AGE SPECIFIC SCREENING and PREVENTATIVE MEDICINE
NEW ZEALAND GENERAL PRACTICE 2018

FEMALE		NON-SPECIFIC		MALE	
		6/52	Six week check Immunisation-Infant		
		3/12	Immunisation-Infant		
		5/12	Immunisation-Infant		
		15/12	Immunisation-Child		
		2-5	Weight, Height, BMI		
		4	Immunisation-Child B4 School Check		
		<5	Teeth – Lift the Lip		
		9-26	Immunisation-HPV		
		11-12	Immunisation-Child		
		12-19	HEEADSSSS		
		15+	Smoking Alcohol	15+	Testicular Cancer
20-69	Cervical Screening	20+	Mental Health		
		20+	Melanoma (E)		
		25+	Hepatitis B (E)		
		25+	Heart & Diabetes (R) Kidney (R)		
		<30	Chlamydia (R)	30+	Heart & Diabetes (E) Kidney (E)
		35+	COPD (R)		
40+	Heart & Diabetes (E) Kidney (E)	45	Immunisation-Td		
45-69	Breast Screening	45+	Glaucoma Macular Degeneration		
		50+	Abdominal Aortic Aneurysm (R)	50-70	Prostate cancer
		50+	Osteoporosis (R)		
		50-69	Peripheral-Vascular Disease (R)		
		60-74	Bowel Cancer		
		65-80	Immunisation-Shingles		
		65+	Immunisation-Elderly Atrial Fibrillation Falls		

GLOSSARY

Age
Regular Age for Screening and/or Preventative Management

- Therefore, may 'exclude' high-risk patients who may require 'Earlier' input E.g.
  - 'Positive family history'
  - 'Annual Influenza Immunisation' for pregnant women or those with a chronic medical condition as defined by Pharmac criteria – Diabetes etc.

Underline
Immunisation – type of vaccine

(E)
Ethnicity

- Screening may be 'Earlier' or 'Later' or 'Specific' to an Ethnic Group.

(R)
Risk Factor

- Screening based on the presence of a risk factor for a disease.

RED FONT – Change in Recommendation for 2018

GREEN FONT - Screening Opportunity – Age is an Author Recommendation

- The Author has reviewed the disease literature, morbidity and mortality statistics and has made an assessment that an open discussion maybe warranted with some patients. E.g.
  - Education on Patient Regular Self Examination
  - Patient wanting a 'Full Check Up '
  - 'Well Man Check' or 'Well Woman Check'

Exclusions

- **Family History**
  As mentioned above, this article 'excludes' high-risk patients who may require 'Earlier' screening E.g. Family history of Bowel Cancer.
- **Screening in a hospital setting, birthing centre or at home** E.g.
  - Newborn Hearing Screening
  - Newborn Metabolic Screening

Screening For and Against

- Notes including references have been documented where screening is debatable. E.g.
  - Melanoma
  - Prostate Cancer
  - Testicular Cancer

REFERENCES and EXPLANATORY NOTES

Abdominal Aortic Aneurysm

- **Age:** **50+**
  Reference: www.bpac.org.nz **October 2016**
  Targeted testing for abdominal aortic aneurysm

- Abdominal aortic aneurysms (AAA) are present in 5–10% of older men and 1–2% of older women, and cause the death of five men and two women per 100,000 annually.
- The rate of spontaneous AAA rupture increases with aneurysm size. One study found aneurysms 5.0–5.9 cm had an annual rupture risk of 9.4%; the risk increased to 32.5% for aneurysms of 7.0 cm or more.
- Spontaneous AAA rupture is associated with a high mortality rate (80%), and emergency surgery following AAA rupture has a significantly higher mortality rate (30–65%) than elective AAA repair (3–10%).
- General practitioners can identify patients at risk of AAA. Early diagnosis allows patients to be offered surgery when the risk of spontaneous rupture outweighs the risk of surgery, usually when the AAA diameter is greater than 5.5 cm.
- AAA may be detected by palpation in patients with low or normal body mass, but it is usually detected by abdominal ultrasound.
- Testing for AAA in primary care - Opportunistic investigation for AAA with abdominal ultrasound should be considered in people at increased risk. The patient risk profile can be based on the following factors:
  - The risk of AAA is highest in those aged over 50 years with either known cardiovascular disease or CVDRA >10%.
  - AAA prevalence is higher in males, current and past smokers, those with a family history of AAA, and increases with age.
  - Māori have increased risk of AAA at a younger age and equal numbers of males and females are affected.

Peer Review: **Dr Carl Muthu**
Vascular Surgeon
Auckland City Hospital

Reference: **www.nhs.uk**

- The United Kingdom has an AAA screening programme for men aged 65. The NHS AAA Screening Programme was set up in England in 2009 and has been offered throughout the UK since the end of 2013.
- Men aged over 65 are far more likely to have an AAA than women or younger men, so any man registered with a GP will receive a letter inviting him for screening in the year he turns 65.
- Dr Carl Muthu believes that 50 is too young, and would recommend imitating the UK programme. Ie. Having an ultrasound for males at age 65.
  - The reason being: if you did an ultrasound on a heavy smoking male at age 50, you may give both yourself and the patient false reassurance if the scan was negative. He could still subsequently go on and develop an aneurysm, and rupture it at an age when he could lose significant life years.

- If however he has a normal scan at age 65, he is extremely unlikely to develop an AAA until he is very much older.
- The only possible exception to this could be Maori (especially smokers) who are likely to develop AAA at a younger age (potentially less than 65) and those with a family history of AAA at a young age.

Alcohol

- **Age:** **15+**
  Reference: **www.bpac.org.nz May 2016**
  Alcohol misuse: how to help patients in primary care

- In 2014–15, 18% of the population aged over 15 years reported misusing alcohol, many of whom view their drinking as normal and do not realise, or refuse to acknowledge that they have a problem.
- People of lower socioeconomic status, males and those of Māori or Pacific ethnicity are the most likely to misuse alcohol.
- Alcohol is a toxin, a carcinogen and an addictive psychotropic drug.
- Every year alcohol is estimated to cause between 600 and 1000 premature deaths in New Zealand.
- For every ten of these deaths, approximately four are due to injuries while under the influence of alcohol, three are due to alcohol-related cancers and three to long-term diseases attributable to alcohol.

