Services for Children and Young People

General and Community Paediatric Services

Tier 2 Service Specification

September 2024

Health New Zealand
Te Whatu Ora

Contents

1. Status

Approved to be used for mandatory nationwide description of services to be provided.

MANDATORY ☑ RECOMMENDED ☒

Mandatory- it is compulsory to use this Specification when purchasing services. No Districts should use a local service specification instead of this mandatory specification.

2. Review History

Review History	Date
Approved by Nationwide Service Framework Coordinating Group (NCG)	**October 2011**
Published on NSFL	**February 2011**
Review: of the General and Community Paediatric Services service specification (April 2003) Amendments: new content Community Paediatric Component, Service Planning, Purchase Unit Code Table addedM55008. Deleted Appendix A, Guidelines for Service Development - community paediatrics.	**January 2011**
Update: new Appendix One: service description for Children and Young Persons Diabetes Services.	**August 2011**
Moved to Health NZ template. Updated links for PUDD and NSFL only. Amended DHB to become District/Region where appropriate. No other changes to content made.	**September 2024**
Consideration for next Service Specification Review	**Within five years**

Note: In September 2024 a small programme of work moved all Service Specifications to Health New Zealand branded templates. No amendments were made to the body text or content of the Service Specification, so references to DHB, Ministry of Health or other pre-2022 reforms vocabulary will still exist. A larger programme of work to review and revise all Service Specifications is planned for late 2024 to early 2025.

Note: Contact the NSF Team, Te Whatu Ora | Health New Zealand to discuss proposed amendments to the service specifications and guidance in developing new or updating and revising existing service specifications. NSF@tewhatuora.govt.nz

Nationwide Service Framework Library web site here

3. Introduction

This tier two Services for Children And Young People- General and Community Paediatric Services service specification (the Service) must be used in conjunction with the overarching tier one Services for Children and Young People, tier one Specialist Medical and Surgical Services service specifications, and tier one Community Services and any related tier two Paediatric Services service specification such as Well Child Health Promotion, Paediatric Oncology and / or Disability Support Services eg, Child Development Services service specifications.

Refer to the tier one service specifications for generic details on:

- Service Objectives
- Service Users
- Access
- General Service Components
- Service Linkages
- Exclusions
- Quality Requirements

The above sections are applicable to all service delivery.

4. Service Definition

The Service provides a personal and a population health based approach to assuring the attainment and maintenance of optimal health and development for children and young people within a defined population. This approach is supported by the international trend in child health to move away from a focus solely on 'sickness services' towards 'health promoting services'. The focus on health promoting services can be achieved by appropriate primary, secondary and tertiary preventative interventions.

A well developed general and community paediatric service is user friendly and driven by the needs of the population.

The Service supports a range of primary prevention, promotion and protection services that includes facilitation of:

- the diagnosis and treatment of acute and chronic conditions
- referral on to the appropriate specialty service for care of children whose condition is of such severity or complexity that it is beyond their capacity / capability.

Central to the Service will be the availability of other services that provide a continuum of care from pre-hospital services including General Practitioners (GPs), Nurse Practitioners and other community providers to paediatric secondary / tertiary medical, surgical, and intensive care services.

The Service provides:

- an entry point for all children and young people who require medical care beyond the primary level

- sub-speciality care eg, paediatric respiratory medicine via the paediatric team that is a comprehensive and co-ordinated service
- leadership in identifying and addressing the population-based issues for children and young people, their families and whānau or caregivers.

5. Service objectives

5.1 General

The primary objective for providers of the Service is to enable children and young people to lead healthy and rewarding lives as children and young adults, maximise their potential in adulthood and reduce the risk of developing chronic disease and disability in adulthood.

The primary objectives for providers of the Service are to:

- enable as many children and young people as possible to reach adulthood with their potential un-compromised by illness, environmental hazard or unhealthy lifestyle
- participate in the development and implementation of the priorities of the District,other relevant documents as well as align with the NZHD Strategy and the Minister of Health 'Get Start' objectives.

5.2 Māori Health

Refer to tier one Services for Children and Young People service specification.

6. Service Users

The population of children and young people up to 18 years of age within a defined District catchment are the focus of this Service. It is expected that a major focus of the service will be around the four priority populations identified in the *1998 Child Health Strategy:* Service users include:

- tamariki Māori and youth
- Pacific peoples children and youth
- children and youth with high health and disability support needs
- children and young people in the care of statutory agencies (eg, Departments of Child Youth and Families and Justice)
- children and youth from families with multiple social and economic disadvantages.

7. Access

Refer to tier one Services for Children and Young People service specification.

8. Service Components

8.1 Process

8.1.1 General Paediatric Component

Expert assessment and care for children and young people. Areas of focus include:

- provision of all hours emergency service for children and young people
- involvement in directing/providing inpatient care, outpatient services, including outreach nursing and medical services as appropriate
- provision of active risk factor management and early, effective rehabilitation which limits disease progression and results in return to school or other activity
- informing or supporting parents to gain the knowledge and skills required to prevent or reduce acute exacerbation of chronic disease, and leads to improvements in quality of life and a reduction of inappropriate admissions to hospital
- work with families or whānau to identify their needs for support, and either provide or facilitate access to support from other health or community services, especially for those children of families and their whānau at risk of adverse outcomes, families and whānau on whom children are very dependent
- case management of children and young people with high needs to support effective continuity of care. Where children and young people are receiving services from other agencies, participating in routine intersectoral collaboration and co-ordination as well as initiatives such as Strengthening Families, Young People Offenders Programme, High and Complex Needs and Family Group Conferences / Child Protection Resource panels
- liaison paediatrician role - providing liaison and linkages with medical and welfare services, pathologists and local coroner in the event of child or young people death as outlined by the Child and Youth Mortality Review Committee (March 2003)
- support ‘transition to adult care’ programmes to assist children with chronic illness or disability issues to receive care in adult service environments
- development of special clinical interests and multidisciplinary assessment and management teams as appropriate in a given location.

8.1.2 Community Paediatric Component

Community paediatrics focuses on national, regional and local population based child and young people’s health issues. The Service has a population-based approach to the attainment and maintenance of optimal health and development for children and young people within a defined population.

Areas of focus include:

- a leadership role in evaluation of clinical services for children and young people
- supporting development of good systems of care for health to facilitate quality primary, secondary and tertiary prevention eg referral pathways, guidelines, protocols, interagency collaboration initiatives

- community needs and outcome assessment and other epidemiological information to support evidence based service planning and funding
- a detailed assessment of the health and development needs information systems that use evidence to tailor child health services to meet the changing needs and health outcomes of a community
- advocacy for children and young people
- take a leadership role in child protection, and child disability and network with other agencies on these issues for children and families
- informing health service policy, planning and development for children and young people
- promoting changes in specific behaviours or lifestyles to promote improved health and reduce need for further episodes of specialised care
- promoting effective screening and prevention of unnecessary or long term complications
- supporting staff development for children and young peoples health services
- access to information for children, young people and their family or whānau, and other practitioners

8.2 Assessment, diagnosis and treatment for General Paediatric Services

- Assessment, diagnosis, stabilisation and treatment of children and young people on an urgent or non-urgent basis.
- Discussion of treatment options (including possible risks) and management plan with the child and family and whānau as appropriate.
- Planned care including:
  - prompt response to emergencies
  - pain control
  - provision of medical treatments and procedures
  - written care plan to be developed with child and parent or guardian
  - disability support, carer support, return to primary care etc.

