BEST PRACTICE

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Māori Health

Te Wero – The Challenge

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better medicine

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Kupu Whakataki – About this journal

Welcome to BPJ 22, our second journal focused on Māori Health

E aku iti, e aku rahi, rau rangatira mā, koutou ngā manukura, ngā manutaki o te hauora o te iwi tēnā koutou.

Koutou mā kua timu i te tai, koutou mā kua rere atu i te Pū-nui-o-tonga, koutou mā kua haere ki tua o Paerau. Moe mai, okioki mai.

Ka aro atu ēnei tuhinga ki te whakapakaritanga o te hauora o te Māori, ka aro pū tonu atu ki ngā ngāngara e ngau kino tonu ana ki te iwi taketake o ēnei whenua, a ka whai atu anō ki ētahi ngāngara anō e kīkini ana ki te tangata whenua, ko te oranga niho, te mate tākihi ukiuki me te aukatinga kai paipa.

Koutou mā te arero o te taiaha o tēnei pakanga hauora, nei te mihi kore mutu ki a koutou, werohia, werohia, werohia rā!

This edition focuses on three health issues for Māori where ethnic disparities are significant:

- Oral health
- Chronic kidney disease
- Smoking cessation

These are all areas where primary care has the potential and opportunity to make a significant contribution to improving Māori health.

One of the key contributors to disparities in health outcomes is the cost of accessing care. Financial barriers can be significant with over 56% of Māori located in the three most deprived socio-economic deciles. This journal includes information on the subsidies and other support that is available for individuals and whānau (see page 52). General practitioners, pharmacists and practice nurses can assist by becoming familiar with the financial support that is available and by ensuring all patients receive their full entitlements.

Successful services targeting Māori

To show what can be achieved with careful planning and effective targeting of services we have profiled three initiatives:

- One Heart Many Lives – cardiovascular risk assessment for Māori men in Hawke's Bay
- Rural general practitioner clinics in Central Otago
- Mobile practice nurse services in Hamilton

While there are many successful services targeting Māori around the country, more can and should be done to ensure the momentum continues and improvements to Māori health are prioritised. Whānau ora – families supported to achieve their maximum health and wellbeing – remains an important aim.

He Ritenga Whakaaro

A recent survey about Māori experiences of health services showed that while most reported good experiences, 20% expressed concerns about their interactions with health professionals. Some Māori had such negative experiences of health services that they say they are less likely to access medical care when needed.

Although Māori have lower life expectancy (8.2 years for males and 8.8 years for females) and greater rates of illness or disability than non-Māori, they receive less consultation time with their GPs (13.7 minutes versus 15.1 minutes), less access to some health services, fewer referrals to specialists and fewer investigations. Four key themes emerged about barriers to healthcare:

1. Organisational Barriers
   - The distance to travel for care
   - The availability of appointments at suitable times
   - Waiting times
   - The (lack of) choice of provider
   - Inflexibility of healthcare systems
   - Poor experiences (e.g. lack of response to complaints, lengthy resolution times)

2. Cost Barriers
   - Direct costs (e.g. consultation costs, prescription charges)
   - Indirect costs (e.g. loss of wages due to time off work while obtaining care, expenses relating to travel or child care)
   - Participants also questioned whether a GP visit was value for money

3. Health Provider Barriers
   - Perceptions of negative or racist attitudes towards Māori
   - Perceptions of being patronised
   - Being treated disrespectfully by staff

4. Cultural Fit Barriers
   - Patients attitudes (e.g. whakama or shyness)
   - Reluctance to challenge authority
   - A wait and see attitude toward sickness or injury (often related to cost)
   - Prior bad experiences
   - A preference (often unfulfilled) for Māori clinicians and providers

He Ritenga Whakaaro suggests there is a growing trend among Māori to critique the health system. Te Wero (the challenge) for primary care services is to improve attitudes and behaviours, and deliver health care services that are appropriate, accessible and effective for Māori.

Hei tiki have become iconic symbols of Māori and New Zealand however the meaning is obscure. One theory is that they represent Hine-te-iwaiwa, a celebrated ancestress associated with fertility and the virtuous qualities of Māori womanhood. Another theory is that hei tiki represent Tiki, the mythical first human. A further suggestion is that they represent the unborn embryo, particularly children that are stillborn.

