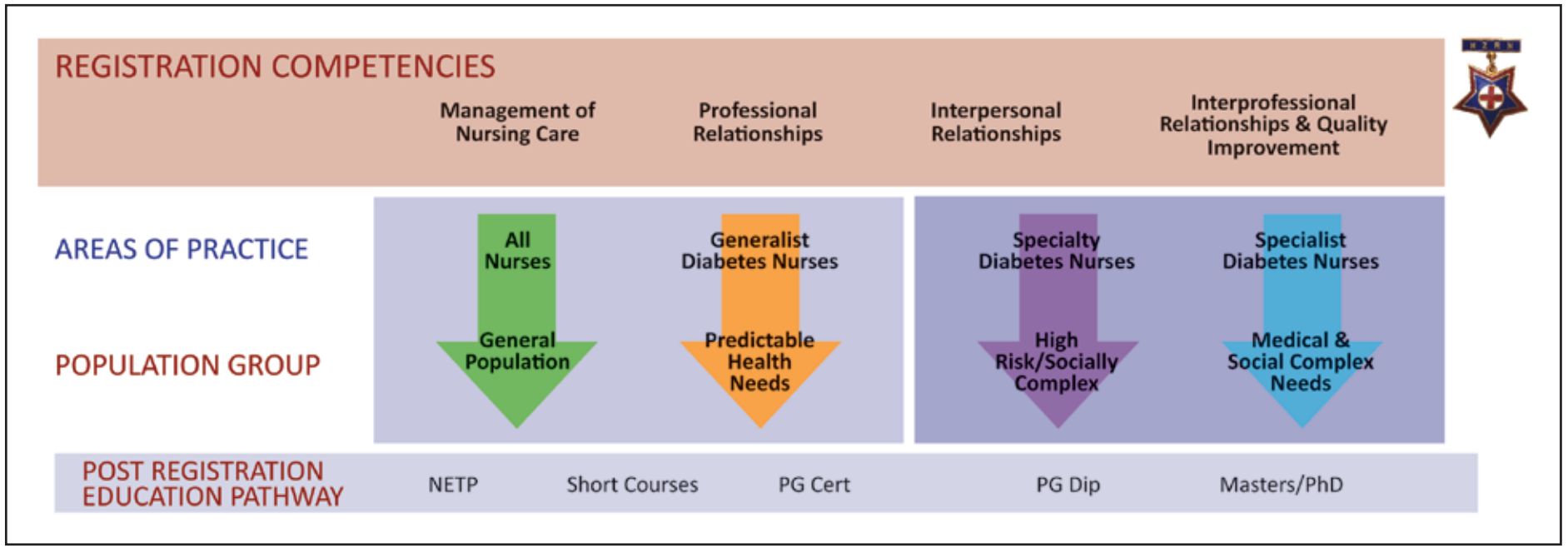

Figure 3: Alignment of areas of practice with respective population groups, and post registration education pathways.

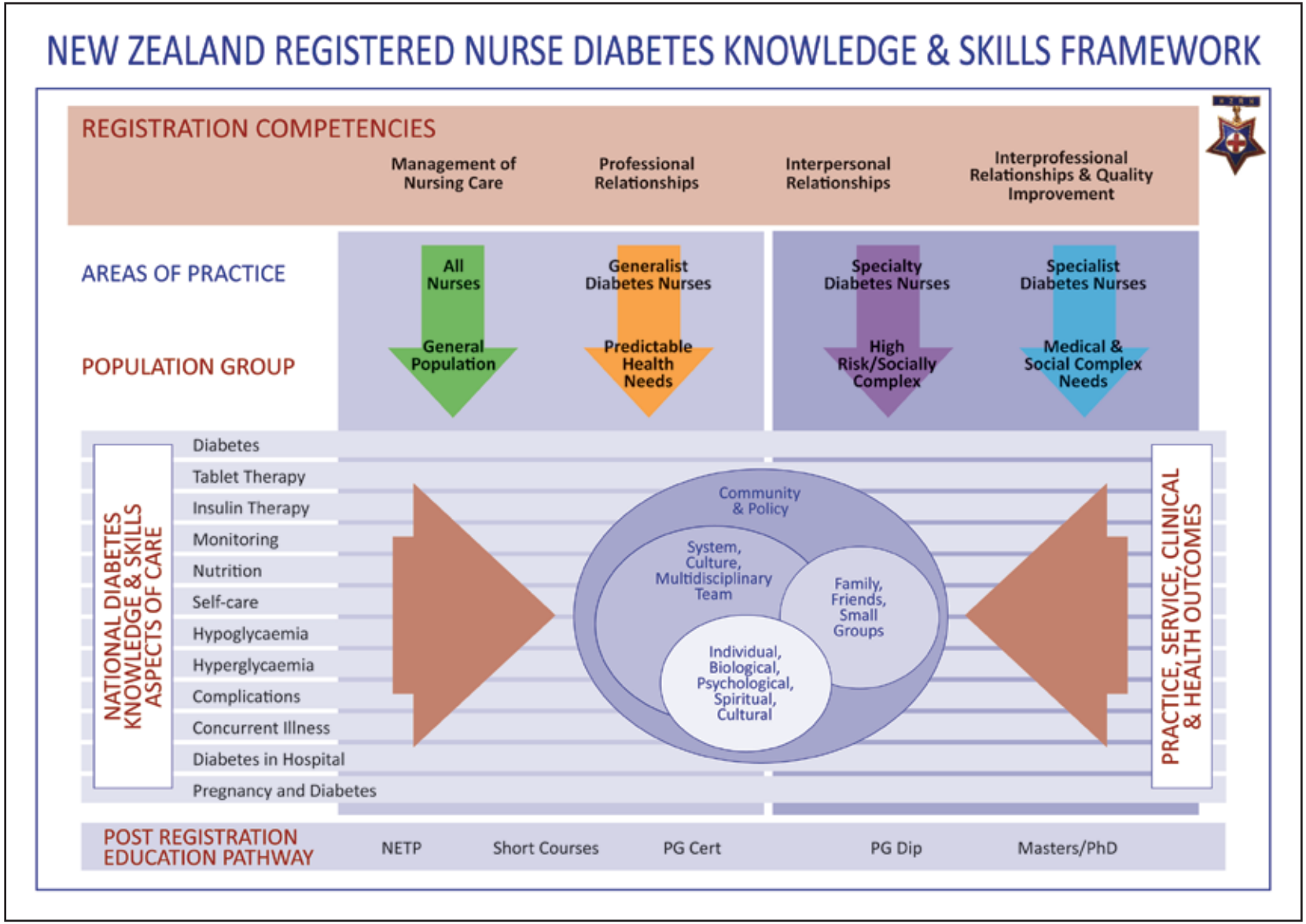

Figure 4: National Diabetes Nursing Knowledge and Skills Framework.

1.3 AREAS OF PRACTICE

All nurses, regardless of practice setting, are required to work collaboratively with the person with diabetes to address their health needs. At all stages of life, and at several points across the health continuum, people with diabetes will require services from nurses in generalist settings such as general practice, diagnostic services and general medical/surgical services. People with diabetes may also have co-morbidities requiring identification, treatment and monitoring. All nurses need to be capable of applying generic diabetes nursing knowledge and skills to meet the health needs of these individuals. In particular, all nurses should:

- Work as part of larger health care team, and understand their role in diabetes care as a member of the multidisciplinary team
- Practise nursing in a manner that the person with diabetes determines as culturally safe
- Role model the application of the Treaty of Waitangi principles in nursing practice
- Assist individuals with (or at risk of developing) diabetes to access resources/information
- Lead or assist community health professionals with prevention initiatives as appropriate
- Provide support to families of individuals living with diabetes
- Provide information and education to individuals and community groups
- Be engaged in quality activities
- Assess and interpret clinical indicators of general health status and metabolic control
- Complete documentation of clinical assessment, care, recommendations and evaluation of response accurately.

Generalist diabetes nurses may participate either frequently, or for short intensive periods of time in the care of people with diabetes. These nurses may have expertise in other health conditions but require generalist diabetes knowledge and skills to support people with diabetes who have predictable health care needs. In particular, the generalist diabetes nurses should:

- Act as a resource within their practice setting/workplace
- Act as resource for unregistered health care providers and individuals with diabetes and their families
- Conduct comprehensive health assessment
- Practise nursing in a manner that the person with diabetes determines as culturally safe
- Role model the application of the Treaty of Waitangi principles in nursing practice
- Provide diabetes education and care to the person with diabetes and their family
- Consult with experts/other health professionals as required
- Communicate clinical care provided and outcomes to relevant health professionals
- Evaluate treatment outcomes and refer to appropriate services when necessary
- Document assessment, care plan, continuing care and management plan, evaluation and referrals made
- Have an awareness of local and national guidelines and be able to access them
- Contribute to the development of guidelines, policies and procedures.

Specialty diabetes nurses need to develop speciality diabetes knowledge and skills to enable them to provide care for people with diabetes who are at high risk for disease progression and complication development. It is expected that as their practice advances, specialty diabetes nurses will demonstrate more effective integration of theory, practice and experience along with increasing degrees of autonomy in their judgments and interventions for people with diabetes. In particular, the speciality diabetes nurse should:

- Provide proficient diabetes care and education to the person with diabetes and their family
- Use sound judgement to advise on or develop clinical management plans for person with diabetes
- Use a collaborative approach to negotiate care/changes in care or management plan
- Document assessment, care plan, continuing care and management plan, evaluation and referrals made
- Actively impart evidence-based knowledge in a variety of settings
- Practise nursing in a manner that the person with diabetes determines as culturally safe
- Role model the application of the Treaty of Waitangi principles in nursing practice
- Lead or participate in clinical audit of diabetes care within practice setting
- Lead or contribute to local and/or national clinical guideline development, or service development
- Act as a change agent to influence practice development.

Specialty diabetes nurses may apply to the Diabetes Nurse Specialist Section of NZNO for national accreditation.

Specialist diabetes nurses have expert diabetes nursing knowledge and skills which enable them to provide care for people with diabetes who have complex health care needs and require episodic care or longer-term oversight of their diabetes management. These nurses are typically clinical nurse specialists who have developed expert diabetes practice through additional experience and postgraduate education towards a Masters of Nursing. Specialist diabetes nurses are often nurse leaders/managers of their respective Diabetes Specialist Services. In particular the specialist diabetes nurse should:

CLINICAL

- Demonstrate expert clinical judgement and decision making, role modelling best practice.
- Provide expert clinical care and advice to people with complex health needs.
- Use a collaborative approach to negotiate and plan care/changes to care and management plan.
- Document assessment, care plan, continuing care and management plan, evaluation and referrals.
- Practise nursing in a manner that the person with diabetes determines as culturally safe.
- Role model the application of the Treaty of Waitangi principles in nursing practice.