8.3 Rehabilitation

The Service will have processes in place to actively plan for the provision of rehabilitation from an early stage in treatment for those children and young people requiring rehabilitation. These processes include the co-ordination and planning between the Services to ensure that the child's ongoing needs and activities are assessed and referrals or transfers to an appropriate community or hospital service are arranged in a timely manner.

8.4 Discharge planning or onward referral

- Discharge to a lower level of care as soon as it is appropriate, with a written discharge summary and care plan to be provided to the child's or young person's parent / guardian and GP.
- Child's parents or guardians are familiar with current medication and can address any concerns before leaving hospital or arrangements are with made the child's GP for this to occur.
- Compliance problems are identified and there is liaison with the child's GP community pharmacist or other health provider.
- Where appropriate, referral to Māori or Pacific peoples community based services.
- Referral to Accident Corporation Commission case managers or their equivalent where appropriate.
- Referral with subsequent follow up, to Ministry of Education, Special Education, Child, Youth and Family, Child and Adolescent Mental Health Services where appropriate.
- Comprehensive coverage will be obtained by referral of the child to a higher level of service (including tertiary health services) when the severity or complexity of the condition is beyond the technical and clinical capacity of the local services.
- In conjunction with the relevant community health service, the Service will assess the need for, type and amount of professional community services and personal care, home help and, including related equipment eg, or ostomy services, wheel chairs, orthotics etc.
- Where the Service considers the child may require disability support services, the child will be referred to disability assessment services. This referral may occur at any time. It should be noted that these services are often part of the same team as general paediatric services is in many ways a disability assessment service and it is certainly the major referrer and supporter of early intervention developmental services.
- The Service will involve educational services when appropriate.
- Support effective case management of children and young people with high health and or disability support needs.

8.5 Consultative services

Consultation and advisory services are provided to GP and other specialists concerning the condition and ongoing management of children and young people. If a specialist opinion is sought, a referral needs to be made.

8.6 Settings

The Service will be provided in the setting that is most likely to achieve the best possible health outcome for children and young people.

8.7 Service levels

Refer to tier one Services for Children and Young People service specification.

8.8 Key Inputs

The Service must recognise the importance of an integrated continuum of care as well as an effective population health focus to ensure efficient use of professional resources. The Service is multidisciplinary with input from:

- Paediatricians
- Paediatric Nurse Practitioners, where available
- Registered Nurses with competence in paediatrics
- Allied Health professionals including Māori or Pacific people's community health workers where appropriate.

8.9 Support Services

Refer to tier one Services for Children and Young People and tier one Medical and Surgical Services service specifications.

9. Service Linkages

The Service is expected to maintain linkages with:

Linked Providers	*Nature of Linkage*	*Accountabilities associated with linkages*
Primary Care Organisations and Primary Health Organisations	Refer or liaise re individual children as appropriate Provide education, information or expert opinion	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/young person Work together on population based projects which have a child and young people focus
General Practice Teams (GPTs) in PHO/PCO	Liaise and work with the relevant GPT	Whenever there are client concerns or issues, or to provide education, information or expert opinion. Improve referral pathways and technical advice
Hospital services	Refer to relevant Hospital services as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/young person
Child and Adolescent Mental Health Services	Refer or liaise re individual children as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/young person
Child Development Services	Refer, involve or liaise re individual children as appropriate	There are close relationships with these services that have specialist neuro-development therapists
Public Health Services – public health nurses, health protection officers, Vision and Hearing Screening Services	Refer or liaise re individual children as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/young person

Linked Providers	*Nature of Linkage*	*Accountabilities associated with linkages*
Early Intervention Team	Refer or liaise re individual children/young person as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/young person
Pharmacies	Refer or liaise re individual children as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/young person
Lead Maternity Carers (LMCs)	Liaise and work with relevant LMC	To provide education, information or expert opinion
Well Child/Tamariki Ora providers (WCPs)	Liaise and work with the relevant WCPs	Work with other relevant professionals whenever there are concerns relating to a particular child/young person
Whakarongo Mai Ear Health Services	Refer or liaise re individual children as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child
Child and Young people Dental Oral Health Services	Refer or liaise re individual children /young person as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
Pacific peoples health providers and Pacific Family Support units where available	Refer or liaise re individual children /young person as appropriate	Work with other Pacific health providers including Pacific community health workers whenever there are concerns relating to a particular child/young person
Family Start	Liaise and work with the relevant FS worker	To ensure seamless delivery for high-need families or to provide education, information or expert opinion
Child, Young People and Family (CYF)	Liaise and work with CYF	Whenever there are growth, developmental or behavioural concerns for a child or young person referred to, or under, CYF supervision Participate in family group conferences as required Refer to CYF where a child's or young person's safety is at risk from abuse or neglect Work together on community preventative initiatives and improved intersectoral working
Care and Protection Resource Panel	Member of local Care and Protection Resource Panel.	Provide education, information or expert opinion.
Interagency Co-ordination (Strengthening Families)	Attend or instigate interagency co-ordination meetings as appropriate	Whenever there are client concerns or issues, or to provide education, information or expert opinion. Members of the Strengthening Families local management group
Community Agencies	Refer or liaise re individual children or young person as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child/young person. Provide education, information or expert opinion.

Linked Providers	*Nature of Linkage*	*Accountabilities associated with linkages*
Other District services – B4 School Checks, Population Health, child health/advisory groups	Liaise and involve in planned care for children and young people	Work with other relevant professionals whenever there are concerns relating to a particular child/young person. Provide education, information or expert opinion
Group Special Education (Ministry of Education)	Refer or liaise re individual children as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
Schools, Preschools and other education providers eg, Parents And First Teachers, Home Interactions Programme for Parents and Youngsters	Refer or liaise re individual children or young person as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
Māori Health Providers	Refer or liaise re individual children or young person as appropriate Provide education, information or expert opinion	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
Early Childhood Development Unit	Refer or liaise re individual children as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child
Disease or disability based community groups (eg, Asthma society)	Refer or liaise re individual children or young people as appropriate Provide education, information or expert opinion	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
Young people organisations in particular those with a health focus.	Refer or liaise re individual young people as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular young person
Ministry of Social Development including Work and Income , Family Start	Refer or liaise re individual children or young person as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/ young person
NZ Police	Refer or liaise re individual children as appropriate Provide education, information or expert opinion	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/young person
NZ Justice	Refer or liaise re individual children as appropriate	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child/young person

10. Exclusions

Exclusions from this service specification are listed below:

- where Service users are eligible for services funded under the Accident Compensation Act 2001, they are excluded from receiving these services through public funding under Vote: Health
- WCTO services such as those provided by GPs, Plunket or similar community based organisations
- Community health home support services. These are the responsibility of the District community health service (see Specialist Community Nursing Services service specification) where the child / young person is domiciled
- other community based services such as those provided through Primary Community Organisations (PCO) or Primary Health Organisations (PHO) contracts, Māori Health providers, Pacific peoples health providers or other community groups such as Asthma societies.