Māori Health Framework

BPJ 13 – Improving Māori Health (May 2008), our first Māori health edition, has been one of bpac's most requested publications. It focused on the following topics, all of which remain priorities for Māori health:

- Cardiovascular disease
- Diabetes
- Asthma and chronic cough
- Rheumatic fever
- Gout

In addition, BPJ 13 provided information on Rongoā Māori, disparities and the diverse realities of Māori health. It also included the following framework – practical solutions for improving Māori health – that is still relevant and should be considered by all providers to assist in addressing Māori health disparities that may exist within their own practice.

"The health system can become a leading solution in the 'crisis in Māori health' that is evident in current disparities."[1]

1 Plan to improve Māori health
Change does not happen by accident, it needs a plan. Develop a simple practice plan for addressing disparities. Ask your PHO for a copy of its Māori health strategy.

2 Set realistic practice goals
You don't have to change everything at once. Set priorities. The first goal may be as simple as correctly recording ethnicity or smoking status.

3 Build trusting therapeutic relationships
Invest time in building trusting therapeutic relationships with patients and whānau.

4 Engage patients in their health issues
Consider each contact as an opportunity to educate and engage patients in their health care and address wider issues.

5 Agree on realistic patient-centred health goals
Break up the health issue into manageable pieces. Agree on achievable treatment goals, activity goals and lifestyle changes.

6 Make it easy for patients to come back
Give patients a reason and expectation about returning. Use reminders. Make the environment welcoming. Offer solutions for financial barriers.

7 Form partnerships
Find out who is taking responsibility for a patient's healthcare – it may be another whānau member. Involve Māori health providers. Encourage community initiatives.

Haere e whai i te waewae o Uenuku, kia ora ai te tangata – *"Go search for the footprints of Uenuku, so that humankind may be nurtured". Uenuku is said to be a very wise person from whom one could learn the secrets of health, personal safety and welfare.*

1. Jansen P, Bacal K, Crengle S. He Ritenga Whakaaro: Māori experiences of health services. Auckland, Mauri Ora Associates 2008

Oranga niho – Te wero
Oral Health – The Challenge

Key reviewers:
Dr Pauline Koopu, Te Whānāu-a-Apanui, Ngāti Konohi, Ngāti Kahu, Te Ao Marama (Māori Dental Association), Wellington

Dr Dorothy Boyd, Specialist in Paediatric Dentistry, Senior Dental Officer, Otago DHB

Mā te huruhuru te manu ka rere, mā te niho ora ka ora te tangata

With feathers the bird will fly, with good oral health, the person will thrive

Key concepts:

- Major inequalities exist in the oral health of New Zealanders and urgent action is required
- Rates of dental caries in children are increasing
- Poor oral health is preventable but prevention must start early
- Cost is one of the major barriers

Why do patients go to a GP rather than a dentist?

There are many reasons why a patient may present to general practice rather than a dentist. Some of these reasons are: [1, 2, 3]

- A GP may be viewed as more accessible – patients can usually be seen on the same day
- There may be financial considerations – a GP consultation is likely to be less expensive than a dentist
- The patient may not have a regular dental provider and therefore views the GP as the first person to see when a problem arises
- There may be a lack of co-ordinated after hours dental care, or this care may exist, but patients may not be aware of it
- The patient may be seeking treatment that will give immediate relief of symptoms rather than definitive treatment of the underlying dental issue
- A patients past experiences (e.g. fear, pain) and those of family and friends may influence the choice of practitioner
- The patients may have limited knowledge of the specific roles of dental and medical practitioners
- Oral health is a part of general health – people may not consider a dental origin for their health problem e.g. bacterial endocarditis

How can GPs help improve oral health?

There are three easy actions to take which will improve the oral health of patients.

1. Ask about oral health
2. Examine the teeth and gums
3. Be aware of what services are available

1. Ask about oral health

It is good practice to ask patients about oral health. For example, when children present for immunisations (particularly at the 15 month immunisation visit), ask "Is your child enrolled with the School Dental Service?" Other opportunities may present during the "B4 School Check", when new patients enrol in the practice, and during consultations where poor oral health is apparent (e.g. while examining a sore throat).

Best Practice tip: Make it a practice wide task to record enrolment status with the School Dental Service for all children aged under 18 years. Have enrolment forms for the School Dental Service in the practice and encourage parents to enrol their children. Place a recall to check when they next present that they have enrolled the child. If the child is already enrolled, check that they have attended appointments.

Most DHBs have information, downloadable enrolment forms and lists of local school dental clinics on their website.