LEADERSHIP AND MANAGEMENT

- Recognise team diversity and utilise other team members for their strengths.
- Contribute to the development, implementation and evaluation of clinical guidelines in diabetes care, locally and nationally.
- Develop best practice e.g. through leadership, teaching and consultancy.

- Consistently demonstrate effective nursing leadership, management and consultancy, working across settings and within interdisciplinary environments.
- Ensure quality assurance systems are in place to monitor the standard of services for the person with diabetes.
- Continually evaluate aspects of service provision.
- Identify service deficits and develop strategic plans for the service.
- Initiate and lead research, and promote evidence-based practice.
- Represent nursing at a strategic level of interdisciplinary planning, advocating for and promoting nursing practice.
- Demonstrate collaborative relationships with tertiary educational institutes and other educational providers.

1.4 NATIONAL KNOWLEDGE AND SKILLS FRAMEWORK AND THE ACCREDITATION PROCESS FOR NURSES SPECIALISING IN DIABETES

New Zealand standards of practice for nurses specialising in diabetes were developed in the late 1990s to provide a benchmark for quality care. Closely linked to the development of standards of practice was the establishment of an accreditation process to enable nurses working in this field to have the opportunity to demonstrate their clinical expertise in diabetes and to have this expertise acknowledged by their peers.

Since then legislation and health policy have driven enormous change within nursing and the delivery of health care, diabetes in particular.

Nurses are required to prove their competence and a multitude of frameworks exist by which this can be done. The accreditation process for nurses specialising in diabetes continues to offer a unique opportunity for nurses to be recognised within the specialty. However, the accreditation process needs to accurately reflect the diversity of settings in which nurse's practise. It also needs to provide a robust and credible definition of the knowledge and skills nurses require to deliver care to people with diabetes.

The accreditation process was reviewed in 2007 and changes to the framework were made to align the framework to Nursing Council requirements for PDRPs and address some issues that have tested the accreditation process.

The NDNKSF articulates the required knowledge and skills across the varied areas of practice within the specialty of diabetes in a New Zealand context. It is envisaged that this framework will provide a measurable means of evaluating practice and guide the development of individual nurses. This framework provides the substance to underpin the accreditation process and guide the development of other resources including self-assessment tools, orientation programmes, job descriptions, and curriculum for education programmes. Collectively, these improve the quality of nursing care and have a direct impact on outcomes for people with diabetes.

Andrea Rooderkerk – Chairperson, Accreditation Board (Diabetes Nurse Specialist Section NZNO), 2003–2006.

1.5 HOW CAN THE NDNKSF ASSIST NURSES, EMPLOYERS AND PEOPLE WITH DIABETES?

The National Diabetes Nursing Knowledge and Skills Framework:

- Assists in the development of a range of transferable clinical skills which can be used in care delivery throughout a nurse's career
- Seeks to minimise risk by ensuring all staff know the standard of care required within diabetes care and are capable to provide that care
- Provides guidance to employers about what to expect at different levels of nursing practice
- Helps to prepare nurses who wish to progress to advanced practice roles in care delivery and leadership
- Provides a reference point for planning educational programmes and clinical preparation for each area of nursing practice
- Provides a mechanism for nurses to measure health outcomes and the effectiveness of their practice
- Provides a mechanism for portfolio development for local Professional Development Recognition Programmes and Nursing Council of New Zealand's requirements for ongoing registration
- Links with the Diabetes Nurse Specialist Section of NZNO's National Accreditation Process for Nurses Specialising in Diabetes (2007)
- Can inform curriculum for undergraduate and postgraduate registered nursing programmes.

2. COMPONENTS OF THE NATIONAL DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK

The National Diabetes Nursing Knowledge and Skills Framework describes:

- Treatment and management guidelines
- Orientation and professional development principles
- Processes for completing the NDNKSF
- Criteria for clinical competency evaluation
- Aspects of diabetes care with knowledge and skill requirements for each area of practice
- Potential clinical indicators for measuring practice, service, clinical and health outcomes.

3. QUALITY MONITORING FRAMEWORK AND HEALTH GAINS

The nurse-patient relationship is central to the patient experience and a major determinant of patient outcomes. Nursing is committed to advancing the health of New Zealanders through nursing leadership, partnerships in health care delivery, and the advancement of clinical expertise. Quality care is the cumulative result of the interactions of people, individuals, teams, organisations and systems. Potential improved health outcomes for the person with diabetes that can be expected by nurses more actively engaging in outcome measurement are:

- A reduction in the risk of developing diabetes
- Improved screening , early detection and clinical management of their diabetes
- Improved assessment, care planning and education
- Improved treatment of acute diabetes related emergencies
- Improved collaboration between health providers delivering their care.

Quality improvement needs to be embedded within all levels of the system and the interactions between systems. It ranges from the overall health system, through the organisations and teams and individuals within those organisations, to the people receiving and affected by the services delivered within systems.

Suggested indicators for Nursing Practice, Service, Clinical and Health Outcomes are included in Section 11.

Nursing practice indicators guide measurement of nursing assessment, planning, care delivery and evaluation of care. Service level clinical indicators are included to highlight the key performance indicators already measured by District Health Boards. Although most nurses providing care for the person with diabetes do so in the context of a multidisciplinary team, it is important that nurses take some responsibility for monitoring outcomes relating to their own practice and practice environment. Outcomes and indicators specifically for diabetes education have been identified by Diabetes Australia following a robust consultation process. Specific tools to measure outcomes identified in the Diabetes Australia framework are identified in the Clinical Indicator Section.

4. SUMMARY

This framework is an important step forward for diabetes nursing. It addresses a number of political and professional issues including ones that emerge from:

- The New Zealand Health Strategy
- The Primary Health Care Strategy
- The need for leadership in diabetes nursing
- The increased focus on work-based and lifelong learning
- The need for a framework for career progression in diabetes
- The focus on both professional and academic qualifications
- The incorporation of outcome measurement into daily practice.

This framework provides nurses with the ability to plan their careers in a more structured way, and supports their continuing professional development by identifying individual development and training requirements. Lastly, incorporation of health and clinical outcome measurement into daily practice is of particular importance. This feed-back loop will provide nurses with the tools to measure the impact and maintenance of change in practice, and their effectiveness in their daily practise.

A wide range of international literature and international standards and competency frameworks were critiqued in the development of the National Diabetes Nursing Knowledge and Skills Framework for registered nurses providing diabetes care. In particular, the UK Integrated Career and Competency Framework provided a template to begin and expand upon and I am grateful for their permission to utilise their work. More recently, the Australian National Professional Development Framework for Cancer Nursing has also informed the framework development.

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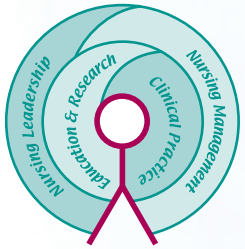
Diabetes and related conditions across the lifespan
MidCentral District Health Board

MidCentral District Health Board
Te Pae Hauora o Ruahine o Tararua

DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK FOR REGISTERED NURSES PROVIDING DIABETES CARE

- Treatment and management guidelines
- Responsibilities and activities according to area of practice
- Knowledge and skills for each area of practice
- Clinical indicators



5. TREATMENT AND MANAGEMENT GUIDELINES

General	• Diabetes Nurse Specialist Section (NZNO) National Standards of Practice for Nurses Specialising in Diabetes (1997).
Diabetes	• New Zealand Guidelines Group (2003). Management of Type 2 Diabetes.
Glycaemic Control	• New Zealand Guidelines Group, Type 2 Diabetes (2003). Section 3: Glycaemic Control: Pharmacological Interventions to Achieve Glycaemic Control, pp.30–36.
Monitoring Glycaemic Control	• New Zealand Guidelines Group, Type 2 Diabetes (2003). Section 2: Lifestyle Management: Monitoring Glycaemic Control, pp. 29–30.
Nutritional Plan and Weight Management	• New Zealand Guidelines Group, Type 2 Diabetes (2003). Section 2: Lifestyle Management: Dietary Intervention, pp. 9–15. • New Zealand Dietetic Association (2000). Position Paper: Cardiovascular Health for New Zealanders: The Role of Diet. • New Zealand Dietetic Association (1996). Position paper: Nutritional Management of Diabetes.
Promoting Self Management of Diabetes and Healthy Lifestyle	• Sport & Recreation NZ (nd): Guidelines for Promoting Physical Activity. • New Zealand Guidelines Group, Type 2 Diabetes (2003). Section 2: Lifestyle Management. • Land Transport Safety Authority (2002). Medical Aspects of Fitness to Drive: A Guide for Medical Practitioners.
Hypoglycaemia	• American Association of Diabetes Educators (AADE) Core Curriculum (2003). Diabetes Management Therapies, pp. 279–310.
Hyperglycaemia	• AADE Core Curriculum (2003). Diabetes and Complications, pp. 21–42.
Retinopathy	• New Zealand Guidelines Group (2003). Management of Type 2 Diabetes. Section 6. Diabetic Eye Disease, pp. 61–66. • AADE Core Curriculum (2003). Diabetes and Complications, pp. 125–152.
Neuropathy	• New Zealand Guidelines Group (2003). Management of Type 2 Diabetes. Section 7. Diabetic Foot, pp.67–76. • AADE Core Curriculum (2003). Diabetes and Complications, pp. 191–222.

Nephropathy	• New Zealand Guidelines Group (2003). Management of Type 2 Diabetes. Section 5. Diabetic Renal Disease, pp. 53–60. • AADE Core Curriculum (2003). Diabetes and Complications, pp. 153–190.
Hypertension/ Cardiovascular Disease, and Peripheral Vascular Disease	• New Zealand Guidelines Group (2003). Management of Type 2 Diabetes (2003). Section 4. Diabetic Cardiovascular Disease, pp. 37–52. • New Zealand Guidelines Group (2003). Assessment and Management of Cardiovascular Risk. Section 13: Management of PWD, Hyperglycaemic States or the Metabolic Syndrome, pp. 89–112. • New Zealand Guidelines Group (2003). Section 3, pp. 75. • New Zealand Guidelines Group, Management of Type 2 Diabetes (2003). Section 7. Diabetic Foot Disease, pp. 67–76. • AADE Core Curriculum (2003). Diabetes and Complications, pp. 99–124.
SPECIAL CONSIDERATIONS	
Identification and Treatment During Concurrent Illness	• AADE Core Curriculum (2003). Diabetes Management Therapies, pp. 313–329.
Managing Diabetes in Hospital	• AADE Core Curriculum (2003). Diabetes Management Therapies, pp. 313–329.
Pregnancy – Pre-Conception Care for Women with Pre-existing Diabetes	• Australasian Diabetes in Pregnancy Society (ADIPS). The ADIPS Gestational Diabetes Management Guidelines (1998). • AADE Core Curriculum (2003). Diabetes in the Life Cycle and Research, pp. 99–142 & 145–176.
Pregnancy – Antenatal and Postnatal	• Australasian Diabetes in Pregnancy Society (ADIPS). (1998). The ADIPS Gestational Diabetes Management Guidelines • AADE Core Curriculum (2003). Diabetes in the Life Cycle and Research, pp. 99–142 & 145–176.