11. Quality Requirements

11.1 General

The Service must comply with the Provider Quality Standards described in the Operational Policy Framework or, as applicable, Crown Funding Agreement Variations, contracts or service level agreements.

11.2 The Role of Community Paediatrics

Epidemiological measures of the health of children and young persons will be noted and targets set for each subsequent year in line with agreed District protocols and in response to national and relevant community groups' (including iwi) identified health needs.

These for example could include measures / prevalence of:

- immunisation levels
- glue ear as complication of otitis media
- tooth decay
- diseases associate with inadequate nutrition
- diabetes
- asthma
- childhood mortality (various age ranges)
- suicide
- sexually transmitted infections
- pregnancy
- smoking
- alcohol and drug referrals

- body mass index (BMI)
- rates of physical activity.
- or other measures as appropriate.

Information collected to record ethnicity, and as appropriate age, (need standard age brackets), NZ Deprivation, and other demographic variables as deemed relevant.1 As nationally consistent standards with measures are developed they are to be adopted.

11.3 8.3 Ethnicity recording

Ethnicity is to be collected according to the 'Ethnicity Data Protocols2 for the Health and Disability Sector – 2004' at Level 0. The Protocol provides guidelines for collecting ethnicity for newborns or children. Where people report themselves as belonging to more than one ethnic group, use section 4.4 of the protocols to report prioritised ethnicity:

In summary apply the following guideline:

- Māori, report as Māori
- Pacific, report as Pacific
- otherwise, report as Other.

12. Purchase Units and Reporting Requirements

12.1 Purchase units

Purchase Units are defined in Health New Zealand's Nationwide Service Framework Purchase Unit Data Dictionary[3]. The following Purchase Units apply to this service:

Specific reporting requirements apply at tier three service specifications.

Purchase Code	PU Description	PU Definition	PU Measure	PU Measure Definition	National Collections or Payment Systems
M55001	Paediatric Medical Inpatient	DRG WIESNZ Discharge. Additional Information is found	Cost Weighted Discharge	A numerical measure representing the relative cost of	National Minimum Data Set (NMDS)

[1] (Health NZ will be working with The Paediatric Society of New Zealand to develop nationally consistent standards regarding this information.)

[2] ***The Protocols are published on the Minstry's website at***

http://www.moh.govt.nz/moh.nsf/pagesmh/3006.

[3] www.nsfl.health.govt.nz

Purchase Code	PU Description	PU Definition	PU Measure	PU Measure Definition	National Collections or Payment Systems
	Services (DRGs)	in the NZ Casemix Framework for Publicly Funded Hospitals which gets updated every year.		treating a patient through to discharge	
M55002	Paediatric Medical - 1st attendance	First attendance to paediatrician or medical officer at registrar level or above or nurse practitioner for specialist assessment.	Attendance	Number of attendances to a clinic/department /acute assessment unit or domiciliary	National Non-Admitted Patient Collection (NNPAC)
M55003	Paediatric Medical - Subsequent attendance	Follow-up attendances to paediatrician or medical officer at registrar level or above or nurse practitioner.	Attendance	Number of attendances to a clinic/department /acute assessment unit or domiciliary	NNPAC
M55005	Paediatric Community Programme – Nurse follow up	Seventy-two hour nurse follow up of children who have been assessed acutely in a designated acute assessment unit.	Service	Service purchased in a block arrangement uniquely agreed at a local level	NNPAC
M55008	Paediatric Community service for Children and Young People	Population Medicine Service provided by community paediatrician- includes liaison, advocacy, and health promotion	Service	Service purchased in a block arrangement uniquely agreed at a local level	NNPAC

12.1 Reporting Requirements

Paediatric Community Service (CPS)

Quarterly Reporting to the funder/District on the following:

Number of attendances

- by type (Total (including Accident), Accidents, Accident within 6 weeks, Accident after 6 weeks)

- by ethnicity (NZ Māori, Pacific Island, Other CPS time spent in achievement of major work areas
- number of projects or groups being led or assisted by CPS
- list of groups or projects with brief description including ranking of effectiveness of functioning of such groups in period (full, moderate, minimal or in development) relative to objectives
- narrative report on relationships with key providers in area
- number of education or training sessions with Service users in period, or resource packs developed for these groups
- narrative report on development of epidemiological data and / or relevant research and / or national projects
- narrative report on implementation of the Māori Health plan
- narrative report on Pacific Health outcomes.

13. Glossary

Not Required

14. Appendices

14.1 Appendix 1 – Diabetes Service Description

Service Description for Children and Young Persons Diabetes Services

This service description for Children and Young Persons Diabetes Services (the Service) must be used in conjunction with the overarching tier one Services for Children and Young People and the tier two General and Community Paediatric Services service specifications. It is also linked to the tier two Diabetes Services and relevant tier three Diabetes service specifications, and their tier one Specialist Medical and Surgical service specification.

Background

This service description was developed to support the ongoing improvement of diabetes services for children and young people with diabetes and to provide a framework to build an accurate and consistent data collection to support diabetes services, planning and analysis of usage for children and young people with diabetes.

Diabetes in children and young persons is primarily type 1 diabetes and is incurable, lifelong, not preventable, and often described as a chronic disease or long term condition. The incidence of type 1 diabetes is increasing, but also an increase in type 2 diabetes being seen in children and young persons. The majority of children and young persons with type 1 diabetes are European, but there are an increasing number of Māori and Pacific children and young persons developing type 2 diabetes.

Meeting the needs of children and young persons with diabetes is often more challenging than for adults. Diabetes in children and young people has a major impact on family life, on the child's growth and development and on a child's education. As early and good control is

critical for good long-term outcomes, treatment of diabetes is also the treatment of the whole family and whānau.

Poor control of diabetes can increase the risk for complications later in life that are not easily reversed or delayed. Control of diabetes during adolescence is further complicated by accelerated physical growth (growth hormone is antagonistic to insulin action), physiological state (influence of pubertal hormones) and psychosocial status (adjusting to the normal development tasks of adolescence in combination with the demands of a diabetes management plan).

Good access to early education, intervention and ongoing support creates the best opportunity to engage the child, young person and family, to improve their chances of attaining the best outcomes.

1. Service Definition

This service description refers to diabetes services provided for all children and young persons from initial diagnosis of type 1 or 2 diabetes up until the date of their 19th birthday. The purpose of the Service is to:

- encourage the optimal evidence-based management of children and young persons with diabetes
- support the delivery of a high quality diabetes services for children and young persons with diabetes by collecting accurate data and subsequent analysis of this information to support service planning and delivery. (This specification defines the information to be collected and specifies how that information will be managed and to which organisations it will be reported.)