2. Examine the teeth and gums

This applies not only when there are symptoms but also opportunistically when examining a patient's throat or mouth. Encourage parents to look in their child's mouth for signs of dental decay (e.g. obvious cavities or chalky white patches). If one whānau member has dental problems it is likely that others may have similar problems. Promoting good preventative behaviour needs to be targeted at the whole whānau.[1]

The "Lift the Lip" message, a joint venture from the Ministry of Health and the New Zealand Dental Association, is a nationally consistent phrase used to encourage parents to look in their child's mouth. Instructional videos showing how to detect decay in young children can be viewed online. These videos are aimed at Well Child providers, B4 School Check providers and general practices. Available from:
www.healthysmiles.org.nz/default,120,lift-the-lip-.sm

3. Be aware of what services are available

Be aware of what services are available in the area such as Māori health providers, mobile units, contracted and private dentists. Be familiar with the options for dental

Oral healthcare funding in New Zealand

Publicly funded dental care in New Zealand is targeted at people under the age of 18. The aim is to promote good oral health from an early age so that the benefits flow on into adulthood. Dental care for adults is provided by private dental practitioners and in most cases the cost of treatment is the responsibility of the individual. However there are some publically funded targeted services.

Oral health care is funded for the following groups in New Zealand;

- Children from birth to Year 8 (age ~ 12 years)
- Adolescents from Year 9 (age ~ 13 years) to age 18 years
- Low-income adults
- Special needs and medically compromised patients

Children from birth to Year 8

All children need to be enrolled with the School Dental Service to receive free oral health care. The age of enrolment varies by region, but the majority are enrolled by age two and a half years. Dental care is provided by dental therapists in school, community or mobile dental clinics until the end of Year 8. Children can be referred to a dentist for further treatment, which is free if accessed under the Combined Dental Agreement.

Adolescents from Year 9 to 18th birthday

Adolescents can access free dental care under the Combined Dental Agreement. Year 8 students are provided with an enrolment form, usually from a dental therapist via the School Dental Service. They then select a contracted dentist for their care who will sign the form to access funding. Adolescents can be enrolled at any age up until their 18th birthday.

The treatment covered under this agreement includes regular examinations, preventive services (fissure sealants, fluoride treatments), fillings and extractions. A fee may apply for other services such as larger tooth coloured fillings in back teeth. Other specialised services such as orthodontic and cosmetic work (e.g. tooth whitening) are not covered.

Low-income adults

For people with a Community Services Card (CSC), funding for dental care up to $300 per annum is available through Work and Income New Zealand.

Some public hospitals provide limited services (pain relief and infection control) for people who are unable to access private care due to their financial circumstances. Patients accessing this service must have a CSC and are usually required to pay some of the cost of treatment.

In many areas hospital emergency departments only provide dental care if it is trauma related. Other after hours care is usually provided by private dentists working on an on-call roster. The cost of this care is the responsibility of the individual.

Special needs and medically compromised patients

Specialised dental care is available from hospital based services for people with medical conditions, intellectual or physical disabilities, mental illness or severe dental disease that prevents them from using private dental services. A part charge may often apply to these services. Criteria for referral varies by region, check with the local DHB.

Treatment secondary to trauma is covered by ACC

In circumstances where teeth are damaged in an accident, the cost of treatment for all age groups is usually covered in part by ACC.

care for all age groups and have information available on funding and resources. Contact your local DHB if you don't know where to start.

Establish good working relationships and referral processes with dental health teams. Dental care has tended to be relatively isolated from the rest of primary health care and often there may be limited communication between doctors and dentists.[3]

What action can GPs take when confronted by poor oral health?

Don't ignore oral health

There are known links between periodontal (gum) disease and diabetes, smoking, oral cancers and poor maternal oral health and pre-term or low-birth weight babies.

Oral health encompasses both physical and psychosocial aspects which can have a major impact on the way an individual functions in their day to day life. Missing, damaged or diseased teeth and the pain and self-consciousness arising from this can have a marked effect on quality of life. Poor oral health can affect personal relationships, self esteem, general health and work.

"Promoting oral health is not simply a matter of reducing caries levels. It is also about promoting the overall health of society and its individuals." – Ministry of Health[4]

Initiate treatment and refer

If a patient presents with an oral health problem, treatment may be initiated if appropriate, followed by referral for dental treatment.

See page 14 for management of common oral health conditions seen in general practice.