Recommended upper limits of drinking

- Drinking alcohol is not recommended for children and pregnant women.
- For other adults, recommended upper limits of intake to reduce the long-term risk from drinking are:
  Females:
  - Two standard drinks* daily
  - AND
  - No more than ten standard drinks per week
  - AND
  - At least two days with no drinking

  Males:
  - Three standard drinks daily
  - AND
  - No more than 15 per standard drinks week
  - AND
- At least two days with no drinking.
- To reduce the risk of injury while under the influence of alcohol, females are recommended to have no more than four standard drinks on any one occasion, and males no more than five standard drinks on any one occasion.
- One standard drink in New Zealand equals 10 g of pure alcohol. Examples of standard drinks include a 100 mL glass of wine, a 330 mL can of beer or a 30 mL measure of spirits.

Recording alcohol use

- Record when patients have been asked about their alcohol use and their

reported levels of consumption.

- Revisit the topic at least annually for patients aged 15–25 years, every three years between the ages of 25 and 35 years and every five years for patients older than 35 years.
- More frequent enquiries are appropriate for patients identified as misusing alcohol or if there are suspicions that they are concealing their drinking.

ABC

- The ABC approach to smoking cessation is well known. A similar approach is recommended for identifying and assisting patients who are misusing alcohol: Ask, Brief intervention and Counselling.

Using questionnaires to detect hazardous drinking

- The AUDIT contains ten questions and a score of eight or more has a sensitivity of 84% and specificity of 83% for detecting alcohol use disorder.
- Clinicians, however, often find questionnaires rigid and in practice modify or adapt them according to patient responses.
- A pragmatic approach is to begin with a short series of questions, such as the AUDIT-C, which contains the first three questions of the AUDIT relating to:
    - How often alcohol is consumed
    - How many alcoholic drinks are usually drunk
    - How often six or more drinks are consumed in one session
- This preliminary approach is recommended by the Health Promotion Agency and the Royal New Zealand College of General Practitioners.
- Routinely handing patients the AUDIT-C while they are waiting to see a clinician is one way to initiate alcohol reduction interventions across a practice.

Atrial Fibrillation

- **Age:** **65+**
  Reference: **www.bpac.org.nz August 2017**
  An update on managing patients with atrial fibrillation

- Atrial fibrillation (AF) affects at least 5% of people in New Zealand aged over 65 years. Patients with AF have a higher risk of mortality, with a four to five-fold increased risk of stroke, a three-fold increased risk of heart failure and two-fold increased risks of myocardial infarction and dementia compared to people without AF.
- AF is often an incidental finding, detected by pulse palpation or routine blood pressure measurement and subsequent electrocardiogram (ECG) monitoring.
- As the incidence of AF increases with age, and the consequences of complications can be severe, clinicians should consider opportunistic assessment for AF in patients aged over 65 years.
- Patients with AF may also present with palpitations and associated symptoms such as feeling light-headed and dizzy, shortness of breath, chest discomfort, a reduced capacity for exertion or sleeping problems. The range and severity of symptoms and extent of changes in heart rate and rhythm at diagnosis can vary widely.

B4 School Check

- **Age:** **4**
  Reference: www.health.govt.nz

- The B4 School Check is a nationwide programme offering a free health and development check for four year olds.
- The B4 School Check aims to identify and address any health, behavioural, social, or developmental concerns which could affect a child's ability to get the most benefit from school, such as a hearing problem or communication difficulty.
- Some DHBs use a predominantly primary health care-based service delivery model, while others use a more public health or Well Child nursing-based approach. Regardless of the model of delivery, it is important that there is good engagement and collaboration between providers at all levels.

Bowel Cancer

- **Age:** **60 – 74**
  Reference: www.health.govt.nz

- The National Bowel Screening Programme is a free programme for men and women aged 60 to 74 years.
- More than 3000 New Zealanders are diagnosed with bowel cancer each year and more than 1200 die from it.
- There may be no warning signs that bowel cancer is developing.
- The National Bowel Screening Programme aims to save lives by detecting bowel cancer at an early stage when it can often be successfully treated.
- The programme is being rolled out progressively throughout New Zealand, starting in July 2017.*
  - This is an invitation-based screening programme.
  - To be invited, you must be:
    - aged 60 to 74 years
    - eligible for publicly funded health care.
- The screening test (faecal immunochemical test ie.**FIT** kit) is simple, clean and fast. You do it by yourself at home.
- Bowel screening is for people who don't have any symptoms of bowel cancer.
- If you have any **bowel symptoms** which concern you, please talk to your doctor straight away.

* Bowel screening will continue to be offered to eligible people at Waitemata DHB, which will transition from the Pilot to the National Bowel Screening Programme in January 2018. Information on the Pilot is available on the Ministry of Health website.

Breast Screening

- **Age:** **45 - 69**
  Reference: www.timetoscreen.nz

- BreastScreen Aotearoa is New Zealand's free national breast screening programme for women aged between 45 and 69.

  Reference: www.health.govt.nz
  Cancer – New registrations and deaths 2013

- In 2013 breast cancer accounted for 641 deaths (633 females and 8 males)

Cervical Screening

- **Age:** **20 - 69**
  Reference: www.timetoscreen.nz

- The National Cervical Screening Programme is available to women in New Zealand from the time they turn 20 until they turn 70.
- Most cervical cancers develop from an infection – called HPV, or the human papillomavirus – that almost everybody is exposed to if they have had sex. But with regular smear tests (every 3 years) we can detect it and get onto it, before it becomes cancer.
- Since the national screening programme started, the number of women who die of cervical cancer has dropped by nearly two thirds. And if every woman you know got tested regularly, the number could drop even lower.

  If you are a woman or trans or non-binary person with a cervix
  - Are aged between 20 and 70
  - Have ever had sex
  - Then you should have regular smears

  This includes:
  - Are immunised against HPV
  - Are single
  - Only have sex with women
  - Have a disability
  - Have been through menopause
  - Are no longer having sex

- Cervical Screening may be used as an opportunity to enquire about other symptoms (below) which might help identify common conditions E.g. Endometriosis, Genital Prolapse, Polycystic Ovarian Syndrome, Sexually Transmitted Infections, Uterine pathology.
  - Dysmenorrhoea
  - Heavy Menstrual Bleeding – Blood test maybe required – FBC, iron, etc.
  - Menstrual Irregularity
  - Urinary Incontinence
  - Vaginal Discharge
- Future plans on pregnancy maybe applicable for some women, in which case the following topics would be relevant
  - Pre-Conception Folic Acid
  - Rubella Immune status
- Family Violence screening is being done in some General Practices by trained staff.