2. Service Objectives

2.1 General

The Service's objectives are to:

- improve the management and control of diabetes in children and young persons, to reduce the incidence and delay the impact of associated microvascular and other long-term complications and hospital admission for diabetes and its complications, including diabetic ketoacidosis (DKA). Short-term benefits also include improved academic performance and school attendance, reduced hospital admissions and greater satisfaction with services
- improve the quality of services provided to children and young persons with diabetes through the review of aggregated data at both the regional and national level, and acting on the outcome
- ensure regular retinal screening[4] of children and young persons with diabetes, as appropriate, which enables early diagnosis and treatment and reduces the complications from diabetic retinopathy
- ensure all young people with diabetes will experience a smooth transition of care from paediatric diabetes services to adult diabetes services, whether hospital or community based, either directly or via a young person's clinic.

[4]Retinal screening can be delayed until puberty, or five years after diagnosis, whichever is the earlier (Ministry of Health. 2008. National Diabetes Retinal Screening and Grading System and Referral Guidelines 2006. Wellington: Ministry of Health, p. 6).

2.2. Māori Health

Refer to the tier two Diabetes Services, the tier one Specialist Medical and Surgical Services and tier one Services for Children and Young People service specifications.

3. Service Users

All eligible children and young persons from initial clinical diagnosis of type 1 or 2 diabetes up until the date of their 19th birthday.

4. Access

4.1 Entry criteria

The child or young person will have a confirmed clinical diagnosis of diabetes and be referred to the Service.

The *Child Health Strategy* (1998)[5] defines a child as being aged from before birth to 14 year. The strategy further identifies that young people up to the age of 18 years should be given care within the most developmentally appropriate services, as young people have specific developmental needs which require that they are cared for in youth appropriate settings.

4.2 Exit criteria

- ***Transition[6] from Paediatric to Adult Services***

  As diabetes is a chronic and currently incurable condition, it is anticipated that children and young people eligible to receive the Service will remain so up till their 19th birthday, until their transition to adult diabetes services. The transition will be organised in partnership with each young person and at an age appropriate to and agreed with them.

  The age of transition will not be the same for every young person, and it is important that arrangements are centred on the young person rather than the Service. Each young person must be individually assessed and their services matched and co-ordinated to their needs. The process is negotiated with the child/young person and the needs of parents, carers and families and whānau addressed.

- ***Transfer:***

  Children and young persons living with a diagnosis of type 1 diabetes who transfer into the District area are accommodated into the new outpatient setting to be seen by a diabetes multi-disciplinary team.

4.3 Time

Children and young persons:

- with diabetes will be referred to the Service within recommended timeframes[7] for retinal screening

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[5] Ministry of Health. *Child Health Strategy*. Wellington: Ministry of Health. 1998.
[6] Transition is an explicit, purposeful, planned, yet flexible movement of a young person from a child-centred to adult-orientated healthcare system.
[7] as indicated in the *National Diabetes Retinal Screening Grading System and Referral Guidelines [2006]* for retinal screening.

- who have already been living with a diagnosis of type 1 diabetes, who transfer into the District area, are accommodated into the new outpatient setting within a normal clinic cycle (three months) to be seen by a diabetes multi-disciplinary team.

4.3.1 Children and young persons with newly diagnosed type 1 diabetes:

- are to be seen promptly, in an appropriate paediatric diabetes service. (Delay in instituting insulin is associated with increased risk and severity of DKA and increased hospital stay)
- ideally within one month of diagnosis a formal outpatient appointment is arranged with the diabetes specialist doctor / paediatric endocrinologist within a multi-disciplinary team
- every 3 months, follow-up at clinic. Thereafter, the frequency of appointments will be determined by the needs of the child/young person in conjunction with the direction provided by the multi-disciplinary team.

4.3.2 *Children and young persons with newly diagnosed type 2 or other categories of diabetes may not be admitted to hospital upon diagnosis, but ideally require:*

- within one month of diagnosis, a formal outpatient appointment arranged with the diabetes specialist doctor / paediatric endocrinologist within a multi-disciplinary team
- every three months, a review undertaken by a diabetes multi-disciplinary team
- every 3 months, a follow-up at clinic thereafter arranged until the follow up appointment timing can be extended at the direction of the multi-disciplinary team.

5. Service Components

5.1 Process

5.1.1 Referral to Another Service or Provider

Children and young persons with diabetes will be referred to:

- another service (when the required level of care is unable to be provided) as part of a comprehensive multi-disciplinary team approach, to ensure that the individual receives clinical care and social support that best meets their diabetes-related needs
- a new District diabetes service provider, when an individual moves/changes domicile. In this event, the health service must ensure, through the timeliness of referral and the information provided, that the continuity of care for the child or young person is maintained.

5.1.2 Access to the Service for Initial stabilisation for new type 1 diabetes

- All new children and young persons with type 1 diabetes need to have access to a knowledgeable staff member on a daily basis for insulin dose adjustment. This access method will differ according to local service availability, and may be through:
  - the District switchboard
  - or preferably, by direct phone access with a member of the paediatric diabetes service

- or diabetes service as provided locally.

5.1.3 Acute access ongoing

- The Service makes provision for children and young persons and families to have ongoing acute access for issues such as sick day advice, DKA, pre-operative advice and insulin dosing. This acute access will differ according to local service availability and may be provided through:
  - the District switchboard and paediatric registrar (or equivalent)
  - or directly to members of the paediatric diabetes service
  - or a designated health professional on a rostered and rotating basis
  - or diabetes service as provided locally.

5.1.4 A Multi-Disciplinary Team (MDT)

A MDT is required to oversee the provision of care for all children and young persons with diabetes. In smaller Districts this may be achieved through participation in a regional paediatric diabetes service, to augment the local multidisciplinary service. For example, because of the specialist knowledge required to provide high quality diabetes services to children and young persons with diabetes services, Districts should collaborate to provide regionally linked services, including sharing staff, resources, education and audit practices.

The MDT personnel/activities will include:

- every child and young person with diabetes being seen at least once a year by a diabetes nurse specialist, a paediatric endocrinologist
- a dietitian with expertise in children and young persons with diabetes
- psychological services are recommended
- a forum for review of case load, outcome measures for overall performance of diabetes services and for specific support for services, such as addressing local difficulties with intensive treatment, substance use and/or specialist psychological support
- an educational forum for sharing good clinical practice, crisis limitation and managed clinical care; and
- the collection of robust information on numbers of children and the incidence of new cases (type 1 and other forms), audit data regarding clinic attendance, HbA1c targets and surveillance of complications / related conditions to inform further development of service provision.