Provide education to promote good oral health for all

In addition to education about immediate care, use the opportunity to provide ongoing education about preventative care. This may include advice on:

- Good oral hygiene (see page 20)
- A healthy diet, in particular avoidance of sugary foods
- Giving teeth a rest – encourage food and drink free periods between snacks and regular meals (ideally 1½ to 2 hours)
- Regular dental examinations (annually if good oral health, three to six monthly if problems exist)
- A smoke free environment
- The use of mouth guards in sport

How to enrol in the School Dental Service

Practices are encouraged to have enrollment forms available. Otherwise the parent or caregiver should contact the dental clinic at the school closest to their home address (listed in the phone book under school name) or ask their Plunket nurse. Primary school aged children who have not previously enrolled will receive an enrolment pack when they start school.

For information on adolescent dental care, call 0800 ITS FREE (0800 4873733)

The status of oral health in New Zealand

Oral health in New Zealand has improved in general over the last few decades, mainly attributed to the introduction of fluoride toothpaste and the fluoridation of the water supply in some areas.[4] However, significant inequalities remain for some groups. The state of oral health varies widely with age, ethnicity, socio-economic status and access to fluoridated water.[5]

Child oral health statistics in New Zealand are worse than countries with similar oral health systems such as Australia and the United Kingdom.[5] In New Zealand until the early 1990s, dental caries rates among children were declining. However in recent years these rates have become static or even slightly increased.[6] Figure 1 shows the percentage of five year old children that are free of tooth decay, clearly demonstrating ethnic inequalities.

Primary health care has an important role in improving oral health.

> "The vision is for an environment that promotes oral health, whether through fluoridated water, a healthy diet or publicly funded services staffed by a multidisciplinary workforce that actively addresses the needs of those at greatest risk of poor oral health. In this future, oral health is recognised as an important part of general good health. Links between oral health services and other health care ensure that oral health is promoted, improved, maintained and, where necessary, restored at the earliest opportunity."
>
> – Ministry of Health[5]

Oral health inequalities in New Zealand

Good oral health relies on success in four important areas – enrolment, attendance, good oral health behaviour and treatment. Significant inequalities have been identified amongst children in New Zealand. Higher rates of decayed, missing and filled teeth are found amongst Māori and Pacific children, those in low socio-economic groups and children living in rural areas.[4,7,8] There are many reasons for these inequalities including;

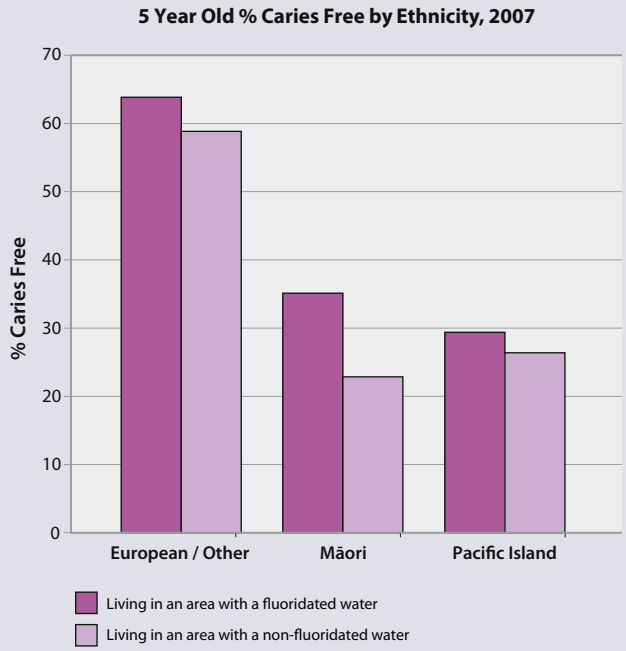

Figure 1: % five-year-old children in New Zealand caries free by ethnicity (School dental service data. Ministry of Health, 2009).[9]

- Access to and delivery of dental care services
- Availability of a fluoridated water scheme
- Socio-economic status
- Transient population
- Cultural barriers

Access to and delivery of dental care services

Māori and Pacific children in particular have low rates of enrolment in the School Dental Service.[4] If children can be enrolled early it provides a good opportunity, not only to detect early tooth decay but also to educate whānau about good practices and behaviours, that promote oral health. Once children are at primary school, the majority are enrolled but use of the service declines in adolescence.[9]

Dental therapists are no longer permanently based at every school, therefore access is reliant on ability to contact the service, transport and parental responsibility. In many areas community based clinics or mobile services

have been developed to overcome these barriers. These clinics may operate from a non-traditional setting e.g. marae, work place or recreational venue.[1]