  Reference: www.nsu.govt.nz
  September 16th 2016

- 'The clinical guidelines provide high-level direction to clinicians caring for women on the cervical screening pathway, and are being updated to align with the move

to human papillomavirus (HPV) primary testing in 2018,' Clinical Director of the National Screening Unit, Dr Jane O'Hallahan says.

- Earlier this week, the Ministry of Health announced that the age women begin having cervical screening will change from 20 to 25 due to harms outweighing benefits of screening younger women. This will occur in 2018 at the same time as New Zealand changes its primary test for cervical screening from three-yearly cytology, which detects whether women have cell changes that could lead to cancer, to HPV screening every five years.

Chlamydia testing

- **Age:** **<30**
  Reference: **www.nzshs.org**

- Test all sexually active persons < 30 years and anyone at risk.
- See Express STI Testing Questionnaire **www.nzshs.org/guidelines**

COPD (Chronic Obstructive Pulmonary Disease)

- **Age:** **35+**
  Reference: **www.bpac.org.nz** **February 2015**
  The optimal management of patients with COPD - Part 1: The diagnosis

- A clinical diagnosis of COPD can be considered in anyone aged over 35 years who has had long-term exposure to cigarette smoke, occupational exposure to dust, fumes or gas, or who has typical symptoms of COPD, i.e. breathlessness, cough and/or sputum production. Symptoms such as chest tightness, wheezing, and airway irritability are also common, although wheezing is not an indication of disease severity.
- COPD cannot be diagnosed based on the presence of symptoms alone. Spirometry is required to confirm a diagnosis, however, the results of spirometry are not disease specific. For example, it may not be possible to differentiate between COPD, chronic bronchitis or asthma as the cause of a patient's low FEV_1
- Spirometry can be reliably performed in a general practice setting, although training is required in both the technique and the maintenance of the equipment.
- When performing spirometry:
  - Patients should be clinically stable and free of respiratory infection
  - Patients should not have inhaled a short-acting bronchodilator in the previous six hours, or a long-acting beta2-agonist (LABA) in the previous 12 hours
  - An FEV1 < 80% predicted and a FEV1/FVC ratio < 0.7 indicates an airflow limitation
- Over-diagnosis of COPD is more likely in older patients who have decreased lung function and under-diagnosis of COPD is more likely in younger patients, especially when the FEV_1/FVC is close to 0.7.

Falls

- **Age:** **65+**
  Reference: **www.bpac.org.nz** **April 2015**

Stand up to falls - April Falls month and the Health Quality & Safety Commission's reducing harm from falls campaign
Contributed by the Health Quality & Safety Commission

- Falls are the most common and costliest cause of injury in older people, with around 30 – 60% of people aged 65 and over falling each year and 10 – 20% of those falls resulting in injury such as hip fracture, hospitalisation or death.
- The Commission – through its falls programme as well as April Falls and the campaign focus on falls – supports and encourages a number of proven preventive measures that can be integrated into routine health care.
  These include:
    - Exercise programmes, such as the Otago Exercise Programme, and group exercise classes, such as tai chi, which can reduce falls by 30–40% in older people living in the community
    - Vitamin D prescribed for those at risk of vitamin D deficiency
    - Home safety assessments and modifications where necessary
    - Individually targeted multi-factorial interventions

Reference: www.bpac.org.nz August 2015
Stay Independent Falls Prevention Toolkit

- The Stay Independent Falls Prevention Toolkit is an aid for Primary Care Teams for the assessment of an individual's risk of falling, including practical strategies to reduce this risk.
- The toolkit is based on the STEADI falls campaign developed by the United States Centers for Disease Control and Prevention (CDC), and has been adapted for use in New Zealand by bpac^{nz} in association with the Health Quality & Safety Commission.
- Screening for falls risk involves asking three simple questions which quickly cover several important points:
    - Have you slipped, tripped or fallen in the last year?
    - Can you get out of a chair without using your hands?
    - Are there some activities you've stopped doing because you are afraid you might lose your balance? Do you worry about falling?
- A positive answer to any one of these three questions above leads to multi-factorial risk assessment and intervention.

Reference: Journal of Primary Healthcare 25th August 2017
Falls and depression in octogenarians - life and living in advanced age: a cohort study in New Zealand

- Depression and falls are common and co-exist in octogenarians. GPs thinking about falls should also think about depression and vice versa.

Glaucoma

- **Age: 45+**
  Reference: www.glaucoma.org.nz

- Glaucoma NZ's key message for all New Zealanders is that early detection of glaucoma is vital when it comes to preventing blindness.

- That means an eye examination for glaucoma every five years from the age of 45 and every three years from the age of 60.
- However, at any age, if you notice changes in your eyesight, then you should have your eyes examined at that time. For example, if you require hobby glasses, it is a good idea to have your eyes checked by an eye health professional, just in case there is an underlying problem. In addition if you have risk factors for glaucoma, such as family history, then you may need your eyes checked more frequently.
- It is really important for people to know if glaucoma runs in their family, because if it does, your risk increases substantially.
- You are also at higher risk of getting glaucoma if you are 60 years and over, are short sighted, have a past or present use of steroid drugs, or previous eye injury.

Heart and Diabetes Check

- **Age: 25+ Dependant on Age, Ethnicity, Gender, Cardiovascular Risk Factors**
  Reference: www.health.govt.nz

- Cardiovascular disease (CVD) risk assessment and management for people aged 30 to 74 years without prior CVD is now based on new five-year CVD risk prediction equations from the New Zealand PREDICT study, to be known as the NZ Primary Prevention Equations. There are separate equations for people with and without diabetes.

- For people with severe mental illness (schizophrenia, major depressive disorder, bipolar disorder, schizoaffective disorder), CVD risk assessment is recommended from age 25 years. Repeat assessments should follow every two years, unless the risk is 15 percent or more, when it should be repeated every year.

- People aged 75 years and older are outside the age range included in the NZ Primary Prevention Equations. Therefore risk estimates in this population will only be approximations but are potentially useful.

- It is no longer possible to use paper charts to estimate CVD risk due to the increased number of predictors in the new equations. Risk assessment and communication will now require access to an electronic decision support system that should be integrated within primary care patient management systems.

- Outcomes predicted are the combination of hospitalisations and deaths from ischaemic heart disease (including unstable angina), stroke, transient ischaemic attack (TIA), heart failure and peripheral vascular disease.

When (what age) to start risk assessments for men and women in different population subgroups?