6. ORIENTATION AND PROFESSIONAL DEVELOPMENT: PRINCIPLES

RECOGNITION OF PRIOR LEARNING (RPL)

It is the responsibility of the nurse to provide evidence of the depth and nature of prior learning and to identity how this knowledge relates to their programme of learning. Exemptions can be granted on the basis of recognition of prior learning, defined as a process of recognising learning outcomes achieved through formal study, work experiences and/or life experiences. RPL will be granted where a nurse can satisfactorily demonstrate that their prior learning matches current knowledge and the standards required for the identified competencies. The nurse must demonstrate or provide evidence that their experiences meet the performance criteria of the knowledge and skills identified within the NDNKSF.

The following may be used as the basis of evidence for the RPL process:

- Using the nurse's portfolio as a guide. The portfolio highlights the nurse's past educational experiences and accomplishments. It gives the learner the opportunity to provide evidence of knowledge and skills gained through prior learning and experiences
- Challenge testing, where knowledge and skills in an identified area are evaluated in a simulated setting by an assessor
- The interview assessment
- Attestation
- All applications for RPL should be made to the relevant body, who will seek further expert opinion if required.

KNOWLEDGE AND SKILL DEVELOPMENT

The greatest emphasis is on self-directed learning and clinical practice experiences. There are a variety of teaching/learning strategies used, including clinical experts, self-directed learning, ward rounds, and case review. Assessments are practice and competency based, with direct relevance to the development of clinical knowledge, skills and attitudes.

ASSESSMENT

The purpose of assessment is to allow the nurse to review their progress and to re-evaluate their learning needs as required, with the goal of improving the quality of the learning experience for the nurse. Assessment is part of the teaching/learning process, designed to assist the nurse to evaluate their own progress, facilitate feedback, assist with the identification of learning needs and establish that the nurse has achieved the required level of knowledge and skills.

The process of assessment is a positive and open experience that assists the nurse to successfully complete their programme of learning. It requires active participation by the nurse, preceptor and nurse educator.

Competency-based practice can be assessed using the Bondy (1984) assessment tool. A variety of methods will be utilised to assess learning outcomes, including demonstration of clinical competencies, assessment and care planning, presentations in the form of case review, exemplars, and reflection on practice. These activities assist the nurse to reflect on practice, develop new knowledge and plan their further development.

6.1 PROCESS FOR COMPLETING DIABETES NURSING KNOWLEDGE AND SKILLS FRAMEWORK

All areas are to be completed within the specified time period. Summarise the evidence you obtained to assist you in meeting the identified knowledge and skill requirement. Discuss/demonstrate with your preceptor and have them sign in the relevant sections.

The following rating scale is used for evaluating competency. The criteria for clinical evaluation cluster into three major areas:

- Professional standards and procedures
- Quality aspects of the performance
- Assistance needed to perform the activity.

Five levels of competency are identified: independent, supervised, assisted, marginal, and dependant. Independent means meeting the criteria identified in each of the three areas above. It does not mean without observation, as the performance must be observed to be rated independent by someone other than the nurse carrying out the procedure.

Effect refers to achievement of the intended purpose of the activity

Affect refers to the manner in which the activity is performed

Quality of performance includes the use of time, space, equipment, and expenditure of energy.

Assistance required. Cues can be supportive or directive. Cues such as 'that's right' or 'keep going' are supportive or encouraging but do not change or direct what the nurse is doing.

Directive cues, which can be verbal or physical, indicate either what to do or say next or correct an ongoing activity.

The x (not observed) category is provided to identify when the opportunity to demonstrate a particular competency was not available to the nurse in the setting. This is only used for those skills/competencies which are infrequently used in the setting. It is, however, expected that all competencies are addressed (Bondy, 1983).

Competent performance in any area is practice that is independent, safe and accurate on every occasion, without supporting cues, proficient and co-ordinated.

6.2 CRITERIA FOR CLINICAL COMPETENCY EVALUATION

SCALE LABEL	STANDARD PROCEDURE	QUALITY OF PERFORMANCE	ASSISTANCE
Independent	Safe Accurate Effect } Each time Affect }	Proficient, co-ordinated, confident. Occasional expenditure of excess energy. Within an expedient time frame.	Without supporting cues.
Supervised	Safe Accurate Effect } Each time Affect }	Efficient, co-ordinated, confident. Some expenditure of excess energy. Within a reasonable time frame.	Occasional supportive cues.
Assisted	Safe Accurate Effect } Each time Affect } Most of time	Skilful in parts of behaviour. Inefficiency and unco-ordination. Expends excess energy. Within a delayed time frame.	Frequent verbal and occasional physical directive cues in addition to supportive ones.
Marginal	Safe but not alone Performs at risk Accurate – not always Effect } Occasionally Affect }	Unskilled, inefficient. Considerable expenditure of excess energy. Prolonged time frame.	Continuous verbal and frequent physical cues.
Dependant	Unsafe Unable to demonstrate behaviour	Unable to demonstrate procedure/ behaviour. Lacks confidence, co-ordination, efficiency.	Continuous verbal and physical cues.
X	Not observed		
Recognition of Prior Learning (RPL)	Certifications gained, demonstration, oral presentation, and/or challenge test may be used as evidence		

(Source: Bondy, K.N. (1983) 'Criterion-Referenced Definitions for Rating Scales in Clinical Evaluation', Journal of Nursing Education, 22(9), 376–382.)

7.
ALL NURSES: FUNDAMENTAL KNOWLEDGE AND SKILLS FOR ALL NURSES

RESPONSIBILITIES AND ACTIVITIES	Met	Not met
• Works as part of larger health care team, understands role in diabetes as a member of the multidisciplinary team	☐	☐
• Assists individuals with (or at risk of developing) diabetes on accessing resources/information	☐	☐
• Practises nursing in a manner that the person with diabetes (PWD) determines as culturally safe	☐	☐
• Is aware of local services to seek advice as required	☐	☐
• Role models the application of the Treaty of Waitangi principles in nursing practice	☐	☐
• Leads or assists community health professionals with prevention initiatives as appropriate	☐	☐
• Provides information and education to individuals, their family and community groups	☐	☐
• Is engaged in quality activities	☐	☐
• In the clinical setting:		
• Assesses and interprets clinical indicators of general health status and metabolic control	☐	☐
• Completes documentation of clinical assessment, care, recommendations and evaluation of response accurately	☐	☐

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
DIABETES	**For the delivery of safe diabetes care you should be able to:**	1, 2	
	• Describe the two main types of diabetes mellitus • State normal blood glucose range		
GLYCAEMIC CONTROL: DIABETES TABLETS	**For the safe administration and appropriate use of diabetes tablets you should be able to:**	1, 2, & 3	
	• Describe effect of oral hypoglycaemic agents on blood glucose levels • Adminster/supervise administration of prescribed medication • Report identified problems appropriately		
GLYCAEMIC CONTROL: INSULIN THERAPY	**For the safe administration and appropriate use of insulin you should be able to:**	1,2,3	
	• Describe the effects of insulin on blood glucose levels • Demonstrate a fundamental knowledge of insulin e.g. action/side effects • Demonstrate competence in preparation and administration of insulin • Describe preferred sites for insulin injection and rationale for rotation of sites • Demonstrate basic knowledge of the timing of doses, especially in relation to meals and type of insulin • Describe situations where insulin dose or type may need to be altered • Report identified problems appropriately and refer as required		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
MONITORING GLYCAEMIC CONTROL	**For the safe and appropriate use of blood glucose monitoring, equipment, and monitoring of glycaemic control you should be able to:**	1,2,& 4	
	• Perform blood glucose monitoring according to manufacturer's instructions and local guidelines • Interpret the result and report to the approriate person if outside the expected range • Teach procedure to person with diabetes and/or their carer • Demonstrate awareness of and follow local/workplace quality assurance procedures, including disposal of sharps. Inform PWD about safe disposal of sharps • Identify situations where testing for ketones is appropriate • Demonstrate awareness of HbA1c test and interpretation of result		
NUTRITIONAL PLAN AND WEIGHT MANAGEMENT	**To meet the individual's nutritional needs you should be able to:**	1, 2, 3 & 4	
	• List the principles of a healthy diet and the influence of diet and nutrition on glycaemic control • Demonstrate knowledge of foods high in simple carbohydrate and fat		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
PROMOTING SELF MANAGEMENT OF DIABETES AND HEALTHY LIFESTYLE	**To support individuals to self-manage their diabetes you should be able to:**	1, 2, 3 & 4	
	• Demonstrate knowledge of strategies to support the PWD to develop self-management skills • Provides health education in a manner that the PWD determines as culturally safe • Observe and document any barriers to self-care • Assess self-care ability and work with the PWD to optimise self-care skills • Direct people to information and support to encourage informed decision-making about living with diabetes • Demonstrate knowledge of benefits of regular physical activity for PWD • State relationship between smoking and long term outcomes for PWD • Demonstrate awareness that depression is often present in PWD		
HYPOGLYCAEMIA	**For the appropriate prevention, identification and treatment of hypoglycaemia you should be able to:**		
	• State the normal blood glucose range • Describe signs and symptoms of hypoglycaemia • List possible causes of hypoglycaemia • Describe the treatment for mild and severe hypoglycaemic episode, according to local guidelines • Document and report episodes of hypoglycaemia		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
HYPERGLYCAEMIA	**For the appropriate identification and treatment of hyperglycaemia you should be able to:**	1, 2 & 3	
	• State the normal blood glucose range • List signs and symptoms of hyperglycaemia • List possible reasons for hyperglycaemia • Perform appropriate tests (e.g. blood and urine) in accordance with local guidelines • Refer as appropriate/according to guidelines		
COMPLICATIONS	**To care for people with microvascular or macrovascular complications you should be able to:**		
	• Demonstrate awareness of potential diabetes micro and macrovascular complications, risk factors and prevention strategies • Be aware of required screening tests for: – retinal screening – microalbuminuria/creatinine • Demonstrate awareness of the recommended blood pressure measurements in diabetes • Identify 'At Risk' foot and provide education as required • Explain principles of recommended foot care for PWD • Report changes in pain, sensitivity, skin integrity, colour or temperature immediately and refer as appropriate • Demonstrate awareness of the psychosocial impact of living with diabetes complications • Consult or refer as required		