Availability of a fluoridated water scheme

More than half New Zealand's population lives in areas that have fluoridated community water supplies, a factor known to improve dental health. The remainder live either in areas with non-fluoridated water supplies or areas reliant on rainwater. Water fluoridation has been shown to reduce dental caries by up to 50%. It is also effective in reducing socioeconomic and ethnic disparities in dental caries.[10]

Socio-economic status

Socio-economic factors can have a major impact on oral health. Costs can limit access to services. Families on tight budgets with competing priorities may struggle to provide a good healthy diet (e.g. cost of soft drink vs. milk). They may also have limited resources to cover other costs such as toothbrushes, fluoridated toothpaste and dental floss.

Transient population

Māori and Pacific families are more likely to be transient and therefore are more likely to miss appointments for ongoing dental care and less likely to re-enrol in each new area.[7]

Cultural barriers

As the majority of oral health workers are non-Māori and non-Pacific, this may contribute to cultural barriers. There are a number of Māori oral health services operating in New Zealand (see side bar). Māori providers have adopted a whānau ora approach and have been very effective in improving Māori oral health where they operate.[8] Barriers such as language, negative attitudes from whānau towards dental treatment and differing beliefs about dental care itself, can also contribute to poor oral health.

Māori health providers

Māori health providers currently operate successful community based oral health care services throughout New Zealand. An example is Te Manu Toroa.

Te Manu Toroa provides a Kaupapa Māori model of health care for Māori in the Tauranga and Te Puke areas. Te Manu Toroa provides dental health services for Māori children and also Māori mothers (under 18) who attend the Bay of Plenty Polytechnic. The most recent addition to the dental service, was the acquisition of a fully equipped mobile dental facility, which allows Te Manu Toroa to have onsite access to the majority of its patients.

For provision of services the following two significant barriers needed to be addressed:

1. Changing Māori attitudes and beliefs about dental health services

Māori views on dental health services were traditionally reactionary: "If you had a bad enough tooth ache, pull it out. If you pull one out, pull them all out so you don't have to come back again". The cost of accessing a dentist was also an issue, hence the simple rationale that no teeth meant no ongoing costs.

Te Manu Toroa provides a proactive whānau ora approach. A caregiver is required to accompany their tamariki (children) and rangatahi (teenagers) to the dental service. This approach has not diminished the levels of access. The message is stressed to whānau that the service is free until a child turns 18. Simple interventions will, save money in the future.

There is a significant difference in attendance at the clinic between primary school (99%) and secondary school (55%) students. Lack of motivation of rangatahi to attend the dental service appears to stem from teenage culture rather than Māori culture. The goal of Te Manu Toroa is to increase attendance amongst rangatahi.

2. Developing a good working relationship between the providers of primary health care and dental health services

Te Manu Toroa have worked to develop a collaborative professional approach to the provision of health services with local primary care. Patients have benefited through improved access to oral health care.

To find out who the Māori health providers are in your area, contact your local DHB.

Acknowledgement:

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He mate niho ka kitea e te Rata

Management of common oral health problems seen in general practice

Key reviewers:
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Ka kata a Kae – Kae laughs.

This is from the story of Tinirau and Kae, where Kae eats Tinirau's pet whale. Tinirau sends some women to exact revenge. In order to identify Kae, they have to make him laugh to see his crooked teeth.

www.bpac.org.nz keyword: oralproblems

Patients may present to their GP with oral health problems. When necessary, treatment may need to be initiated followed by appropriate referral to a dental service. Good oral health behaviours should be emphasised (see page 20).

Poor oral hygiene and gum disease

Halitosis or bad breath can indicate a number of oral health and general medical conditions. Check the mouth (teeth, gums and tongue) for an obvious dental cause such as bacterial buildup on the tongue and consider other factors such as diet. Some medical conditions associated with halitosis include sinus infection (post nasal drip), tonsillitis, respiratory infection, diabetes and oral cancers.