POPULATION SUBGROUPS

- **Individuals without known risk factors**

  MEN **Age 45 years**
  WOMEN **Age 55 years**

- **Maori, Pacific or South-Asian (Fijian Indian, Sri Lankan, Afghani, Bangladeshi, Nepalese, Pakistani, Tibetan) peoples**

  MEN **Age 30 years**
  WOMEN **Age 40 years**

- **People with other known cardiovascular risk factors or at high risk of developing diabetes**

  MEN **Age 35 years**
  WOMEN **Age 45 yeas**

- **Family history risk factors:**
  - Diabetes in 1st degree relative (parent, brother of sister)
  - Hospitaliastion for or death from heart attack or stroke in a 1st degree relative before the age of 50 years (father or brother, mother or sister)
  - Famililial hypercholesterolaemia

  MEN **Age 35 years**
  WOMEN **Age 45 years**

- **Personal history risk factors**
  - Atrial fibrillation
  - People who smoke
  - Gestational diabetes
  - Hb1Ac 41-49 mmol/mol
  - BMI ≥ 30 or truncal obesity (waist cicumference ≥102cm in men or ≥88cm in women)
  - eGFR <60 but >45ml/min/1.73m2

  MEN **Age 35 years**
  WOMEN **Age 45 years**

- **People with diabetes (type 1 or 2)**

  MEN **From the time of diagnosis**
  WOMEN **From the time of diagnosis**

- **People with severe mental illness ie. Those who have been diagnosed with schizophrenia, major depressive disorder, bipolar affective disorder, schizoaffective disorder and/or addiction**

  MEN **From age 25 years**

WOMEN From age 25 years

HEEADSSSS assessment

- **Age:** **12 – 19**
  Reference: **Youth Health – Enhancing the skills of Primary Care Practitioners In caring for all young New Zealanders – A Resource Manual – Published 2011**

- HEEADSSSS is a tool for engagement, a screening tool that helps gather information to form a picture of the context for the person and their presenting complaint. It is also a tool for planning what the next step should be, together with the young person. Categories covered include:
  - Home
  - Education and Employment
  - Exercising and Eating
  - Activities
  - Drugs
  - Sexuality
  - Suicide
  - Spirituality
  - Safety and Strengths

  Reference: **www.health.govt.nz**

- The Prime Minister's Youth Mental Health Project (YMHP) was launched in 2012 and aims to help prevent the development of mental health issues and improve young people's access to youth mental health services.
- The Youth Mental Health Project responds to a report from the Prime Minister's Chief Science Advisor – 'Improving the Transition: Reducing Social and Psychological Morbidity During Adolescence'
- This report raised concerns about mental health issues in the period when young people move from childhood to adulthood including depression and other mental health disorders, cannabis use and harmful use of alcohol, and youth suicide.
- The Prime Minister's Youth Mental Health Project is rolling out programmes and activities in schools, via health and community services, and online to improve the mental health and wellbeing of young people.

Hepatitis B (Chronic infection)

- **Age:** **>25**
  Reference: **www.hepatitisfoundation.org.nz**

- Hepatitis B is the most common serious liver infection in the world. It is the leading cause of liver cancer. About 100,000 people in New Zealand are chronically infected with the virus.
- Hepatitis B is spread through contact with blood or bodily fluids. It is highly infectious and can survive outside the body for more than seven days. The age a person is infected is very important in determining whether the person gets sick and whether they clear the infection.
- About 99% of people with chronic hepatitis B were infected as babies or young children. The most common way babies get infected is from their

mother during birth. The most common way young children get infected is from playing with other children who have hepatitis B or by close contact with a hepatitis B household member. When young children and babies get infected, they develop chronic infection with the associated life-long risks of cirrhosis, liver failure and liver cancer.

- When adults are infected, they often become sick with acute hepatitis (jaundice, abdominal pain and vomiting) but usually get rid of the infection.
- Those most at risk of hepatitis B are people who:
    - Are of Māori, Pacific Island, or Asian ethnicity over the age of 25 years
    - Were born outside New Zealand
    - Have a mother or close family member has hepatitis B
    - Live with someone who has hepatitis B
    - Have ever had unprotected sexual contact with an HBV person
    - Have ever injected drugs (once is enough)
    - Have received a tattoo using unsterile equipment
- Testing is very important as the virus often begins damaging the liver before any symptoms appear. With regular monitoring, hepatitis B can be successfully managed.

Reference: **Gane E. Screening for chronic hepatitis B infection in New Zealand: unfinished business. NZMJ 2005;118:1211**

- Almost 20% will develop active liver disease (chronic hepatitis B or CHB) and will progress to cirrhosis and liver failure, whilst another 5 to 40% will develop hepatocellular carcinoma.
- In 1998, the Government decided to fund a national HBV screening programme, targeting Asian, Pacific, and Maori New Zealanders older than 15 years (thus unlikely to be protected by universal neonatal vaccination). Screening commenced in 1999 and continued for 3 years.
- Observed rates in Maori (5.6%) were similar to those reported by previous studies, but significantly higher rates were found in Pacific Islanders (median 7.3%, Tongan 13%) and Asians (median 6.2%, 8.1% in South East Asian, 8.9% in Chinese), thus reflecting higher prevalence rates in those countries of birth.
- The vast majority (85%) of HBsAg-positive New Zealanders remain unaware of their status.
- Urgent consideration should be given to reopening the screening programme.

Immunisations – Child and Adult

- **Age:** **various**
  Reference: **www.health.govt.nz/publication/immunisation-handbook-2017**

- Immunisation visits may provide screening opportunities
  E.g. Developmental delay

Immunisations – HPV

- **Age:** **9 – 26**
  Reference: **www.health.govt.nz/publication/immunisation-handbook-2017**

- Between 2008 and 2016, HPV (human papillomavirus) immunisation was free for girls and young women up to their 20th birthday, including non-residents under the age of 16 and living in New Zealand for eight months or more.
- From 1 January 2017, HPV immunisation is free for everyone, male and female, aged 9 to 26, including non-residents under the age of 18.
- HPV immunisation is available through participating schools or from family doctors, local health centres and some Family Planning clinics.
- Children who are in year 8 at school are offered the vaccine either through a school-based immunisation programme or through their family doctor if a school programme is not available.
- HPV immunisation aims to protect young people from HPV infection and the risk of developing cervical cancer and a range of other HPV diseases later in life. Currently, around 150 women are diagnosed with cervical cancer and 50 women die from it each year in New Zealand.