********* SPECIAL CONSIDERATIONS *********			
ASPECT OF CARE	**LEVEL OF KNOWLEDGE AND SKILL**	**NCNZ COMP DOMAIN**	**I/S/A/M/D/X/RPL EVIDENCE**
IDENTIFICATION AND TREATMENT DURING CONCURRENT ILLNESS	**To manage concurrent illness you should be able to:**		
	• Demonstrate knowledge of effect of concurrent illness on glycaemic control • Demonstrate awareness of basic sick day guidelines • Document and report any abnormal findings in observations and consult/refer as appropriate		
MANAGING DIABETES IN HOSPITAL	**To prepare a person for hospital or to manage diabetes in hospital you should be able to:**		
	• Provide advice or care to ensure adequate nutrition and fluids, blood glucose monitoring and comfort • Explain the potential for alteration in diabetes medications during a hospital admission • Demonstrate awareness and application of local guidelines, policies and procedures		
PREGNANCY – PRE-CONCEPTION CARE FOR WOMEN WITH PRE-EXISTING DIABETES	**To support the individual in preparation for pregnancy you should be able to:**		
	• Demonstrate awareness of the need for pre-conception care for women with pre-existing Type 1 or Type 2 diabetes in childbearing age • Demonstrate knowledge of the appropriate referral system to specialist services		
PREGNANCY – ANTENATAL AND POSTNATAL	**To support the individual during and after pregnancy you should be able to:**		
	• Make immediate referral to specialist team with consent of pregnant woman • Understand need for screening for gestational diabetes • Understand need for postnatal oral glucose tolerance test and for ongoing screening		

8.
GENERALIST DIABETES NURSES: NURSES WHO PROVIDE REGULAR CARE TO PEOPLE AT RISK OF OR WITH DIABETES OR WHO ARE ENTERING THE SPECIALTY

RESPONSIBILITIES AND ACTIVITIES	Met	Not Met
As for all nurses plus:		
• Acts as a resource within their practice setting/workplace	☐	☐
• Acts as resource for unregistered health care providers and individuals with diabetes and their families	☐	☐
• Conducts comprehensive health assessment	☐	☐
• Provides diabetes education and care to person with diabetes (PWD) and their family	☐	☐
• Consults with experts/other health professionals as required	☐	☐
• Communicates clinical care provided and outcomes to relevant health professionals	☐	☐
• Evaluates treatment outcomes and refer to appropriate services when necessary	☐	☐
• Documents assessment, care plan, continuing care and management plan, evaluation and referrals made	☐	☐
• Practises nursing in a manner that the PWD determines as culturally safe	☐	☐
• Role models the application of the Treaty of Waitangi principles in nursing practice	☐	☐
• Has an awareness of local and national guidelines and where to access	☐	☐
• Contributes to the development of guidelines, policies and procedures	☐	☐

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
DIABETES	**For the delivery of safe diabetes care you should be able to:**	1, 2	
	• Demonstrate knowledge of the pathophysiology of Type 1 and 2 diabetes • Describe the importance of insulin for glucose, lipid and protein metabolism • State normal blood glucose range		
GLYCAEMIC CONTROL: DIABETES TABLETS	**For the safe administration and appropriate use of diabetes tablets you should be able to:**	1, 2, & 3	
	• Demonstrate basic knowledge of types of diabetes tablets and their mode of action • Describe indications for initiation of diabetes tablets in people with impaired glucose tolerance or Type 2 diabetes • Describe common side effects, especially hypoglycaemia and when to seek advice • Recognise abnormal results or problems and report appropriately • Identify and address issues affecting adherence to prescribed oral diabetes therapy		
GLYCAEMIC CONTROL: INSULIN THERAPY	**For the safe administration and appropriate use of insulin you should be able to:**	1,2,3	
	• Demonstrate a basic knowledge of insulin e.g. action/type/side effects, especially hypoglycaemia • Demonstrate basic knowledge of indications for initiation of insulin therapy • Demonstrate basic knowledge of when insulin might need to be altered and consult as appropriate • Assess an individual patient's educational needs • Demonstrate competence in preparation and administration of insulin • Describe preferred sites for insulin injection and rationale for rotation of sites • Demonstrate basic knowledge of the timing of doses, especially in relation to meals and type of insulin • Recognise the potential psychological impact of insulin therapy and where appropriate offer support to PWD (PWD) and significant others • Recognise abnormal results or problems and report appropriately		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
MONITORING GLYCAEMIC CONTROL	**For the safe and appropriate use of blood glucose monitoring, equipment, and monitoring of glycaemic control you should be able to:**	1,2,& 4	DM
	• Perform blood glucose test according to manufacturer's instructions and local guidelines • Recognise abnormal results or problems and report appropriately • Teach procedure to PWD/carer in the context of self-management, including frequency of testing, interpretation of results and required action • Demonstrate awareness of and follow local/workplace quality assurance procedures, including disposal of sharps. Inform PWD about safe disposal of sharps • Interpret blood glucose result and take appropriate action as per guidelines • Demonstrate knowledge of monitoring glycaemic control with Haemoglobin A1c • Identify situations where testing for ketones is appropriate		
NUTRITIONAL PLAN AND WEIGHT MANAGEMENT	**To meet the individual's nutritional needs you should be able to:**	1, 2, 3 & 4	
	• List the principles of a healthy diet and the influence of diet and nutrition on glycaemic control • Demonstrate knowledge of foods high in simple carbohydrate • Identify significance of Body Mass Index (BMI) and weight circumference • Demonstrate awareness of when and how to refer to a dietician • State relationship between obesity and diabetes and the need to attain/maintain desirable body weight • Demonstrate awareness of local and national nutritional guidelines		
PROMOTING SELF MANAGEMENT OF DIABETES AND HEALTHY LIFESTYLE	**To support individuals to self-manage their diabetes you should be able to:**	1, 2, 3 & 4	
• **Education and behaviour change**	• Demonstrate knowledge of strategies to support the PWD to develop self-management skills • Provides health education in a manner that the PWD determines as culturally safe • Observe and document any barriers to self-care • Assess self-care ability and work with the PWD to optimise self-care skills • Direct people to information and support to encourage informed decision-making about living with diabetes		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
• **Physical activity** • **Smoking cessation** • **Depression**	• Demonstrate knowledge of benefits of regular physical activity for PWD • State relationship between smoking and long-term outcomes for PWD • Demonstrate awareness that depression is often present in PWD		
HYPOGLYCAEMIA	**For the appropriate prevention, identification and treatment of hypoglycaemia you should be able to:**	1, 2 & 3	
	• State blood glucose threshold for hypoglycaemia • List possible causes of hypoglycaemic episodes • Define mild, moderate and severe hyoglycaemia • Describe signs and symptoms of hypoglycaemia • Describe and implement treatment for a mild and severe hypoglycaemic episode, according to local guidelines • Make referral for medication review as appropriate		
HYPERGLYCAEMIA	**For the appropriate identification and treatment of hyperglycaemia you should be able to:**	1, 2 & 3	
	• State the blood glucose threshold for hyperglycaemia • List signs and symptoms of hyperglycaemia • List possible reasons for hyperglycaemia • Perform appropriate tests (e.g. blood and urine) in accordance with local guidelines • Refer to diabetes team as appropriate/according to guidelines • Demonstrate basic knowledge of influence of hyperglycaemia on development of diabetes complications		
COMPLICATIONS	**To care for people with microvascular or macrovascular complications you should be able to:**	1, 2 & 3	
	• Demonstrate basic knowledge of the pathophysiology of microvascular disease • Demonstrate basic knowledge of the pathophysiology of macrovascular disease • Demonstrate awareness of complications and prevention strategies • Be aware of required screening tests • Educate PWD in prevention and importance of screening for complications • Demonstrate awareness of the psychosocial impact of living with diabetes complications • Consult or refer as required		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
HYPERTENSION/ CARDIOVASCULAR DISEASE (CVD),AND PERIPHERAL VASCULAR DISEASE (PVD)	**To care for people with hypertension and/ or cardiovascular disease (CVD)), and peripheral vascular disease (PVD) you should be able to:**	1, 2, 3 & 4	
	• Demonstrate knowledge of the pathophysiology of vascular disease • Undertake ongoing assessment and monitoring as requested • Perform blood pressure measurement according to NZGG (2003): Assessment and management of cardiovascular risk (p.75). • Demonstrate awareness of the recommended blood pressure measurements in diabetes • Demonstrate awareness of risk factors for CVD and PVD • Identify 'At risk foot' and provide education as required • Assess for pain related to possible claudication, angina, neuropathic or mechanic origin • Make appropriate referrals		
RETINOPATHY	**To care for people at risk of or with retinopathy you should be able to:**	1 & 2	
	• Demonstrate knowledge of the pathophysiology of diabetic retinopathy • Demonstrate awareness of those PWD at risk of retinopathy • Recognise the need for regular retinal screening		
NEUROPATHY	**To care for people at risk of or with neuropathy you should be able to:**	1, 2 & 3	
	• Demonstrate knowledge of the pathophysiology of diabetic neuropathy • Demonstrate awareness of those PWD at risk of neuropathy • Explain purpose of monofilament testing • Demonstrate competence in correct use of monofilament testing • Report changes in pain, sensitivity, skin integrity, colour or temperature and refer as appropriate		
NEPHROPATHY	**To care for people at risk of or with nephropathy you should be able to:**	1 & 2	
	• Demonstrate knowledge of the pathophysiology of diabetic nephropathy • Describe basic function of the kidney • Describe key prevention strategies for minimising risk of nephropathy		