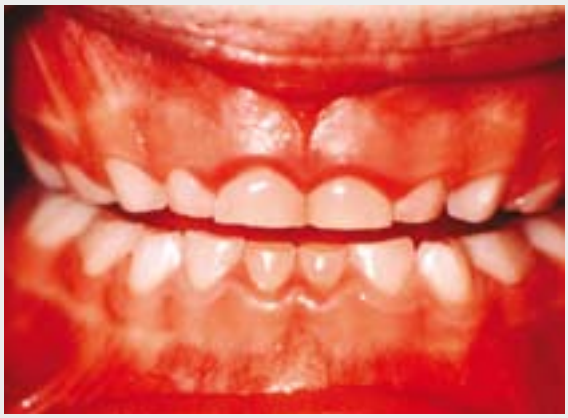

Figure 1: Gingivitis in a child. Note the redness around the gingival margin of the upper incisor teeth. (Source: D. Boyd)

Gingivitis is localised inflammation of the gums (Figure 1). Symptoms include swollen bleeding gums with brushing or flossing, erythema and halitosis but not usually pain.[1] For treatment and prevention, good oral hygiene should be followed. Appropriate use of an antiseptic mouth wash such as chlorhexidine gluconate 0.2% (Orion brand fully subsidised) may also assist (see page 22 for appropriate use). If applicable, smoking cessation should be advised.

Periodontitis is the loss of supportive bone structure around the root of the teeth caused by chronic gingivitis.[1] Symptoms include receding gums that bleed easily on contact and subgingival dental plaque. Referral for mechanical debridement and ongoing dental care is required. Periodontal disease is rarely a feature of systemic disease.

Kawakawa for dental pain

Kawakawa (*Macropiper excelsum*, Māori Pepper Tree) is a traditional Rongoā Māori treatment used for toothache. The leaves, which have a spicy taste, are chewed and retained in the mouth, while the saliva is swallowed.

Kawakawa is related to the black pepper tree and kava. The leaves contain the essential oil myristicin, which is also the predominant psychoactive ingredient in nutmeg, although kawakawa is not used for psychotropic purposes.

There have been no scientific studies on the biological activity or toxicology of kawakawa, however no adverse effects or interactions have been recorded.

Medical problems associated with oral health problems

- Dry mouth (xerostomia) – e.g. from Sjögren's syndrome or from adverse effects of medication, head and neck radiotherapy
- Gingival hyperplasia (hypertrophic gums) can be an adverse effect of calcium channel blockers or cyclosporin and some antiepileptic medications.
- Oral cancers
- Poor nutrition
- Mental health problems, visual impairment or lack of knowledge leading to poor oral hygiene and inadequate diet
- Parkinson's disease leading to difficulties with chewing and dental hygiene
- Eating disorders e.g. Bulimia – associated with erosion of tooth enamel particularly of the palatal (roof of mouth) surface of upper teeth
- Poorly controlled diabetes may result in oral health problems
- Osteonecrosis of the jaw related to bisphosphonate therapy

Other causes of "dental" pain

Trigeminal neuralgia

Herpetic neuralgia

Referred pain from tempo-mandibular joints

Salivary gland disorders

Sinusitis

Jaw pain referred from mycocardial tissue or temporal arteritis

Neoplasia e.g. breast secondaries in jaw

Pericoronitis is an acute localised infection under the gum flaps of a partially erupted tooth or impacted tooth. This most commonly affects the wisdom teeth.[1] Initial treatment is irrigation of the area to remove debris (e.g. trapped food particles), chlorhexidine mouthwash and adequate analgesia. If the infection involves the wisdom teeth bilaterally and the swelling is marked, there can be airway compromise, requiring urgent hospital referral. If there is significant swelling or evidence of cellulitis or systemic disease, amoxycillin (500 mg three times per day, for five days) or metronidazole (400 mg three times per day, for five days), may be prescribed.

Dental caries is a disease caused by bacteria which damage hard tooth structure (also known as tooth decay or cavity). It is asymptomatic in the initial stages. If left untreated, the patient will usually start to notice temperature sensitivity and mild pain. Preventative education and dental treatment is required.

Sensitive teeth may be caused by periodontal disease, caries, trauma, toothbrush abrasion, erosion or attrition, age, smoking and medical conditions (e.g. radiation therapy). Patients often experience acute localised pain while eating and drinking cold foods/liquids. Toothpastes specially formulated for sensitive teeth can be used. Several applications may be required before sensitivity is reduced. Dentists can also apply desensitising agents. It is also important to eliminate any possible etiological disease.

Dental infection or abscess

All people with dental abscess require referral for further dental care such as root canal treatment or extraction (Figure 2). Treatment of acute symptoms can be managed in general practice.

If pain is significant, prescribe adequate and regular analgesia – begin with paracetamol or ibuprofen which can be taken together if pain relief, with either alone, is insufficient. If pain relief is still not adequate, add codeine. Patients can be advised to consume cool, soft foods.