5.1.5 Continuing care

Includes:

- ongoing proactive clinical assessment, education about self-care, support and access to advice. Care must respond to ongoing needs over time, taking account of the individuals' development and maturity
- support to families in making informed choices about treatment and, if they cannot provide it themselves, advice as to where treatment can be obtained

- glycaemic control[8] (to prevent long-term complications) to be undertaken in the context of promotion of physical health as well as psychological and emotional well-being.

5.2 Settings

The Service is provided in a setting that is most appropriate to achieve the best possible health outcomes for children, young persons with diabetes, and their families and whānau. The Service will generally be delivered primarily as out-/in-patient services but also through key community settings, such as schools and diabetes camps.

Ideally the Service is provided in appropriate community settings as close to the person's home as possible.

Follow-up education may be conducted in a variety of appropriate settings such as the home, school, and work-place.

5.3 Service Levels

5.3.1 Primary / Secondary Interface

Primary health care providers are unlikely to care for sufficient numbers of children and young people with diabetes to develop the necessary specialist competences.

It is recommended that Districts have a formal written agreement with primary health care providers documenting responsibilities, including arrangements for shared access to records and 24-hour access to specialist diabetes advice.

5.3.2 Specialist Management of Diabetic Ketoacidosis (DKA)

Whenever possible a specialist/consultant paediatrician with training and expertise in the management of DKA should direct management of the child or young person with diabetes.

The protocols[9] are seen as a guide, and if the service providers are unsure of how to proceed, they should contact an expert in this field.

The child or young person with diabetes should be cared for in a unit that has experienced nursing staff trained in monitoring and management of diabetic ketoacidosis and clear written guidelines for managing diabetic ketoacidosis.

Immediate treatment in an intensive care unit (paediatric if available), a High Dependency Unit (HDU) or a children's ward specialising in diabetes care with equivalent resources and supervision and discussion with a Paediatric Intensive Care Unit Consultant should be considered for children and young persons with signs of severe DKA)[10].

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[8] . The target is an HbA1c of routinely <7% or 53 in the new units without frequent disabling hypoglycaemia.

[9] Protocols are found on the website: http://www.ispad.org/FileCenter.html?CategoryID=5 and http://www.starship.org.nz/Clinical%20Guideline%20PDFs/Diabetic%20Ketoacidosis.pdf

[10] severe acidosis pH<7.1, with marked hyperventilation, severe dehydration with shock, depressed sensorium with risk of aspiration from vomit, very young age or where staffing levels on the wards are insufficient to allow adequate monitoring.
http://www.starship.org.nz/Clinical%20Guideline%20PDFs/Diabetic%20Ketoacidosis.pdf

Additional resources available are from the International Society for Paediatric and Adolescent Diabetes (ISPAD)[11] and the Australasian Paediatric Endocrine Group (APEG), *Clinical Practice Guidelines: Type 1 Diabetes in Children and Adolescents (2005)*[12]. Furthermore, national advice is available from Starship Childrens' Health Auckland District on the treatment of Diabetic Ketoacidosis (DKA).

5.4 Support Services

It is important that the Service is well integrated with other general and specialist services and that there is effective consultation, liaison and referral between services and sub-specialities.

The Service is supported by, but not limited to, the following service providers:

- clinical support services such as:
  - laboratory services that can provide frequent and accurate measurement of biochemical variables
  - pharmaceutical services
  - imaging services
  - a paediatric HDU or similar intensive observation area, as available.
- allied heath support services such as:
  - social workers
  - orthotics services
  - podiatry services
- ancillary services
- interpreting services (including sign language).

5.5 Key Inputs

The staff employed to deliver the Service should have experience in paediatric and or adolescent service provision and have access to clinical peer review (where necessary).

Nursing Staff

Experienced nursing staff should be trained in monitoring and management of diabetic ketoacidosis.

It is recommended that Districts consider utilising the Diabetes Nurse Specialist Section of the New Zealand Nurses' Organisation's endorsed National Diabetes Nursing Knowledge and Skills Framework (NDNKSF) as a framework for developing nursing skills. Clinical Nurse Specialists in specialist services should achieve a minimum of level four if working with the NDNKSF.

Specialist staff

Diabetologists, endocrinologists and paediatricians.

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[11] http://www.ispad.org/FileCenter.html?CategoryID=5 and http://www.nhmrc.gov.au/publications/synopses/cp102syn.htm

Key Worker

A named key worker, who oversees care and offers support through transition as and when appropriate, should be identified for each child or young person. Primary health care teams must be kept informed of transition arrangements, with full access to care records, (where available) or up-to-date care-plans.

Transition Clinics

For young people with diabetes, a joint partnership between the paediatric and adult specialist diabetes service teams and the primary health care team is necessary to ensure effective and comprehensive care for young persons as they mature. Where possible, transition clinics will comprise a paediatrician, diabetologist, nurse and dietitian. Ideally, a psychologist, social worker or family therapist will also be in attendance. If the principal source of ongoing care is to be primary care, then the primary health care service needs to be represented in this transition clinic and process.

Multi-Disciplinary Team (MDT)

The MDT oversees the provision of care for all children and young persons with diabetes and is made up of the following staff:

- diabetes nurse specialist with expertise in children and young persons with diabetes.
- paediatric endocrinologist
- dietitian with expertise in children and young persons with diabetes
- psychological support

Note: In smaller Districts the MDT may be achieved through participation in a regional paediatric diabetes service, to augment the local multidisciplinary service.

6. Service Linkages

Refer to the tier two General and Community Paediatric Services service specification. It is important that the Service is well integrated with other general and specialist paediatric services and that there is effective consultation, liaison and referral between services and sub-specialities. Linkages include, but are not limited to the following:

Service Provider	Nature of Linkage	Accountabilities
Other health care professionals, specialists and registered medical practitioners	Consultation and referral Planning funding and delivery of services	Assessment, diagnosis, treatment / care and intervention (monitoring / evaluation / supervision) that supports seamless service delivery and continuity of care Planning, funding monitoring and evaluation of services
Pharmacies and their organising bodies	Refer and liaise re: individual child or young person as appropriate	Work with other relevant professionals whenever there are concerns relating to a particular child
Community Nurse, Paediatric Nurse, School Nurse, Regional	Referral and consultation	Assessment, treatment and intervention that supports seamless service delivery and continuity of care.

Service Provider	Nature of Linkage	Accountabilities
Public Health Nurse, Nurse Practitioners		
Ministry of Education and early childhood education centres / schools – including 'hospital schools	Facilitate service access and participation	Play therapists / activity specialists – peer support
Work and Income New Zealand	Facilitate service access and participation	Assessment and intervention that supports seamless service delivery, continuity of care and enhances a family's ability to manage the child's condition Child disability allowance / funding
Diabetes Youth NZ Diabetes NZ	Facilitate access to care and participation with peers	In conjunction with the Ministry of Health Diabetes camps / youth camps / family home / respite care. Facilitate education and psychosocial adjustment to living with diabetes. Facilitate access to care and participation with their peers
Well Child/Tamariki Ora providers (WCP).	Liaise and work with the relevant WCPs	Work with other relevant professionals whenever there are concerns relating to a particular child.
Family Start (FS)	Liaise and work with the relevant FS worker.	To ensure seamless delivery for high-need families or to provide education, information or expert opinion.
Early Childhood Development Service	Refer or liaise re individual children as appropriate.	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular child.
Youth organisations in particular those with a health focus.	Refer or liaise re individual children as appropriate.	Provide education, information or expert opinion. Work with other relevant professionals whenever there are concerns relating to a particular young person.
Sport and Recreation New Zealand / Hillary Commission etc / consumer groups / NGOs / Active Families programme	Facilitate access to care and participation with peers	Promoting wellness in conjunction with the Ministry of Health

7. Exclusions

Children and young people who have no clinical diagnosis of diabetes.