********* SPECIAL CONSIDERATIONS *********			
ASPECT OF CARE	**LEVEL OF KNOWLEDGE AND SKILL**	**NCNZ COMP DOMAIN**	**I/S/A/M/D/X/RPL EVIDENCE**
IDENTIFICATION AND TREATMENT DURING CONCURRENT ILLNESS	**To manage concurrent illness you should be able to:**	1, 2, 3 & 4	
	• Demonstrate ability to perform a comprehensive assessment and patient history • Demonstrate knowledge of effect of concurrent illness on glycaemic control • Document and report any abnormal findings in observations and consult/refer as appropriate		
MANAGING DIABETES IN HOSPITAL	**To prepare a person for hospital or to manage diabetes in hospital you should be able to:**	1, 2 & 4	
	• Provide advice or care to ensure adequate nutrition and fluids, blood glucose monitoring and comfort • Demonstrate awareness and application of local guidelines, policies and procedures related to caring for PWD in hospital		
PREGNANCY – PRE-CONCEPTION CARE FOR WOMEN WITH PRE-EXISTING DIABETES	**To support the individual in preparation for pregnancy you should be able to:**	2 & 4	
	• Demonstrate awareness of the need for pre-conception care for women with pre-existing Type 1 or Type 2 diabetes in childbearing age • Demonstrate knowledge of the appropriate referral system to specialist services		
PREGNANCY – ANTENATAL AND POSTNATAL	**To support the individual during and after pregnancy you should be able to:**	1, 2,3 & 4	
	• Make immediate referral to specialist team with consent of pregnant woman • Understand need for screening for gestational diabetes		

9.
SPECIALTY DIABETES NURSE: NURSES PROVIDING CARE FOR PEOPLE WITH DIABETES WHO ARE AT HIGH RISK

RESPONSIBILITIES AND ACTIVITIES	Met	Not Met
As for all nurses, generalist diabetes nurse plus:		
• Provide proficient clinical care to PWD with health needs of increasing complexity	☐	☐
• Provide proficient diabetes education to PWD and their family	☐	☐
• Utilise sound judgement to advise on or develop clinical management plans for PWD	☐	☐
• Uses a collaborative approach to negotiate care/changes in care or management plan	☐	☐
• Documents assessment, care plan, continuing care and management plan, evaluation and referrals made	☐	☐
• Practises nursing in a manner that the PWD determines as culturally safe	☐	☐
• Role models the application of the Treaty of Waitangi principles in nursing practice	☐	☐
• Actively impart evidence-based knowledge in a variety of settings	☐	☐
• Lead or participate in clinical audit of diabetes care within practice setting	☐	☐
• Lead or contribute to local and/or national clinical guidelines development, or service developments	☐	☐
• Act as a change agent to influence practice development	☐	☐

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
DIABETES	**For the delivery of safe diabetes care you should be able to:**	1 & 2	
	• Demonstrate comprehensive understanding of pathophysiology of Type 2 diabetes • Demonstrate comprehensive understanding of pathophysiology of Type 1 diabetes • Demonstrate comprehensive understanding of the role of insulin in glucose, lipid and protein metabolism • Demonstrates fundamental understanding of pathophysiology of diabetes in pregnancy		
GLYCAEMIC CONTROL – DIABETES TABLETS	**For the safe administration and appropriate use of diabetes tablets you should be able to:**	1 & 2	
	• Describe factors that may influence prescribing patterns • Describe contraindications/cautions for individual diabetes tablets • Demonstrate knowledge of therapeutic doses • Demonstrate knowledge of the timing of doses, especially in relation to meals • Demonstrate ability to recognise when diabetes tablets need to be adjusted • Demonstrate knowledge of the progressive nature of Type 2 diabetes and the treatment changes required over time, which may include insulin therapy		
GLYCAEMIC CONTROL – INSULIN THERAPY	**For the safe administration and appropriate use of insulin you should be able to:**	2	
	• Demonstrate a broad knowledge of different insulins available i.e. action, type, side effects • Describe various methods of insulin delivery and administration • Describe factors that may influence prescribing patterns • Recognise when insulin therapy needs to be adjusted • Describe lipohypertrophy, how to prevent it, how it develops and how to treat it		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
MONITORING GLYCAEMIC CONTROL	**For the safe and appropriate use of blood glucose monitoring and associated equipment you should be able to:**	2, 3 & 4	
	• Teach self blood glucose monitoring procedure to PWD/carer, including frequency of testing, interpretation of results and required action • Review blood glucose monitoring technique and provide further education if necessary • Demonstrate knowledge of HaemoglobinA1c and target levels for PWD • Identify appropriate target range for blood glucose levels and explain course of action to follow if outside target range • Demonstrate appropriate maintenance of blood glucose testing equipment • Explain how/where to source diabetes supplies for PWD or health professional use		
NUTRITIONAL PLAN AND WEIGHT MANAGEMENT	**To meet the individual's nutritional needs you should be able to:**	2 & 3	
	• Explain the role of weight management as first line therapy dietary goal in management of Type 2 diabetes and metabolic syndrome • Explain relationship between dietary fat and cholesterol • Work in partnership with a PWD to identify and reduce health risk and reducing fat in the diet • State why diabetes is associated with an increased risk of cardiovascular disease • Discuss benefits of reduced salt in diet • Identify safe alcohol intake levels for PWD • Promote regular physical activity as appropriate/able		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
PROMOTING SELF MANAGEMENT OF DIABETES AND HEALTHY LIFESTYLE	**To support individuals to self-manage their diabetes you should be able to:**	2, 3 & 4	
• **Education and Behaviour Change**	• Assess the PWD and provide tailored education and support to optimise self-care skills and promote informed decision-making about life style choices • Provides health education in a manner that the PWD determines as culturally safe • Demonstrate an understanding of the potential effect of life events on self-care management of the PWD • Assess need for external social support services to support self management of diabetes and refer as appropriate • Demonstrate application of adult learning principles • Identify potential barriers to adherence to self-care and possible strategies to overcome these		
• **Physical Activity**	• Explain beneficial effects of physical activity on blood glucose levels and weight management		
• **Smoking**	• Demonstrate knowledge of impact of smoking on development of cardiovascular disease and other diabetes complications • State how smoking cessation has health benefits for smokers of all ages • Refer PWD for assistance with smoking cessation		
• **Driving**	• Explain precautions for safe driving for a PWD on insulin or oral therapy		
• **Depression**	• Demonstrate understanding that depression is more common in PWD • Demonstrate awareness of the prevalence of depression in a PWD		
HYPOGLYCAEMIA	**For the appropriate prevention, identification and treatment of hypoglycaemia you should be able to:**	1, 2, 3 & 4	
	• Explain normal physiological response to hypoglycaemia • Recognise and discuss possible reasons for hypoglycaemia with PWD • Develop plan with PWD to prevent recurrence of hypoglycaemia • Teach family member or friend when and how to prepare and administer intramuscular glucagon • Recognise when treatment may need to be adjusted, according to local and national guidelines/policy • Participate in educating other health professionals and carers		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
HYPERGLYCAEMIA	**For the appropriate identification and treatment of hyperglycaemia you should be able to:**	2, 3 & 4	
	• Work in partnership with PWD to identify possible causes of hyperglycaemia • Demonstrate knowledge of possible treatment options for hyperglycaemia • Discuss risk of diabetic ketoacidosis; and hyperglycaemic, hyperosmolar non ketotic syndrome • Identify signs and symptoms associated with diabetic ketoacidosis and hyperglycaemic, hyperosmolar non ketotic syndrome • Explain relationship between hyperglycaemia and long-term complications of diabetes • Consult or refer as required		
COMPLICATIONS	**To care for people with microvascular or macrovascular complications you should be able to:**	2 & 4	
	• Demonstrate comprehensive knowledge of the pathophysiology of microvascular disease • Demonstrate comprehensive knowledge of the pathophysiology of macrovascular disease • Demonstrate comprehensive knowledge of complications and prevention strategies • Be aware of required screening tests • Educate PWD in prevention and importance of screening for complications • Consult or refer as required		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
HYPERTENSION/ CARDIOVASCULAR DISEASE (CVD), AND PERIPHERAL VASCULAR DISEASE (PVD)	**To care for people with hypertension and/or cardiovascular disease (CVD)), and peripheral vascular disease (PVD) you should be able to:**	1, 2, 3, & 4	
	• Demonstrate comprehensive knowledge of pathophysiology of vascular disease • Demonstrate comprehensive knowledge of required relevant investigations • Act on interpretation of results – risk assessment history and interpretation • Refer as appropriate • Demonstrate awareness of the psychosocial impact of living with vascular disease • Plan and provide individual patient care and education • Negotiate personal diabetes plans to modify risk factors • Identify methods of screening for 'At Risk Foot' and diabetic foot disease • Describe strategies for minimising risk of injury • Identify pain management strategies • Consult or refer as required		
RETINOPATHY	**To care for people at risk of or with retinopathy you should be able to:**	2, 3 & 4	
	• Educate PWD in prevention and importance of screening for retinopathy • Identify risk factors for development of diabetic retinopathy • Refer to appropriate person if retinal screening results are abnormal and plan follow up • If visually impaired, assist PWD to obtain and use low vision aids • Consult or refer as required		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
NEUROPATHY	**To care for people at risk of or with neuropathy you should be able to:**	2 & 4	
	• Explain purpose of monofilament testing • Demonstrate competence in correct use of monofilament testing • Demonstrate ability to identify risk factors and screen for neuropathy according to local guidelines • Consult or refer as required		
NEPHROPATHY	**To care for people at risk of or with nephropathy you should be able to:**	2, 3 & 4	
	• Demonstrate ability to perform microalbuminuria screening, blood pressure measurement and blood tests according to local and national guidelines • Refer if results are abnormal and plan follow up • Consult or refer as required		
******** SPECIAL CONSIDERATIONS ********			
IDENTIFICATION AND TREATMENT DURING CONCURRENT ILLNESS	**To manage concurrent illness you should be able to:**	1, 2, 3 & 4	
	• Demonstrate awareness of the psychosocial impact of living with diabetes complications • Interpret blood glucose and urine ketone results and initiate appropriate action • Support the PWD in managing diabetes during concurrent illness • Demonstrate knowledge of sick day management according to local guidelines (frequency of blood glucose monitoring, food and fluids, insulin and/or tablet therapy) • Recognise when pharmacological treatment may need adjusting, according to local guidelines and consult as necessary • Provide education to health professionals/carers about sick day management		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
MANAGING DIABETES IN HOSPITAL	**To prepare a PWD for hospital admission or to manage diabetes in hospital you should be able to:**	2 & 4	
	• Demonstrate knowledge of care surrounding investigative procedures e.g. endoscopy, radiology procedures • Demonstrate knowledge of care surrounding pre- and post-operative procedures • Demonstrate knowledge of care surrounding intravenous glucose/insulin/potassium infusion • Consult with or refer as required		
PREGNANCY – PRE-CONCEPTION CARE FOR WOMEN WITH PRE-EXISTING DIABETES	**To support the individual in preparation for pregnancy you should be able to:**	2 & 4	
	• Demonstrate knowledge of the key aspects of pre-conception care in diabetes • Demonstrate knowledge of need to refer to specialist services for preconception care		
PREGNANCY – ANTENATAL & POSTNATAL	**To support the individual during and after pregnancy you should be able to:**	4	
	• Make immediate referral to the specialist antenatal diabetes service		