Immunisation – Zoster (herpes zoster/shingles)

- **Age:** **65-80**
  Reference: www.bpac.org.nz **March 2018**
  Zostavax vaccine: now fully subsidised

- The herpes zoster vaccine Zostavax will be fully subsidised for people turning 65 years on or after 1 April, 2018.
- A catch-up immunisation programme will be available for two years from 1 April, 2018 to 31 March, 2020, during which time people aged 66 to 80 years will be eligible to receive one fully subsidised dose of Zostavax.
- Funded Zostavax vaccinations will initially only be available at general practices.
- Vaccination is appropriate regardless of varicella zoster (chickenpox) or herpes zoster history; consider delaying vaccination by at least one year if recent episode of herpes zoster.

Immunisation – 65 years and older

- **Age:** **65+**
  Reference: www.health.govt.nz/publication/immunisation-handbook-2017

INFLUENZA

- 1 dose is recommended and funded annually for individuals aged 65 years and older

PNEUMOCOCCAL DISEASE

- Adults aged 65 years and older with no other risk factors
  - Give one dose of PCV13 followed at least eight weeks later with 23PPV (not funded).

Kidney Check

- **Age:** **25+ selected by Author**
  Reference: aucklandregion.healthpathways.org.nz

- The Author believes that if a blood test is being taken for a heart (lipids) and diabetes (Hb1Ac) check, it is reasonable to check the kidney function at the same time
    - As the same ethnic risk factors i.e. Māori, Pacific, Indo-Asian ethnicity, which apply for a 'Heart and Diabetes Check' Cardiovascular are also applicable to Chronic Kidney Disease
    - For people with severe mental illness (schizophrenia, major depressive disorder, bipolar disorder, schizoaffective disorder), CVD risk assessment is recommended from age 25 years.

Consider screening for CKD in higher risk patients with:

- Diabetes
- Hypertension
- Raised BMI, usually > 35
- Established CVD (previous diagnosis of coronary heart disease, cerebrovascular disease, or peripheral vascular disease)
- Family history of kidney disease
- Nephrotoxic drugs
- Prostatic syndrome (significant lower urinary tract symptoms) or urologic disease
- Māori, Pacific, Indo-Asian ethnicity
- Age > 60 years

Screen for CKD by taking a urine sample and a blood test at the same visit.

- Urine – looking for albuminuria
- Urine – looking for cells and casts

- Dipstick for protein and cells in the urine alone is not recommended for kidney disease screening. If a dipstick is positive, confirm with a laboratory sample.

- Blood test for creatinine and estimation of GFR with electrolytes (sodium and potassium levels)

Macular Degeneration

- **Age:** **45+**
  Reference: www.bpac.org.nz **February 2016**
  Age-related macular degeneration: what should a general practitioner know?

- Age-related macular degeneration is a progressive condition, which results in loss or distortion of the central visual field and is the leading cause of blindness in New Zealand.
- To reduce the risk of developing age-related macular degeneration, patients can:
    - Quit smoking; this is the single biggest step patients can take to reduce their risk
    - Consume a diet high in fruit, vegetables and fish
    - Avoid UV light
- Regular optometrist examinations from the age of 45 years can facilitate early

detection of macular degeneration, which is usually asymptomatic.

- If patients are unable to attend an optometrist, visual acuity testing and assessment of retinal changes by direct fundoscopy in general practice can help identify those most in need of further clinical attention.

Melanoma

- **Age:** **20+ selected by Author**
  Reference: **www.health.govt.nz**
  Prevalence of Opportunistic Melanoma Screening in New Zealand. Published online: 03 September 2010

- Skin screening is one way of achieving early diagnosis of melanoma, and although there is no substantial evidence of its effectiveness, it is being conducted in some populations opportunistically.

  Reference: **www.health.govt.nz**
  Mortality 2014 Provisional Data Tables

- In 2014 there were 378 deaths caused by melanoma.

Mental Health including Alcohol and Drug Problems

- **Age:** **20+ selected by Author as HEEADSSSS assessment takes place in Adolescent age range 12-19**

  Reference: **Identification of Common Mental Disorders and Management of Depression in Primary care. An Evidence-Based Best Practice Guideline. Wellington: New Zealand Guidelines Group; July 2008**

- Verbal two to three question screening tools for common mental disorders.

  Questions for depression
  - During the past month, have you been bothered by feeling down, depressed or hopeless?
  - During the past month, have you been bothered by little interest or pleasure in doing things?

  If yes to either question, ask **Help question** below

  Question for anxiety
  - During the past month have you been worrying a lot about everyday problems?

  If yes, ask **Help question** below

  Questions for alcohol and drug problems
  - Have you used drugs or drunk more than you meant to in the last year?
  - Have you felt that you wanted to cut down on your drinking or drug use in the past year? □

  These two questions have been shown to pick up about 80% of current drug and alcohol problems
  If yes to either question, ask **Help question** below

The Help question

- Is this something that you would like help with?

Peer Review: **Dr Scott Chambers**
Psychiatrist
Auckland

Reference: **www.mayoclinic.org**

- Atypical depression — also called depression with atypical features — means that your depressed mood can brighten in response to positive events. Other key symptoms include increased appetite, sleeping too much, feeling that your arms or legs are heavy, and feeling rejected.
- In screening for atypical depression in men, irritability is sometimes more commoner than reports of low mood.

Reference: **coronialservices.justice.govt.nz**
28th August 2017

- Chief Coroner Judge Deborah Marshall today released the annual provisional suicide statistics, which show 606 people died by suicide in the 2016/17 year – the third year in a row that the number has increased.
- The information provided relates to provisional suicide figures and will slightly differ from the Ministry of Health figures. They include active cases before Coroners where intent has yet to be established therefore may eventually be found not to be suicides. In addition Ministry of Health figures are recorded by calendar year.

Reference: **www.bpac.org.nz** **November 2017**
Suicide prevention: what can primary care do to make a difference?

- In late August 2017 the Chief Coroner released a sombre statistic - 606 people in New Zealand died by suicide in the past 12 months; an increase for the third consecutive year and almost double the road toll. Age-standardised rates by ethnicity reveal that Māori die by suicide at approximately twice the rate of non-Māori. Young people are also over-represented in suicide statistics. New Zealand has the highest rate of youth suicide among 41 developed nations, with latest statistics showing that 15.6 adolescents per 100,000 aged 15 to 18 years died by suicide in New Zealand in 2012/13, compared to 3.0 in the United Kingdom, 6.8 in Australia and 7.6 in the United States.
- Clearly we have a problem. There has been much effort from individuals and organisations around New Zealand in suicide prevention, but we are yet to find the right formula for reversing this phenomenon. The reasons for suicide are multifactorial, as are the reasons why it is so challenging to address this on a population level. What we can do, however, is to focus on an intervention, one person at a time.
- We asked several experts around New Zealand for their guidance on managing interactions with patients in primary care who are experiencing suicidal thoughts or behaviour. This is not intended to be a comprehensive guide, but it is the start

of a conversation about suicide that we encourage all health professionals to consider. As individuals, we cannot stop 606 deaths per year, but if each of us intervene in a meaningful way with just one person, that is what can make a difference.