8. Quality Requirements

8.1 General

Refer to the tier two Diabetes Services service specification for general quality requirements.

Evidence-based clinical guidelines or recognised clinical best practice recommended are: the International Society for Paediatric and Adolescent Diabetes (ISPAD)[13] and the Australasian Paediatric Endocrine Group (APEG), *Clinical Practice Guidelines: Type 1 Diabetes in Children and Adolescents (2005)*[14]. Furthermore, national advice is available from Auckland District, Starship Children's Health on the treatment of DKA.[15]

8.2 Service Responsiveness

The following must also be considered for children and young people with diabetes and their family and whanāu when providing the Service:

- adequate time should be allowed for explanations and discussion
- adequate time where ethnicity, culture or language may present barriers
- additional assistance for those who might not see themselves as able to actively participate in their own care
- information on how to access care and support at any time.

9. Reporting Requirements

The Service must comply with the requirements of national data collections where available. The District Health Boards will collect the data electronically as defined in the minimum dataset in Appendix A. Districts will provide the information in Appendix B to the Local Diabetes Teams (LDT) by the 20th July.

The information will contribute to the review of information and the development and efficacy of the Service and recommend strategies to improve the quality of diabetes services for children and young persons to the Districts.

Service Specification	Reporting by PHO	Reporting District	Reporting to LDT Frequency	Reporting to LDT Date
Children and Young Persons Diabetes Services	N/A	Purchase Unit data reporting via Non Admitted Patient Collection (NNPAC) Appendix A and B.	Annually	by 20th July

10.Service Planning Information

[13] http://www.ispad.org/FileCenter.html?CategoryID=5
[14] http://www.nhmrc.gov.au/publications/synopses/cp102syn.htm
[15] http://www.starship.org.nz/Clinical%20Guideline%20PDFs/Diabetic%20Ketoacidosis.pdf

The Royal College of Nursing (RCN)[16] in the United Kingdom, recommends a maximum ratio of 70 patients per full-time equivalent paediatric diabetes nurse), required to provide the appropriate quality service.

14.2 APPENDIX 2: Children and Young Persons, Diabetes Minimum Data Set

These items should be recorded in the Districts electronic records.

District

1.1 District

Definition:	Code for District (formerly DHB)
Requirement:	Required

1.2 Hospital

Definition:	Code for the Hospital
Requirement:	Required

1.3 NameTitle

Definition:	Title is an honorific form of address preceding a name, used when addressing a person. This may include Mr, Miss, Master etc.
Requirement:	Optional

1.4 GivenName

Definition:	The GIVEN identifying name
Requirement:	Required

1.5 MiddleNames

Definition:	The second and further given names or initials there of
Requirement:	Required

1.6 Surname

Definition:	The Family Name as distinguished from her/his given and second and subsequent name(s)
Requirement:	Required

1.7 Parents / Caregivers (First / Last) Names

Definition:	Full contact details

[16] 17 Royal College of Nursing (RCN) *Specialist nursing services for children and young people with diabetes* (2006) www.rcn.org.uk/publications/pdf/specialist_nursing_services_for_children_and_young_people_with_diabetes.pdf

First / Last Names	
Address	
Phone (Home)	
Phone (Work)	
Mobile	
Email	
Requirement:	Required

1.8 Siblings and Year of Birth

Definition:	Names and year of birth
Requirement:	Required

1.9 Consultant

Definition:	Full Name
Requirement:	Required

1.10 General Practitioner

Definition:	Full Name
Address	
Contact Number	
Requirement:	Required

Patient Identification Type Element

2.1 Patient External ID

Definition:	This must be a valid NZHIS HCU number (NHI)
Requirement:	Required

2.2 Date of Birth

Definition:	Used to confirm ID, and calculate age
Requirement:	Required

2.3 Gender

Definition:	Gender
Requirement:	Required
Verification rules:	"F" = Female "M" = Male

2.4 PHO Registration Status

Definition:	Patient's current enrolment status with their PHO
Requirement:	Optional

Verification rules:	"E" = Enrolled "R" =Registered "C" =Casual

2.5 Prioritised Ethnicity

Definition:	Ethnicity. If only one ethnicity code is provided it should be prioritised ethnicity
Verification rules:	11=New Zealand European/Pakeha 12=Other European 21=New Zealand Maori 31=Samoan 32=Cook Island Maori 33=Tongan 34=Niuean 35=Tokelauan 36=Fijian 37=Other Pacific Islands (not listed) 30=Pacific Island not further defined 43=Indian 43112=Fijian Indian 441=Sri Lankan 44414=Pakistani 44412=Bangladeshi 44411=Afghani 44413=Nepalese 44415=Tibetan 42=Chinese 442=Japanese 443=Korean 41=Southeast Asian 40=Asian not further defined 51=Middle Eastern 52=Latin American / Hispanic 53=African 54=Other 10=European Not Further Defined

	44=Other Asian (Code 44) 444=Other Asian (Code 444)

2.6 Ethnicity 2

Definition:	As above
Requirement:	Optional

2.7 Ethnicity 3

Definition:	As above
Requirement:	Optional

2.8 Geo Code

Definition:	Geographical Code for the meshblock of the patient's usual residential address
Requirement:	Required

2.9 Deprivation Quintile

Definition:	Deprivation Quintile for geocoded meshblock
Requirement:	Required

3. Patient Consent

3.1 Consent

Definition:	Consent confirming the patient's wish to be included in the service
Requirement:	Required

4. Clinical Data

4.1 Type Of Diabetes

Definition:	Type of Diabetes
Requirement:	Required
Verification rules:	0 = No diabetes 1 = Type 1 2 = Type 2 (incl type 2 on insulin) 3 = Type unknown 4 = Gestational 6 = Other known type 7 = IGT / IFG 9 = Diabetes status unknown

4.2 Date of Diagnosis

Definition:	Date of confirmed diagnosis
Requirement:	Required

4.3 Antibody Status at Diagnosis

Definition:	Antibody status at diagnosis
Requirement:	Required
Verification rules:	0 = Unknown 1 = Insulin 2 = IA2 3 = AntiGad 4 = Islet Cell AB