10.
SPECIALIST DIABETES NURSE:
CLINICAL NURSE SPECIALIST/DIABETES NURSE LEADERS

RESPONSIBILITIES AND ACTIVITIES	Met	Not met
As for all nurses, generalist diabetes nurse, and specialty diabetes nurse plus:		
CLINICAL:		
• Demonstrates advanced clinical judgement and decision making, role modelling best practice	☐	☐
• Provides clinical care and advice to people with advanced disease and significant co-morbidities	☐	☐
• Uses a collaborative approach to negotiate and plan care/changes to care and management plan	☐	☐
• Documents assessment, care plan, continuing care and management plan, evaluation and referrals	☐	☐
• Practises nursing in a manner that the PWD determines as culturally safe	☐	☐
• Role models the application of the Treaty of Waitangi principles in nursing practice	☐	☐
• Is engaged in scholarly enquiry	☐	☐
LEADERSHIP AND MANAGEMENT:		
• Recognition of team diversity and utilisation of other team members for their strengths	☐	☐
• Contributes to the development, implementation and evaluation of clinical guidelines in diabetes care, locally and nationally	☐	☐
• Consistently demonstrates effective nursing leadership and management and consultancy, working across settings and within interdisciplinary environments	☐	☐
• Ensures quality assurance systems are in place to monitor the standard of services for PWD	☐	☐
• Identifies service deficits and develops strategic plan for the service	☐	☐
• Initiates and leads research, and promotes evidence-based practice	☐	☐
• Represents nursing at a strategic level of interdisciplinary planning, advocating for and promoting nursing practice	☐	☐
• Demonstrates collaborative relationships with tertiary educational institutes and other educational providers	☐	☐

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
DIABETES	**For the delivery of safe diabetes care you should be able to:**	1 & 2	
	• Demonstrates in-depth understanding of pathophysiology of Type 2 diabetes • Demonstrates in-depth understanding of pathophysiology of Type 1 diabetes • Demonstrates in-depth understanding of the role of insulin in glucose, lipid and protein metabolism • Demonstrates comprehensive understanding of pathophysiology of diabetes in pregnancy		
GLYCAEMIC CONTROL – TABLET THERAPY	**For the safe administration and appropriate use of oral hypoglycaemic medication you should be able to:**	1, 2, 3 & 4	
	• Demonstrate knowledge of pharmacokinetics and pharmacodynamics of diabetes tablets • Demonstrate knowledge of impact of concurrent medical conditions on prescribing decisions • Facilitate and support education relating to diabetes tablets for individuals/groups of PWD and health professionals		
GLYCAEMIC CONTROL – INSULIN THERAPY	**For the safe administration and appropriate use of oral hypoglycaemic medication you should be able to:**	1, 2, 3 & 4	
	• Demonstrate proficient knowledge of insulin and insulin regimens and act as a resource for PWD and their family, and health care professionals • Describe potential insulin regimens and when each could be prescribed • Explain how to manage missed or incorrect insulin dose • Assess PWD educational needs and deliver appropriately • Provide care and education to assist with the safe transition from oral therapy to insulin therapy • Maintain contemporary knowledge of current practice and new developments		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
MONITORING GLYCAEMIC CONTROL	**For the safe and appropriate use of blood glucose monitoring and associated equipment you should be able to:**	1 & 2	
	• Demonstrate ability to utilise results to optimise treatment interventions according to evidence base guidelines, incorporating patient preferences • Instigate further tests such as HbA1c or random blood glucose • Explain relevance of HbA1c and target levels • Demonstrate knowledge of when HbA1c is not relevant or reliable		
NUTRITIONAL PLAN AND WEIGHT MANAGEMENT	**To meet the individual's nutritional needs you should be able to:**	1, 2, 3 & 4	
	• List types of nutrients (carbohydrate, protein and fat), their basic functions in the body, their relationship to insulin, and their effect on blood glucose and lipid levels • Describe how to evaluate food products from information on food labels • Demonstrate knowledge of carbohydrate counting and its application in practice • Describe how lifestyle and pharmacological factors interlink with diet to affect glycaemic control in delaying progression of Type 2 diabetes • Demonstrate awareness of multifaceted approach to weight loss and maintenance • Set achievable goals for weight loss or management in partnership with PWD • Discuss when pharmacotherapy can be considered for assistance with weight loss and how this would be prescribed • Discuss various artificial sweeteners, their differences and recommend appropriate consumption • Demonstrate knowledge and skills to facilitate behaviour modification • Explain the effect of alcohol on carbohydrate and lipid metabolism • Explain food modification required to manage intercurrent illness		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
PROMOTING SELF MANAGEMENT OF DIABETES AND HEALTHY LIFESTYLE	**To support individuals to self-manage their diabetes you should be able to:**		1, 2, 3 & 4
• **Education and behaviour change**	• Demonstrate knowledge of theoretical frameworks and educational philosophies underpinning behaviour change • Provide health education in a manner that the PWD determines as culturally safe • Demonstrate knowledge and application of range of teaching skills and modes of education delivery • Demonstrate knowledge of behaviour change strategies to facilitate goal setting, risk factor reduction, problem solving and lifestyle modification • Create learning environment to suit the needs of individuals or groups • Assess educational ability and literacy of individuals to tailor the information provided to their abilities • Work with PWD to facilitate lifestyle changes in response to changes in diabetes and/or circumstances		
• **Physical activity**	• Explain the benefits of regular exercise and describe a suitable plan to safely integrate increased physical activity in daily routine • Explain recommended duration of physical activity per day • State need to adjust food or medication for planned and unplanned physical activity • Perform risk assessment to ensure safety to exercise (exclude active proliferative retinopathy, hypertension) • Explain risk associated with physical activity and how to minimise risk • Refer for physical assessment if necessary prior to commencement of exercise • Explain benefits of regular physical activity on risk of cardiovascular disease morbidity and mortality, blood lipid profiles, and weight loss/maintenance		
• **Smoking cessation**	• Identify first and second line pharmacotherapies for smoking cessation		
• **Driving**	• Discuss driving and avoidance of hypoglycaemia		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
• **Depression**	• Demonstrate awareness that all PWD should be screened for depression and offered appropriate therapies • Demonstrate awareness that the presence of micro and macrovascular complications is associated with a higher prevalence of depression and lower quality of life		
HYPOGLYCAEMIA	**For the appropriate prevention, identification and treatment of hypoglycaemia you should be able to:**	1, 2, 3 & 4	
	• Identify factors that may contribute to hypoglycaemia • Describe effects of physical activity and advise on how to minimise hypoglycaemia • Describe the 'rebound effect' or 'Somogyi effect' • Discuss risk associated with hypoglycaemia and driving • Discuss effect of alcohol on liver and increased risk of hypoglycaemia • Describe hypoglycaemic unawareness and underlying pathophysiology • Identify those at risk of hypoglycaemic unawareness • State strategies to minimise risk of hypoglycaemic unawareness • Demonstrate knowledge of effect of other medications on hypoglycaemic awareness • Educate other health professionals and carers about hypoglycaemia		
HYPERGLYCAEMIA	**For the appropriate identification and treatment of hyperglycaemia you should be able to:**	1, 2, 3 & 4	
	• Identify reasons for hyperglycaemia and how to minimise risk • Identify medications that may cause hyperglycaemia • Demonstrate knowledge of effect of counter-regulatory hormones on blood glucose levels • Develop management plans for hyperglycaemia • Refer/consult as necessary for medical assessment/treatment of underlying cause of hyperglycaemia		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
COMPLICATIONS	**To care for people with microvascular or macrovascular complications you should be able to: As for levels 1 and 2 plus:**	1, 2, 3 & 4	
	• Demonstrate in-depth knowledge of the pathophysiology of microvascular disease • Demonstrate in-depth knowledge of the pathophysiology of macrovascular disease • Demonstrate in-depth knowledge of complications and prevention strategies • Be aware of required screening tests and frequency of these • Educate PWD in prevention and importance of screening for complications • Provide psychosocial and educational support for people with complications • Consult or refer as required		
HYPERTENSION/ CARDIOVASCULAR DISEASE (CVD), AND PERIPHERAL VASCULAR DISEASE (PVD)	**To care for people with hypertension and/or cardiovascular disease (CVD), and peripheral vascular disease (pvd) you should be able to:**	1, 2, 3 & 4	
	• Demonstrate an in-depth knowledge of pathophysiology of diabetes and the development of vascular complications • Describe the steps in assessing cardiovascular risk in context of diabetes • State target ranges for PWD for: BP, lipid fractions, and HbA1c according to national guidelines • Explain the benefits of maintaining optimal BP, lipid profile and HbA1c • Discuss benefits of intervention: lifestyle, cardioprotective dietary patterns, weight management, physical activity • Describe benefits of lipid modifying agents • Describe first line antihypertensive agents in diabetes and rationale for use • Describe interventions for the 'At risk foot' and diabetic foot disease • Demonstrate knowledge and skills to facilitate behaviour modification		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
RETINOPATHY	**To care for people at risk of or with retinopathy you should be able to:**	1, 2, 3 & 4	
	• Demonstrate an in-depth knowledge of pathophysiology of diabetes and the development of background, pre-proliferative, proliferative retinopathy and maculopathy • Describe guidelines for screening – who, when, where and how often • Provide or refer for psychological support as required		
NEUROPATHY	**To care for people at risk of or with neuropathy you should be able to:**	1, 2, 3 & 4	
	• Demonstrate an in-depth knowledge of pathophysiology of diabetes and the development of peripheral and autonomic neuropathy • Provide psychosocial and educational support for people with complications • Identify characteristics of the high risk foot • Demonstrate knowledge of the management of peripheral and autonomic neuropathy • Advise PWD about their condition and its management • Co-ordinate care within the multidisciplinary team • Integrate management of diabetes with other contributing conditions • Implement and monitor use of local guidelines • Participate in research and disseminate evidence-based practice • Provide support or contribute to specialist clinics as able, e.g. Wound care/Pain management clinics • Monitor treatment for effectiveness and refer appropriately		
NEPHROPATHY	**To care for people at risk of or with nephropathy you should be able to:**	1, 2, & 3	
	• Demonstrate an in-depth knowledge of pathophysiology of diabetes and the development of nephropathy • Conduct a holistic assessment of patient to identify modifiable risk factors for nephropathy and the ability to self-care to reduce risk • Identify strategies to reduce the impact and progression of nephropathy		