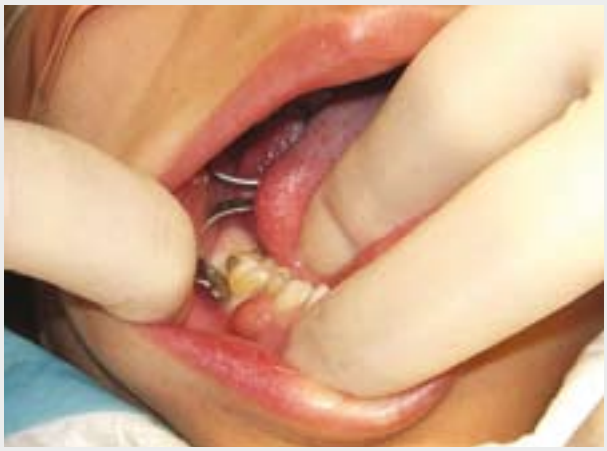

Figure 2: Treatment for buccal abscess in a child, requiring general anaesthesia. Note the raised swelling buccal to the lower right first primary molar. This child was four years old and had a total of ten teeth restored or extracted. When small children have large amounts of work required, a general anaesthetic can be necessary. (Source: D. Boyd)

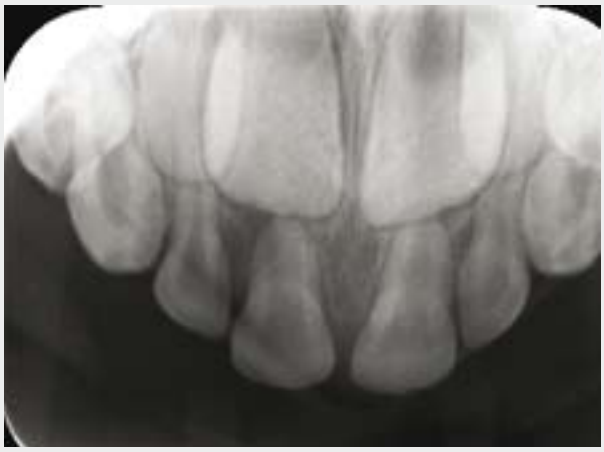

Figure 3: X-ray showing the relationship of the permanent teeth to the primary teeth. This demonstrates how trauma to primary teeth can cause damage to permanent teeth. (Source: D. Boyd)

If there are signs of severe infection (cellulitis, diffuse, tense, painful swelling of the infected tissues) or the patient is systemically unwell, prescribe amoxycillin (500 mg three times per day, for five days) or metronidazole (400 mg three times per day, for five days).[2,3]

If the patient has severe cellulitis, they may require hospital admission for intravenous antibiotics and fluids, or emergency referral if swelling poses a serious risk to general health (e.g. a compromised airway). In rare cases, cavernous sinus thrombosis may be a late complication of dental abscess or infection.

If there is marked swelling, the patient is in extreme discomfort or if dental care is not able to be accessed straight away (e.g. over a weekend), the abscess may be lanced and drained, using topical anaesthesia (or freezing with ethyl chloride spray). Incisions usually epithelialise rapidly, causing the abscess to fill with pus again, so it is important to follow-up with a hot, salty mouthwash to encourage continued drainage.

Toothache without abscess

Pulpitis is inflammation of the dental pulp. This usually arises from caries but can be caused by dental erosion or trauma. In the early stages pulpitis can be reversible after appropriate dental treatment (removal of carious tissue or protection of the pulp and restoration). The pain is usually moderate and the episode that results in the patient presenting for care may be preceded by other less acute episodes, pain on chewing and temperature sensitivity. If the inflammation continues without appropriate dental treatment, the pulp can be irreversibly damaged and root canal therapy or extraction may be required. The pain of irreversible pulpitis becomes severe, spontaneous, and persistent and often poorly localised. Prescribe adequate analgesia (see previous) and refer for dental care. Antibiotics are not indicated in the absence of cellulitis.[2,4]

Trauma

Trauma to teeth

Trauma causing tooth loss is common, especially in children and can result in fracture of teeth (or jaw), tooth

loosening or tooth loss (avulsion). All patients with tooth trauma require dental referral and radiography.[2] Tetanus injection may be required in some circumstances. Prophylactic antibiotics (amoxycillin) are only required in some cases of tooth avulsion.

Ensure that ACC information is completed. In the case of non-accidental trauma, injuries need to be appropriately documented and history recorded (see side bar). Injuries to primary teeth may cause damage to permanent successor teeth.