4.4 Genetic Markers

Definition:	Antibody status at diagnosis
Requirement:	Optional

5. Diabetes Clinical Data Elements

5.2 HbA1c

Definition:	HbA1c reading. Expressed to one decimal place (%)
Requirement:	Required

4.3 HbA1c Date

Definition:	Date of HbA1c reading.
Requirement:	Required

Clinical Data Recorded / Updated at Each Visit (As required)

4.5 Height

Definition:	Height of patient without shoes (cm)
Requirement:	Required

4.6 Weight

Definition:	Weight of patient dressed without shoes (kg)
Requirement:	Required

4.7 Waist Circumference

Definition:	Waist circumfrence taken midway between lower rib margin and the iliac creat to the nearest 1 cm
Requirement:	Optional

4.8 Smoking History

Definition:	Is the patient a smoker?
Requirement:	Required

Verification rules:	0 = No - never (default) 1 = Yes

4.9 Hypoglycaemic Attacks

Definition:	Number of hypoglycaemic events in the previous 3 months?
Requirement:	Optional
Verification rules:	0=Never 1=Less than 1 per month 2=Less than 1 per week 3=More than 1 per week

4.10 Diabetic Ketoacidosis Attacks (DKA)

Definition:	Number of diabetic ketoacidosis events in the previous 3 months?
Requirement:	Optional
Verification rules:	0=Never 1=Less than 1 per month 2=Less than 1 per week 3=More than 1 per week

4.11 Blood Glucose Self Monitoring

Definition:	Is the patient self monitoring for blood glucose?
Requirement:	Optional
Verification rules:	0 = Never 1 = < 1 test / day 2 = 1-2 tests / day 3 = 2-3 tests / day 4 = 4+ tests / day

4.12 Type of Blood Glucose Monitor

Definition:	Type of blood glucose meter used?
Requirement:	Optional
Verification rules:	Name of Blood Glucose Monitor

4.13 Insulin

Definition:	Is patient being treated with insulin?
Requirement:	Required
Verification rules:	0 = No (default) 1 = Nocturnal only 2 = Once daily

	3 = Twice daily 4 = Multiple injections 5 = Insulin pump 6 = Other insulin (eg prn)

4.14 Insulin Type Used

Definition:	Type of insulin used by patient?
Requirement:	Required
Verification rules:	0 = Lis / NovoR 1 = ActR / HR 2 = PP/HN 3 = PenM 4 = Glargine

4.15 Total Daily Dose of Insulin

Definition:	Total daily dose of insulin?
Requirement:	Required
Verification rules:	0 = None 1 = 0 to 10 units 2 = 11 to 20 units 3 = 21 to 30 units 4 = 31 to 40 units 5 = > 41 units

4.16 Stolic Blood Pressure Today

Definition:	Today's sitting systolic blood pressure (mm Hg)?
Requirement:	Required

4.17 Diastolic Blood Pressure Today

Definition:	Today's sitting diastolic blood pressure (mm Hg)?
Requirement:	Required

4.18 State of Fingers

Definition:	Integrity of finger tips?
Requirement:	Required
Verification rules:	0=Not examined 1=Normal 2=Abnormal (Left)

	3=Abnormal (Right) 4=Abnormal (Both)

4.19 Presence of Lipohypertrophy

Definition:	Presence of Lipohypertrophy?
Requirement:	Required
Verification rules:	0=Not examined 1=Normal 2=Abnormal (Left) 3=Abnormal (Right) 4=Abnormal (Both)

4.20 Carbohydrate Counting for Insulin Doses

Definition:	Carbohydrate counting for insulin doses?
Requirement:	Required
Verification rules:	0 = No 1 = Yes 2 = Occasionally

4.21 Metformin

Definition:	Is patient being treated with Metformin?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Contra-indicated / not tolerated 2 = On maximum tolerated dose 3 = Yes

4.22 Sulphonylurea

Definition:	Is patient being treated with Sulphonylurea?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Contra-indicated / not tolerated 2 = On maximum tolerated dose 3 = Yes

4.23 Glitazone

Definition:	Is patient being treated with Glitazone?
Requirement:	Optional
Verification rules:	0 = No (default)

	1 = Contra-indicated / not tolerated 2 = On maximum tolerated dose 3 = Yes

4.24 Acarbose

Definition:	Is patient being treated with Acarbose?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Contra-indicated / not tolerated 2 = On maximum tolerated dose 3 = Yes

4.25 ACE Inhibitor

Definition:	Is patient being treated with ACE Inhibitor?
Requirement:	Required
Verification rules:	0 = No (default) 1 = Contra-indicated / not tolerated 2 = Yes

4.26 Nicotine Replacement Therapy

Definition:	Is patient being treated with nicotine replacement therapy (i.e. current smoker)?
Verification rules:	0 = Never Offered (Default) 1 = Offered but declined 2 = Prescribed previously 3 = Currently on NRT 4 = Prescribed today 5 = Contra-indicated / not tolerated

4.27 Other Drugs

Definition:	Is patient being treated with other drugs?
Requirement:	Optional
Verification rules:	List drugs

4.28 Date Last Retinal Screening (As per Guidelines 2006)

Definition:	Date of last retinal examination or ophthalmologist review?
Requirement:	Required

4.29 Retinal Screening Interval

Definition:	Planned interval between retinal screening or ophthalmologist appointment (from last report)?
Requirement:	Optinal
Verification rules:	1=Every 2 years (default) 2=Every Year 3=Every 6 months 4=Other 5= Not required (eg blind) 6= Not known

4.30 Eye Referral Today

Definition:	Has the patient been given an eye referral today?
Requirement:	Optional
Verification rules:	0 = No 1 = No - in a screening programme 2 = No - under ophthalmologist care 3 = Yes to retinal screening programme 4 = Yes to ophthalmologist 5 = Not required (eg blind)

4.31 Retinopathy Worst Eye

Definition:	Retinopathy result for worst eye?
Requirement:	Optional
Verification rules:	R0 = None R1 = Minimal *(< 5 microaneurysms or dot haemorrhages)* R2 = Mild *(> 4 microaneurysms and dot haemorrhages. Exudates > 2DD from centre of macula*) R3 = Moderate *(Any features of Mild. Blot or larger haemorrhages. Up to 1 Quadrant of Venous Beading*) R4 = Severe *(One or more of: definite IRMA, 2 quadrants or more of venous beading, or 4 quadrants of blot or larger haemorrhages*) R5 = Proliferative *(One or more of: Neovascularisation, Sub Hyaloid or Vitreous Haemorrhage, Traction Retinal Detachment or Retinal Gliosis*) RT = Stable treated retinopathy PO = Pregnant no retinopathy or macular disease P1 = Pregnant minimal retinopathy, no macular disease P2 = Pregnant more than minimal retinopathy and/or macular disease QI = Clarity / view inadequate NS = Never screened U = Unknown