******** SPECIAL CONSIDERATIONS ********			
ASPECT OF CARE	**LEVEL OF KNOWLEDGE AND SKILL**	**NCNZ COMP DOMAIN**	**I/S/A/M/D/X/RPL EVIDENCE**
IDENTIFICATION AND TREATMENT DURING CONCURRENT ILLNESS	**To manage concurrent illness you should be able to:**	1, 2, 3 & 4	
	• Describe the physiological effects of illness on blood glucose levels, ketone levels and fluid and electrolyte balance • Demonstrate ability to provide advice for clinical management plans during concurrent illness • Actively contribute and implement evidence-based practice in relation to management of concurrent illness • Provide education to other health care professionals on sick day management		
MANAGING DIABETES IN HOSPITAL	**To prepare a person for hospital procedure or admission/ or manage diabetes in hospital you should be able to:**	1, 2, 3 & 4	
	• Trouble-shoot and provide advice on unusual/complex cases relating to the care of PWD in hospital • Advise on appropriate peri-operative management of diabetes • Describe potential hormonal and metabolic disturbances that can occur peri-operatively • Discuss strategies to minimise hormonal and metabolic disturbances • Describe rationale for intravenous glucose, insulin, potassium (IV GIK) infusion • Describe appropriate time to discontinue IV GIK for a person treated with insulin • Support the individual to maintain/re-establish self-management of their diabetes • Educate nurses and other carers about the care of a PWD undergoing surgery		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
PREGNANCY – PRE-CONCEPTION CARE FOR WOMEN WITH PRE-EXISTING DIABETES	**To support a woman with diabetes in preparation for pregnancy you should be able to:**	1, 2, 3 & 4	
***Care delivered within specialist services only**	• Demonstrate proficient knowledge of pathophysiology of pregnancy complicated by diabetes • Assess diabetes complication status and provide advice or refer accordingly • Provide education and support to achieve targets of pre-conception care • Assess and advise on appropriate contraception pre-conceptually • Be aware of requirement for higher dose (5mg) of Folic Acid in women with diabetes pre-conceptually • Evaluate treatment outcomes and refer to specialist diabetes services		
PREGNANCY – ANTENATAL AND POSTNATAL	**To support a woman with diabetes during and after pregnancy you should be able to:**	1, 2, 3 & 4	
***Care delivered within specialist services only**	• Demonstrate sound knowledge and understanding of pregnancy and diabetes • Provide appropriate gestation specific education • Initiate or be involved in the development of management protocols • Evaluate treatment outcomes and refer to specialist diabetes and pregnancy services		

ASPECT OF CARE	LEVEL OF KNOWLEDGE AND SKILL	NCNZ COMP DOMAIN	I/S/A/M/D/X/RPL EVIDENCE
LEADERSHIP AND MANAGEMENT	**To ensure safe and effective nursing practice and outcomes you should:**		
• **Clinical Leadership**	• Consistently demonstrate clinical leadership responsibilities, using an expert level of judgement, decision making and innovation		
• **Legislation**	• Consistently provide leadership, educate, and act as a resource to others in relevant legislation, codes and regulations		
• **Ethics**	• Consistently apply ethical principles/ reflection in own nursing practice, facilitate ethical reflection and debate		
• **Standards**	• Ensure that clinical education occurs within area of practice and support is given to resource nurses ensuring that area specific skills of team meet required standards • Promotes a practice environment that encourages learning and evidence-based practice		
• **Performance Development**	• Be involved in performance development and appraisals • Be a resource and support to nursing staff and others as relevant • Effectively complex performance issues		
• **Policy Development**	• Contribute to/participate in the development of health/socioeconomic policies at a local level and relevant national involvement		
• **Change Management**	• Collaborates with others to take a co-ordinated approach to implement change effectively		
• **Research**	• Use research and scholarship to bring about significant improvement to outcomes, presenting or publishing findings		

11. CLINICAL INDICATORS

The National Diabetes Nursing Knowledge and Skills Framework articulates the knowledge and skill a nurse requires to deliver care to people with diabetes according to their area of practice. Included in this framework are a number of suggested clinical indicators to measure Nursing Practice, Service, Clinical and Health Outcomes. Outcomes and indicators for diabetes education have been identified by Diabetes Australia as illustrated in Figure 2 on page 57, following a robust consultation process.

11.1 NURSING PRACTICE INDICATORS

The content of clinical care will be prescribed in your organisation's various policies, procedures and guidelines. Specifically, the process of care will be prescribed in organisational clinical standards and performance competencies.

An example is described below:

THE NURSE:

A: Completes timely systematic holistic assessments to determine actual and high risk problems.

D: Analyses assessment data and determines, verifies, prioritises and documents nursing diagnoses.

P: In partnership with the person, determines the desired outcomes and develops an individualised plan of care to achieve them.

I: Implements and co-ordinates the interventions to deliver the plan of care.

E: Evaluates and systematically records progress toward attainment of desired outcomes and revises the plan of care as necessary.

11.2 SERVICE LEVEL INDICATORS

The indicators below are from the Ministry of Health's Indicators of performance of DHB performance 2008/09.

It is anticipated that individual nurses would determine the most appropriate indicators to measure (this may involve developing specific indicators), relevant to the focus of their work and their practice setting.

Target 6:	Improving diabetes and cardiovascular disease (CVD)
Target Area:	Improving diabetes and cardiovascular disease (CVD) disease
Dimensions of DHB Performance:	Improving health outcomes

Target Champion – Sandy Dawson, Chief Advisor, Long-term Conditions Policy and Strategy

RATIONALE:

Chronic disease comprises the major health burden for New Zealand now and into the foreseeable future. This group of conditions is the leading cause of morbidity in New Zealand, and disproportionately affects Maori and Pacific peoples. As the population ages, and lifestyles change, these conditions are likely to increase significantly.

Diabetes is important as a major and increasing cause of disability and premature death, and it is also a good indicator of the responsiveness of a health service for people in most need.

Changes in practice that can be expected by setting expectations and monitoring DHB performance against this indicator to health target:

- Diabetes detection and follow-up
- Diabetes management
- Cardiovascular disease – CVD risk recognition.

HEALTH TARGET	DIABETES DETECTION AND FOLLOW-UP
Indicator	Proportion estimated to have diabetes accessing free annual checks
Deliverables	***Numerator:*** *(Data source: DHB)* The number of unique individuals with Type 1 or Type 2 diabetes on a diabetes register, whose date of their free annual check is during the reporting period (broken down into Maori, Pacific, and other ethnic groups). ***Denominator:*** *(Data Source: the Ministry)* The expected number of unique individuals to have Type 1 or Type 2 diabetes, as at the end of the reporting period (broken down into Maori, Pacific, and other ethnic groups).
Rationale	Good performance on identifying and registering people with diabetes is important in reducing inequalities in health outcomes between population groups. This indicator provides a measure of access to good quality care.
Expectations	1. The DHB and the Ministry of Health agree targets for this indicator, as specified in the 2008/09 DAP. If, during the course of the year, the DHB identifies difficulties in meeting targets, the DHB is expected to provide commentary, and a resolution plan on what it is doing to address this performance issue. 2. It is expected that DHBs will achieve equity for all population groups in relation to access to free annual checks.

HEALTH TARGET	DIABETES MANAGEMENT
Indicator	Proportion on the diabetes register who have good diabetes management (HBA1c = 8.0% or less)
Deliverables	***Numerator:*** *(Data source: DHB)* The number of people with Type 1 or Type 2 diabetes on a diabetes register that had an HBA1c of equal to or less than 8% and at their free annual check during the reporting period (broken down into Maori, Pacific, and other ethnic groups). ***Denominator:*** *(Data Source: DHB)* The number of people with Type 1 or Type 2 diabetes on the diabetes register, whose date of their free annual check is during the reporting period (broken down into Maori, Pacific, and other ethnic groups).
Rationale	This is a measure of the effectiveness of care in preventing complications resulting from diabetes.
Expectations	1. The DHB and the Ministry of Health agree targets for this indicator, as specified in the 2008/09 DAP. If, during the course of the year, the DHB identifies difficulties in meeting targets, the DHB is expected to provide commentary, and a resolution plan on what it is doing to address this performance issue. 2. It is expected that there will be an increase in the percentage of people in all population groups on the diabetes register who have good diabetes management. 3. It is expected that DHBs will improve equity for all population groups in relation to diabetes management.
Commentary	This indicator should remain aligned with the Primary Health Organisation (PHO) Performance Programme.

HEALTH TARGET	CARDIOVASCULAR DISEASE
Indicator	CVD Risk recognition
Deliverables	***Numerator:*** *(Data source: DHB via PHO monitoring framework)* The number of people in each target group who have had their five-year absolute CVD risk recorded in the last five years. ***Denominator:*** *(Data Source: DHB via PHO monitoring framework)* The number of people in each respective target group. ***Target groups:*** 1. Maori/Pacific and Indian subcontinent men > 35 years of age 2. Maori/Pacific and Indian subcontinent women > 45 years of age 3. NZ European and other men > 45 years of age 4. NZ European and other women > 55 years of age. Indian subcontinent should be defined as level 2 codes 43 Indian and 44 other Asian as per the ethnicity data protocols for the Health and Disability Sector.
Rationale	CVD is the leading cause of death and morbidity in New Zealand. Early detection of those at risk and early intervention through primary care are two of the key approaches to controlling CVD.
Expectations	1. The DHB and the Ministry of Health agree targets for this indicator, as specified in the 2008/09 DAP. If, during the course of the year, the DHB identifies difficulties in meeting targets, the DHB is expected to provide commentary, and a resolution plan on what it is doing to address this performance issue. 2. It is expected that there will be an increase in the percentage of people in all population groups with CVD risk recorded. 3. It is expected that DHBs will improve equity for all population groups in relation to diabetes management.
Commentary	The DHB should explore other options/opportunities for recognising people at risk of CVD. Primary care options include, as a point of contact for people at risk, community groups, churches, etc.

11.3 CLINICAL AND HEALTH OUTCOMES

The nurse-patient relationship is central to patient experience and a major determinant of health outcomes. Nursing is committed to advancing the health of New Zealanders through nursing leadership, partnerships in health care delivery, the advancement of clinical expertise across **all aspects of diabetes care**, and achieving a high standard of **practice, service, clinical and health outcomes** as illustrated in Figure 6 below.

Outcomes and indicators for specific for diabetes education have been identified by Diabetes Australia following a robust consultation process. Specific tools to measure outcomes identified in their framework are identified in Figure 7 on the next page. Outcomes are represented in a hierarchical manner with knowledge and understanding as the outcome most influenced by diabetes education, followed by self management, then self-determination, then psychological adjustment. Lastly and indirectly, diabetes education influences clinical outcomes and cost effectiveness.