- SAD PERSONS acronym: risk factors for self-harm and suicide.
  - **S** Sex - Male
  - **A** Age - <19 or >45 years
  - **D** Depression
  - **P** Previous Attempt
  - **E** Excess alcohol or substance use
  - **R** Rational thinking loss
  - **S** Social supports lacking
  - **O** Organised plan
  - **N** No spouse
  - **S** Sickness

Osteoporosis

- **Age:** **50+**
  Reference: osteoporosis.org.nz
  Osteoporosis New Zealand Strategic Plan 2017-2020

Work to be completed 2017 – 2020

- ONZ (Osteoporosis New Zealand) needs to work with our partners wherever possible and raise funds to support development of a disease awareness campaign to raise public awareness of osteoporosis.
- The way we propose to do this is through development of a consumer brand and innovative campaigns to target consumers and engage the New Zealand population in bone health awareness, fracture prevention and osteoporosis management. The campaign will centre around the following critical messages:
  - **It is never to late to think about bone health**
  - **Awareness of risk and early diagnosis are key to the treatment of osteoporosis**
  - **The first osteoporotic fracture provides an opportunity to prevent further fractures**

We aim to target age groups as follows:

- Children and Adolescents (0 – 20) Build the biggest and strongest skeleton possible, in light of the individual's genetics.
- Adults (20 – 50) Maintain healthy bones and avoid premature bone loss. Understand your personal risk factors for osteoporosis and talk to your doctor about bone health. Be proactive, ensure good nutrition, do regular weight bearing and muscle strengthening exercise and avoid negative lifestyle habits.
- **Adults (50 – 65)** Sustain mobility and independence. Be empowered to know how to keep bones healthy and prevent and manage osteoporosis**. If you have broken a bone as the result of a minor fall or bump, this is a signal of poor bone health. These individuals are encouraged to ask their doctor or healthcare provider about osteoporosis and a bone health assessment.**

- Seniors (65 +) Treat osteoporosis to prevent fractures, and stop falls. If medication is prescribed, make sure that it is adhered to.

Peer Review: **Dr Mark Bolland**
Endocrinologist
Auckland City Hospital

Auckland Regional Recommendations for Bone Densitometry

- **One purpose of these recommendations is to prioritise a limited resource in the public health system in Auckland to individuals at highest fracture risk and those in whom the bone density result may lead to a change in management. Therefore these recommendations may conflict with existing protocols and with expert guidance from other countries. For these reasons, the recommendations are not absolute, and referrals that do not meet these criteria would be considered on a case-by-case basis. These recommendations are not intended to prevent clinically appropriate referrals.**

Individuals with no previous bone density measurement.

Indications for measuring bone density:

1. Women >65 years and Men >70-75 years:
   Bone density measurement is generally recommended, especially if there are risk factors for fracture.

- Note: screening for osteoporosis is controversial, however many authorities suggest it is reasonable to measure bone density in these age groups.

2. **In younger individuals, bone density measurement is generally only indicated if there are strong risk factors for fracture (history of femur, pelvis, spine, arm, wrist, femur fracture; glucocorticoid use; secondary causes of osteoporosis; parental/sibling history of significant fragility fracture before 65y).**

Situations where routine bone density measurement is generally NOT indicated:

1. Bone densitometry is not usually indicated for younger individuals at low risk of fracture.
   Some examples might include:
   - Premenopausal or perimenopausal women without risk factors for fracture
   - Younger women with a history of breast cancer currently taking aromatase inhibitors. Unless other risk factors are present, bone densitometry can generally be deferred until >60 years.
   - Depo provera use
   - Spinal cord injury
   - Premature menopause (unless a bone density measurement will influence a decision to take hormone therapy or there are other risk factors present, bone densitometry can generally be deferred until 15-20 years after

menopause- for example a women with menopause at 35y could have bone densitometry at 50-55y)
- Individuals with unexplained musculoskeletal pain
- Young adults with eating disorders (unless body weight is markedly reduced)
- Individuals with periarticular or periprosthetic osteoporosis
- Individuals at low fracture risk with a report of "osteopenia" on a plain x-ray
- Individuals with very low fracture risk where knowledge of the bone density will not alter management
- Routinely after bariatric surgery

Note - In cases with specific concerns where bone densitometry is required, the referral should provide the relevant clinical details

2. Regardless of age, obese individuals are unlikely to have low bone density (except in Cushing's syndrome), and bone densitometry is usually not indicated unless there are specific concerns.

Reference: **aucklandregion.healthpathways.org.nz**

Assessment for Bone Density Scan (DEXA) depends on local DHB criteria

Major risk factors for osteoporosis are listed below

- Aged ≥ 65 years (women) or ≥ 75 years (men)
- BMI < 20 kg/m^2
- Family history of osteoporosis
- Smoking – current
- Glucocorticoid use – current
- Early menopause
- > 2 alcoholic drinks daily
- History of falls
- Rheumatoid arthritis
- History of eating disorders
- Medical conditions, e.g., hypogonadism (e.g., premature menopause, anorexia, prostate cancer survivors), coeliac disease, hyperthyroidism, COPD, hyperparathyroidism
- Medications
    - Glucocorticoids – ≥ 5 mg of oral prednisone or equivalent per day, for > 3 months
    - Anticonvulsants
    - Chemotherapy drugs
    - Suppressive doses of thyroxine
    - Lithium
    - Methotrexate
    - Pioglitazone
    - Aromatase inhibitors
    - Gonadotropin-releasing hormone agonist