4.32. Maculopathy Worst Eye

Definition:	Maculopathy result for worst eye?
Requirement:	Optional
Verification rules:	M0 = None M1 = Minimal M2 = Mild *(Microaneurysms and haemorrhages within 1DD*) M3 = Mild+ *(Exudates and or thickening within 2DD but > 1DD)* M4 = Moderate *(Exudates or retinal thickening within 1DD)* M5 = Severe *(Exudates or retinal thickening involving the foveola)* MT = Stable, treated macular disease QI = Clarity / view inadequate U = Unknown

4.33 Feet Sensation

Definition:	Microfilament or vibration perception threshold?
Requirement:	Required
Verification rules:	0=Not examined 1=Normal 2=Abnormal (Left) 3=Abnormal (Right) 4=Abnormal (Both)

4.34 Feet Circulation

Definition:	Diminished or absent pulses?
Requirement:	Required
Verification rules:	0=Not examined 1=Normal 2=Abnormal (Left) 3=Abnormal (Right) 4=Abnormal (Both)

4.35 Criteria For High Risk Foot

Definition:	Is there criteria for high risk foot?
Requirement:	Optional
Verification rules:	0=No 1=Yes

4.36 Diagnosed Metabolic Syndrome

Definition:	Is there diagnosed metabolic syndrome?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Yes

4.37 Diagnosed Celiac Disease

Definition:	Is there diagnosed Celaic Disease?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Yes

4.38 Diagnosed Thyroid Disease

Definition:	Is there diagnosed Hypothyroidism / Hyperthyroidism?
Requirement:	Optional

Verification rules:	0 = No (default) 1 = Yes

4.39 Pregnant

Definition:	If gender is female, is the patient pregnant?
Requirement:	Optional
Verification rules:	0 = No (default) 1 = Yes

4.40 Total Cholesterol

Definition:	Cholesterol reading?
Requirement:	Optional

4.41 Triglyceride

Definition:	Triglyceride reading?
Requirement:	Optional

4.42 Serum Creatinine

Definition:	Serum Creatinine reading expressed to nearest Umol/L?
Requirement:	Optional

4.43 Urine Albumin To Creatine Ratio

Definition:	Urine Albumin to Creatine ratio reading if clinically indicated - (mg/mmol Creatinine)?
Requirement:	Optional

4.44 Overnight Albumen Excretion Rate

Definition:	Overnight Albumen Excretion Rateing?
Requirement:	Optional

4.45 Long Term Condition

Definition:	Has the patient have an additional long term condition(s)?
Requirement:	Required
Verification rules:	List in order of priority

4.46 Disability

Definition:	Has the patient have an additional disability?
Requirement:	Required
Verification rules:	List in order of priority

5. Admissions / Attendances at Hospital

5.1 Admission to Hospital

Definition:	Admission to hospital?
Requirement:	Compulsory
Verification rules:	0=Never 1=Less than 1 per month 2=Less than 1 per week 3=More than 1 per week

5.2 Readmission to Hospital

Definition:	Readmission to hospital?
Requirement:	Compulsory
Verification rules:	0=Never 1=Less than 1 per month 2=Less than 1 per week 3=More than 1 per week

5.3 Inpatient Surgical Treatment

Definition:	Inpatient surgical treatment?
Requirement:	Compulsory
Verification rules:	List surgical treatments

5.4 Attendance at a Multidisciplinary Team Meeting

Definition:	Attendance at a multidisciplinary team meeting?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.5 Attendance at a Clinic held by a Diabetes Nurse Specialist

Definition:	Attendance at a clinic held by a Diabetes Nurse Specialist?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.6 Attendance at a Clinic held by a Dietitian

Definition:	Attendance at a clinic held by Dietitian?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.7 Attendance at a Clinic held by a Paediatrician with a special interest in diabetes

Definition:	Attendance at a clinic held by Paediatrician with a special interest in diabetes?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

Attendance at a Clinic held by a Paediatric Endocrinologist

Reason:	Attendance at a clinic held by a Paediatric Endocrinologist?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.9 Attendance at a Clinic held by a Physician with an interest in diabetes / adult endocrinologist / diabetes specialist, for those who are transitioning to adult services

Definition:	Attendance at a clinic held by a Physician with an interest in diabetes / adult endocrinologist / diabetes specialist, for those who have transitioned to adult services?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.10 Attendance at a Clinic held by a Psychologist

Definition:	Attendance at a clinic held by a Psychologist?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.11 Attendance at a Clinic held by a Counsellor

Definition:	Attendance at a clinic held by a Counsellor?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.12 Attendance at a Clinic held by a Social Worker

Definition:	Attendance at a Clinic held by a Social Worker?
Requirement:	Compulsory
Verification rules:	0=Never 1=Quarterly 2=Annual

5.12 Attendance at a Diabetes Camp

Definition:	Attendance at a Diabetes Camp?
Requirement:	Compulsory
Verification rules:	0=Never 1=Annual

6. Other

6.1 Education

Definition:	Education?
Requirement:	Optional
	Parents at 2 years from diagnosis
	Child at 11 years
	Child at 15 years
	Own testing ……..Years
	Own injectins Years

6.2 Days of school in the previous 3 months

Definition:	Days of school in the previous 3 months?
Requirement:	Optional
Verification	Number

6.3 Participation in a Research Study

Definition:	Participation in a Research Study?
Requirement:	Optional
Verification rules:	0=No 1=Yes
Name of research study	

14.3 APPENDIX B: Aggregated Diabetes Data for Reporting

AGGREGATED DIABETES DATA TO BE REPORTED TO LOCAL DIABETES TEAMS (or equivalent) BY Districts QUARTERLY

Data	Maori	Pacific	European	Other
Total number with diabetes				
Total number with type 1 diabetes				
Total number with type 2 diabetes				
Total number with “other” diabetes?				
Number of “new Type 1 diabetics” per annum?				
Number of “new Type 2 diabetics” per annum?				
HbA1c Mean <5 years of age				
HbA1c Mean 5 to 12 years of age				
HbA1c Mean > 12 years of age				
Average number of visits per year < 5 years of age				
Average number of visits per year 5 to 12 years of age				
Average number of visits per year >12 years of age				
Number of individuals with diagnosed diabetes presenting with DKA (each admission counted as one individual) per annum?				
Number of individuals presenting with hypoglycaemia (each admission counted as one individual) per annum?				

Data	Maori	Pacific	European	Other
Number eligible for retinal screening every 2 years?				
Number who have had retinal screening in last 2 years?				
Number with persistent micro-albumunia and / or on treatment per annum?				
Number with Type 1 Diabetes and NZ Dep Quintile 5 per annum?				
Number with Type 2 Diabetes and NZ Dep Quintile 5 per annum?				
Number seen by a Diabetes Nurse Specialist for an Annual Review / Get Checked per annum?				
Number seen by a Dietitian per annum?				
Number seen by a Paediatrician with a special interest in diabetes per annum?				
Number seen by a Paediatric endocrinologist per annum?				
Number seen by a Psychologist / Counsellor / Social Worker per annum?				
Number seen by “other services,” other than a diabetes related clinician per annum?				
Number registered with the national database				