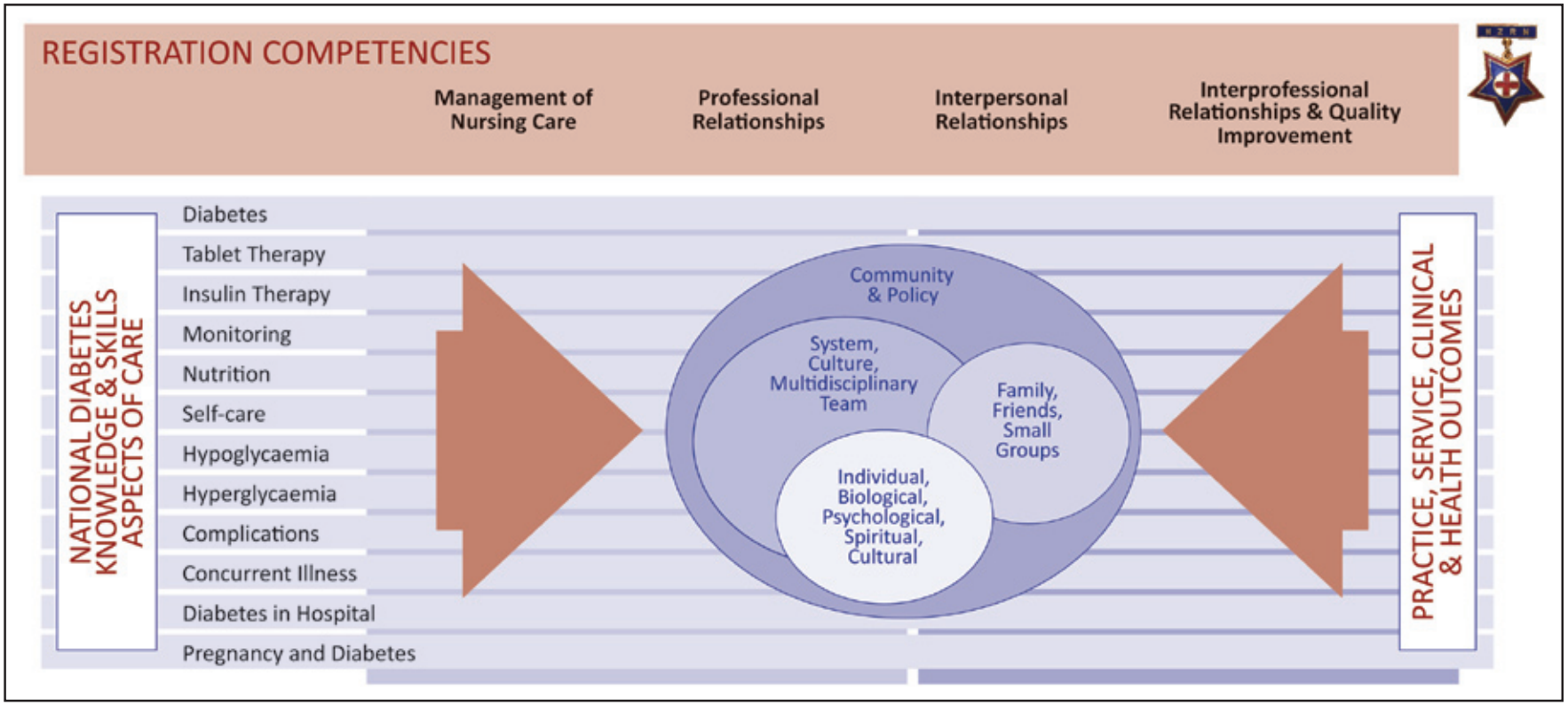


Figure 6: Aspects of diabetes care and outcome measurement.

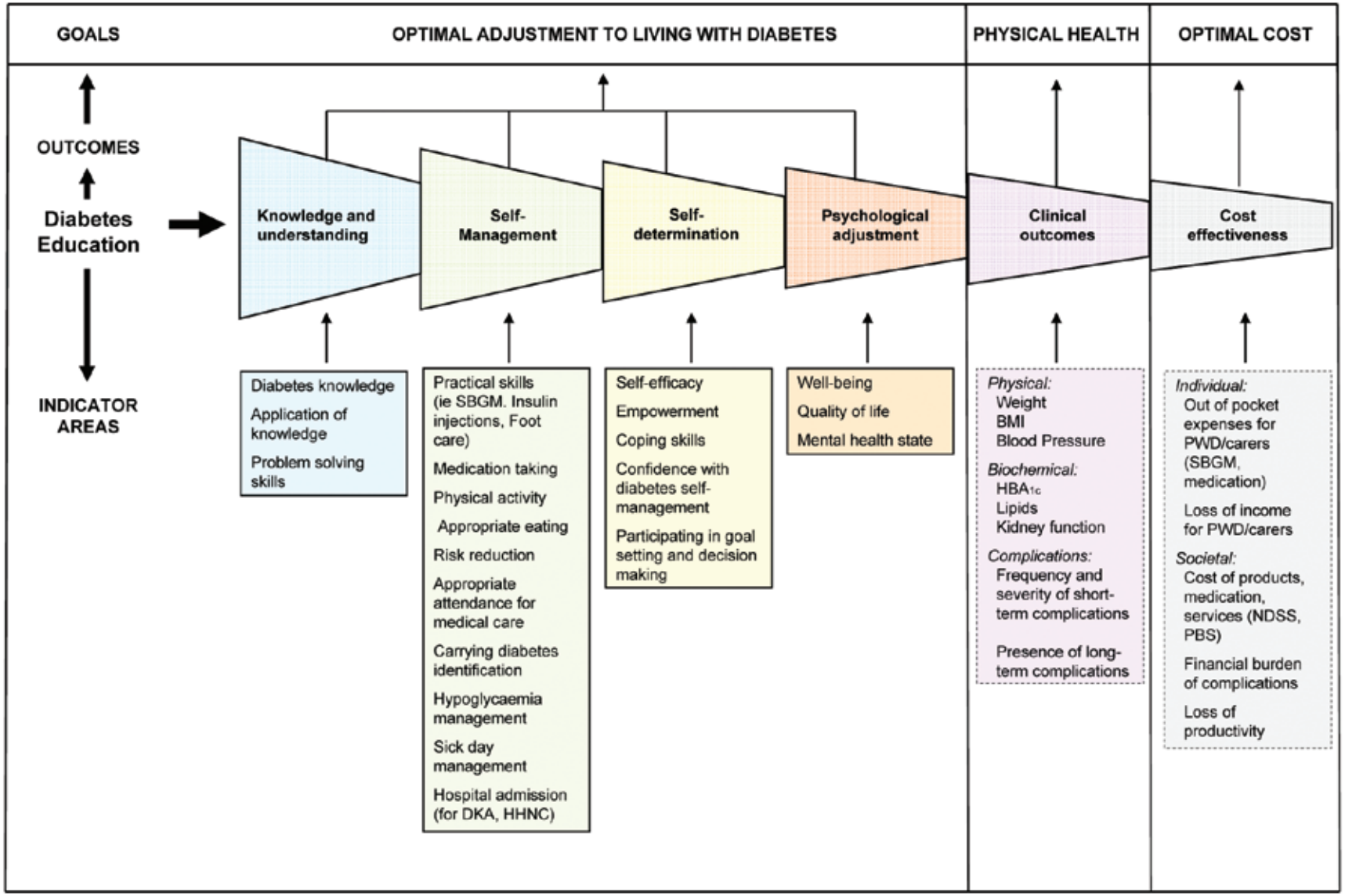


Figure 7: Outcome indicators specific to diabetes education. Eigenmann, C., Colagiuri, R. (2007). Outcomes and indicators for Diabetes Education – A national consensus position. Canberra: Diabetes Australia.

12. CONTINUING EDUCATION RESOURCES

ON-LINE LEARNING WEBSITES

These programmes are suitable across all levels of practice. All nurses and generalist diabetes nurses could commence with this type of study to prepare for study in areas of practice, as each contains a number of diabetes programmes. Some have multiple choice questions where you can assess your own knowledge and skills. These could be printed off and contribute to your evidence of continuing professional development hours.

www.cemedicus.com

www.mededtoday.com

www.cpdgateway.com

www.pharmacist.com

www.cmezone.com

www.cedrugstorenews.com

www.netce.com

www.cecity.com

www.powerpak.com

www.medicalcrossfire.com

13. SUGGESTED WEBSITES FOR GENERAL INFORMATION

New Zealand Society for the Study of Diabetes	www.nzssd.org.nz
Diabetes New Zealand	www.diabetes.org.nz
Diabetes Youth NZ	www.diabetesyouth.org.nz
New Zealand Ministry of Health	www.govt.nz/diabetes
American Association of Clinical Endocrinologists (AACE)	www.aace.com
American Association of Diabetes Educators (AADE)	www.addenet.org
American Diabetes Association (ADA)	www.diabetes.org
Omnus Endocrinology	www.omnus.com.au
Ask Noah About Diabetes (New York Online Access to Health – detailed information about diabetes in English and Spanish)	www.noah-health.org
Canadian Diabetes Association (CDA)	www.diabetes.ca
Centers for Disease Control and Prevention (CDC)	www.cdc.gov/diabetes
Children with Diabetes Web	www.childrenwithdiabetes.com
Diabetes Associations in the Americas	www.dota.org/MAP/SouthAmerica.htm
Diabetes Australia Multilingual Resource (Chinese, Hindi, Thai, Vietnamese, Greek, Indonesian, Italian, Turkish, Ukrainian, Arabic as well as English)	www.multilingualdiabetes.org
Diabetes Deutschland (German – up-to-date information for both people with diabetes and healthcare professionals)	www.uni-duesseldorf.de/diabetes/index.htm
Diabetes Education Study Group of the European Association for the Study of Diabetes	www.desg.org
Diabetes India	www.diabetesindia.com
Diabetes UK	www.diabetes.org.uk
IDF (Europe) Guidelines	www.staff.ncl.ac.uk/philip.home/guidelines
International Obesity Task Force	www.iotf.org
International Society for Paediatric and Adolescent Diabetes	www.ispad.org
Juvenile Diabetes Research Foundation International (JDRF)	www.jdf.org
Latin America Diabetes Association	www.alad.org
MedFetch (automated medline queries – results delivered in English, French, Italian, German, Spanish and Portuguese)	www.medfetch.com
National Institute of Diabetes and Digestive and Kidney Diseases	www.niddk.nih.gov/health/diabetes/diabetes.htm
National Service Frameworks for Diabetes UK	www.doh.gov.uk/nsf/diabetes.htm
Norwegian Diabetes Association	www.dianet.no
PubMed (National Library of Medicine's search service – free)	www.ncbi.nlm.nih.gov/PubMed

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