Peripheral Vascular Disease

- **Age:** **50 - 69**
  Reference: **www.bpac.org.nz** **April 2014**

- In particular, international guidelines recommend targeted testing for peripheral artery disease for the following groups:
    - All people aged between 50 and 69 years who smoke or have diabetes
    - All people from age 70 years regardless of risk-factor status (In practice, the Author believes that non-targeted testing for peripheral vascular disease in all people from age 70 is not a realistic goal)
    - All people with a Framingham risk score > 10%
- The ankle-brachial pressure index (ABPI) is a non-invasive method for detecting or ruling-out the presence of peripheral artery disease. ABPI is a calculation of the ratio of the patient's systolic blood pressure at their ankle to the systolic pressure in their arm.
- ABPI is generally between 1.0 – 1.4 in healthy people, i.e. the systolic pressure at the ankle is greater than the systolic pressure at the arm.
- An abnormally low ABPI value (i.e. < 0.9) has a sensitivity of 79 – 95% and a specificity of approximately 95% for peripheral artery disease.
- Between one-third and one-half of patients with peripheral artery disease will have some evidence of coronary artery or cerebrovascular disease. A meta-analysis of 16 studies involving over 48 000 patients without a history of coronary artery disease, found that when ABPI indicated the presence of peripheral artery disease the risk of cardiovascular mortality increased by over four times for males and approximately 3.5 times for females, compared with people with an ABPI in the normal range.

Peer Review: **Dr Carl Muthu**
Vascular Surgeon
Auckland City Hospital

- ABPI is an operator dependent test. Having an "occasional operator" doing ABPI is bound to lead to false positives or false negatives. In my view; if you were to use ABPI for targeted screening it would be best that either one doctor or more likely one nurse screened all the patients in a practice. Therefore they will develop skill and reliability at performing the test.
- Beware of false negative ABPI in diabetics and renal failure patients. They can have very calcified vessels that can cause artificially high ABPI readings, i.e. they may have a "normal" ABPI but have significant peripheral artery disease.
- I see the significance of a low ABPI, in the absence of symptoms such as claudication and ulceration - as:
    - A marker of the "at risk" foot, especially in diabetics. These patients should be advised to take great care of their feet avoid trauma etc. Consideration should be given to referring them to a podiatrist, orthotist for appropriate footwear, or a diabetic foot clinic if one exists.
    - A marker of underlying cardiovascular disease. A patient with a low ABPI has peripheral artery disease by definition. These patients have a reduced life expectancy due to associated vascular disease in beds other than the legs. They should have aggressive vascular risk factor modification e.g.
        - Blood Pressure

- Lipids
- Diabetes – Hb1Ac
- Aspirin

- I agree with the author's comment that screening all patients over 70 would be unrealistic. Smoker, diabetics and those with a 5-year Cardiovascular Disease (CVD) Risk >10% seems a reasonable compromise.

Prostate cancer

- **Age:** **50 - 70**
  Reference: **www.health.govt.nz**
  Prostate Cancer Management and Referral Guidance
  Published September 2015

- If men are considering being tested, they need to know there is no clear evidence on what age men should begin prostate cancer testing.
- The best recommendation is for primary care practitioners to discuss the benefits and risks of prostate cancer testing with men aged between 50 and 70 years and men aged over 40 years who have a family history of prostate cancer, as they are the most likely to benefit
- Primary care practitioners must obtain informed consent (which can be verbal consent) before doing a PSA test and/or DRE.
- The decision to have a PSA test and/or DRE is entirely the man's, but it is the primary care practitioner's responsibility to make sure the man understands the benefits and risks before he makes his decision. This includes making sure the man understands the benefits and risks of the PSA test and DRE, and the benefits and risks of the procedures he could undergo if he has an abnormal PSA or DRE or is diagnosed with prostate cancer.

  Reference: **www.health.govt.nz**
  Cancer – New registrations and death 2013

- In 2013 prostate cancer accounted for 647 deaths

Six Week Check

- **Age:** **6 weeks**
  Reference: **www.wellchild.org.nz**

- **GP Team Visit**
  Child health and wellbeing
  - Undertake a systematic and thorough clinical examination including:
    - Observe and assess your child's overall health and wellbeing
    - Measure the weight, length and head circumference
    - Examination of their hips
    - Cardiovascular system (the heart and blood system)
    - Vision Check

  - Discuss safe sleeping practices for baby

  - Six week immunization visit

Reference: **www.health.govt.nz**

Mother and Father wellbeing

- Screening for parental depressive symptoms is also an important component of the six week check

Postnatal depression symptoms include:

- always feel tired
- cry a lot
- feel that you are a bad mother
- have aches and pains
- think bad thoughts
- do not sleep well, even when your baby is asleep
- feel that you can't cope with anything, such as housework
- feel anxious or uncertain all of the time
- don't care about how you or things around you look
- get angry with other people around you, such as your partner, other children or your whānau.

Any woman who has a baby is quite likely to feel some of these things some of the time. Postnatal depression is when these feelings do not go away.

Because postnatal depression can affect how women feel about and care for their babies and other children, your midwife or nurse will ask questions about your feelings when they visit, so they can help you to get the support you need.

Postnatal depression can also affect men. Postnatal depression is more common among men who have been depressed before, or whose partners are suffering from depression.

Useful dedicated websites include:

- www.mothersmatter.co.nz
- greatfathers.org.nz

Smoking

- **Age:** **15+**
  Reference: **www.bpac.org.nz** **October 2015**
  Smoking cessation - helping patients stick with it, until they quit

- Nicotine addiction should be managed like other long-term health issues and be addressed at every patient contact, unless it is inappropriate to do so.
- This can be challenging as patients may find it irritating if clinicians continually point out the need to stop smoking. However, the majority of people who smoke wish that they did not. The 2009 New Zealand Tobacco Use Survey found that 80% of current smokers aged 15–64 years would not smoke if they had their life over again.
- Initiating discussions about smoking cessation in different ways is one approach to reducing repetition. For example, smoking cessation conversations could begin by mentioning:

- Stoptober, a 31 day smokefree challenge that is run every October
- The idea of making the family home smokefree, starting from Christmas day
- The possibility of starting the new year with a quit attempt
- How quitting smoking improves cardiovascular risk

- Half of people who take up tobacco smoking long-term, die from this cause. Approximately 5 000 people in New Zealand die each year due to smoking related causes; 350 of these deaths are caused by second-hand smoke. People who smoke cigarettes die ten years younger than non-smokers on average, an effect on mortality similar to that of morbid obesity.
- People who smoke can reverse the long-term effects of smoking if they stop early enough. Quitting smoking before age 40 years results in approximately nine more years of life expectancy compared to those who continue to smoke. Each year of smoking beyond this age reportedly results in three months loss of life.
- Always offer both pharmacological and behavioural support to people who want to quit smoking.
- Combinations nicotine replacement therapy (NRT), e.g. patches and gum or lozenges, is usually the first-line phamacological treatment for people who want to quit.
- NRT can also be offered to people who are not ready to stop smoking to help them "cut down" before quitting.
- If a person experiences a lapse in their quit attempt, behavioural support and the continued use of NRT increases their chances of stopping long-term
- Buproprion, nortriptyline and varenicline are other pharmacological options for smoking cessation. Varenicline is the most effective of these treatments, and is approximately as effective as combination NRT. It is subsidised for patients who have previously tried to quit with other smoking cessation medicines.

Reference: **www.hauoracoalition.maori.nz**

- To support integrated IT within your practice (PMS), the NHC National Hauora Coalition operates MOHIO – our real time, web-based clinical claiming and electronic decision support tool.
- One of these support tools is the 'Smoking ABC' - **Smoking Ask, Brief Advice and Cessation Support for all patients 15 years+**

Reference: **www.health.govt.nz**
Cancer – New registrations and death 2013

- In 2013 lung cancer was the leading cause of cancer deaths (1656 deaths), accounting for nearly one in every five deaths from cancer.

Teeth – Lift the Lip

- **Age:** **<5**
  Reference: **RNZCGP GP Pulse March 2017**
  Baby teeth matter!

- Tooth decay is the number one reason children are admitted to hospital. This is the focus of a campaign currently underway seeking to tackle what remains the most common chronic condition in children.

- The reality is that last year 29,000 children had teeth extracted. And the 2009 Oral Health Survey showed less than half of kiwi kids brush their teeth twice a day with the correct strength fluoride toothpaste.
- In partnership with the Ministry of Health, the Health Promotion Agency has recently launched a campaign to improve oral health for **children under five**.
- To support good oral health, GPs are encouraged to remind parents to:
    - Brush their baby/ children's teeth from when the teeth first appear using a family fluoride toothpaste twice a day. Children need help to clean their teeth until they are around 9 years old.
    - Enrol their baby with their local community dental service for free dental care. All children are eligible for free dental care until their 18th birthday.
    - Lift the lip every month. Gently lift their child's top lip every month to check inside their mouth. It's a quick and easy way to check if tooth decay is present.
    - Choose healthy foods and drinks. Sweet drinks, foods and fruit juices can cause tooth decay.

Testicular Cancer

- **Age:** **15+ selected by Author**
  Reference **testicular.org.nz**

- According to the New Zealand Ministry of Health statistics, 137 (34 Maori) cases of testicular cancer were diagnosed in the NZ in 2013 and 6 men died (0 Maori) from testicular cancer in 2013.
- Most testicular cancers are found by men themselves, by accident or while doing a testiclar self-examation. The testicles are smooth, oval-shaped, and rather firm. Men who examine themselves regularly (once a month) become familiar with the way their testicles normally feel. Any changes in the way they feel from month-to-month should be checked by a doctor, preferably a Urologist.

  Reference: **www.bestpractice.bmj.com**

- When a General Practitioner suspects testicular cancer; serum tumour markers (BHCG, AFP, LDH) and an ultrasound are appropriate first tests to order, before a Urologist sees the patient.
- Ultrasound is the principal test with a sensitivity near 100%. Order early in the diagnostic work-up.

  Reference: **www.uspreventiveservicestaskforce.org**

- The U.S. Preventive Services Task Force (USPSTF) recommends against screening for testicular cancer in adolescent or adult men.

Weight, Height, BMI – Weight Management

- **Age:** **2 - 5**
  Reference: **www.health.govt.nz**
  Weight Management in 2-5 year olds

1 Monitor Growth

- Regularly measure height and weight to calculate Body Mass Index (BMI). Use World Health Organisation age and sex specific growth charts.
- Overweight above 91st percentile.
- Obese above 98th percentile.
- If trending towards overweight, provider the family or whanau with brief nutrition and physical advice.
- **If overweight or obese discuss long-health risks with the family or whanau. Proceed to stage 2 - ASSESS**

2 Assess

- Take a full history for BMI above 91st centile.
- Consider:
    - Co-morbidities
    - Family history of obesity, early cardiovascular disease or dyslipidaemia
    - Precipitating events and actions already taken
    - Usual diet and levels of physical activity and sleep patterns
    - Current physical and social consequences of overweight
    - Signs of endocrine, genetic or psychological causes
    - Medications that may contribute weight gain
- Include in a clinical examination:
    - Blood pressure with appropriate cuff size
    - Skin: intertrigo, cellulitis, carbuncles
    - Hepatomegaly
    - Enlarged tonsils
    - Assessment of short stature/poor linear growth
    - Abnormal gait, flat feet, lower leg bowing or problems with hips or knees
    - Dysmorphic features
    - Undescended testicle (boys)
- **Consider further investigations for BMI above 98th centile:**
    - **Lipid profile**
    - **Hb1Ac**
    - **Overnight sleep study, using pulse oximetry if history suggests sleep apnoea**

3 Manage

- Aim to slow weight gain so the child can grow into their weight.
- Use the Food, Activity (including sleep) and Behaviour (FAB) change approach to address lifestyle interventions.
    - Food/nutritionally balanced diet
    - Physical activity and reduce sedentary time
    - Sufficient sleep
    - Behaviour strategies
- To support meaningful engagement and improved health outcomes, it is

important that a mutually agreed weight management plan takes into account the broader social, environmental and cultural contexts of the child, family and whanau.

- **Refer to paediatric services if significant co-morbidities are identified or an endocrine or genetic cause for obesity is suspected.**
- **Agree a plan for review and monitoring.**

4 Maintain

- Maintain contact and support and continue to monitor the child's height and weight to ensure they are adequately supported.
- Reinforce health eating, physical activity, behaviour strategies and sleep advice.
- Identify and promote local support services. Develop collaborative partnerships with Maori health providers, Pacific health providers, Whanau Ora providers and other community-based organisations as appropriate.
- **Reassess if progress is not sustained.**

PEER REVIEW

- **General Practice**
  - Rochelle Eynon RN
  - Dr Simon Garlick
  - Dr Douglas Horne
  - Dr Bhavana Patel

- **Endocrinologists**
  - Dr Mark Bolland
  - Dr Ajith Dissanayake

- **Gastroenterologist**
  - Dr Alasdair Patrick

- **Nephrologist**
  - Dr Janak De Zoysa

- **Psychiatrist**
  - Dr Scott Chambers

- **Urologist**
  - Mr Mischel Neill

- **Vascular Surgeon**
  - Mr Carl Muthu