Non-accidental trauma

Oro-facial injuries occur commonly in cases of non-accidental injury. Reports of suspected child abuse can be made to the Child Youth and Family Service – 0508 FAMILY (0508 326459). Alternatively, and for suspected abuse in adults, contact the police.

The role of the doctor (or dentist) in this situation is to observe, document and report the injuries. Support should be offered, but an in-depth interview of the victim to confirm whether or not abuse has occurred should not be attempted, as this is the responsibility of the social worker or police officer.

Documentation should be specific and objective and should include:

- The time and date and who was present
- A verbatim account of the incident, including child/parent/caregiver statements
- A description of injuries, including diagrams if appropriate
- A note of any physical or behavioural anomalies
- An account of any advice sought on the matter e.g. from colleagues
- An account of subsequent action taken e.g. call to Child Youth and Family Services
- Planned follow-up and management of injuries

Treatment of an avulsed tooth[2,4]

The preferred emergency treatment of an avulsed permanent tooth is immediate re-implantation, ideally within five minutes (and up to 15 minutes). If rinsing is needed, use normal saline and also flush out any clot from the socket before the tooth is re-implanted. Touching, rubbing or cleaning of the root should be avoided as this reduces the likelihood of successful re-implantation. Hold the tooth by the crown. Look at the adjacent teeth to gauge the line/angle of the replaced tooth. The tooth can be held in place by gently biting on a piece of gauze. The patient should then be immediately referred to a dentist. Primary (deciduous) teeth should not be re-implanted as doing so may damage the permanent tooth above (Figure 3).

If the tooth is unable to be put back in, the patent should be referred immediately to a dentist and the tooth transported in the patient's mouth, under the top lip (but the risk of swallowing the tooth must be considered, especially in children), or placed in a container with fresh, cold milk or saline (do not use water).

Post dental procedures

"Dry socket" – acute alveolar osteitis is seen in patients who have a history of extraction in past 24 – 48 hours, and present with severe, persistent throbbing pain that is localised to the socket. The socket is usually very tender to palpation and there is no blood clot visible. There may be associated halitosis. A dry socket is more frequently seen in people who smoke, especially if they have not abstained since extraction. Initial treatment is to examine the socket for debris and then irrigate with sterile saline. Antibiotics are not indicated but analgesics may be required.[4,5] The patient can be referred to a dentist for packing of the socket.

Post extraction haemorrhage is usually able to be stopped with a few minutes of local pressure on the bleeding socket with a gauze swab or pack.[4,6] This also applies to patients who may be taking aspirin or NSAIDs.[4] If the bleeding continues then refer for further dental care. Ideally this type of problem should be dealt with by the dentist who

performed the procedure, and the patient would normally be provided with written instructions on post extraction care.[6] A thorough review of the patient's medical history should be taken to rule out a haematological disorder.

Lip bite post local anaesthetic is commonly seen in children. Significant trauma may be caused by a child chewing on a numb lip.

Teething in infants

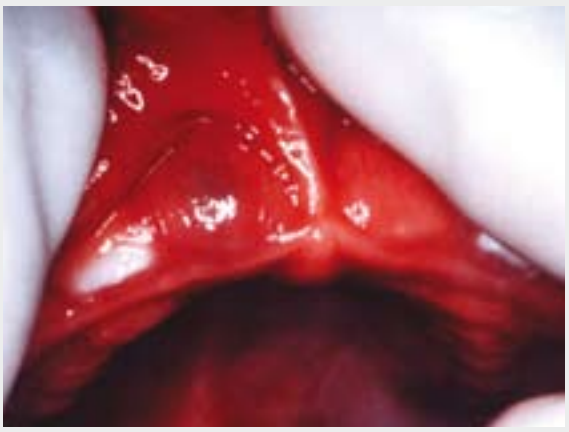

Figure 4: This is an eruption cyst, seen reasonably commonly in infants who are teething. It does not require treatment. (Source: D. Boyd)

Prophylactic antibiotics for prevention of bacterial endocarditis

New Zealand National Heart Foundation guidelines recommend antibiotic prophylaxis should be given to those at highest risk of adverse outcomes, undergoing dental procedures that involve manipulation of either gingival tissue or the periapical region of teeth or perforation of the oral mucosa. The recommended antibiotic is amoxycillin 2 g (child: 50 mg/kg up to 2 g) as a single dose one hour before the procedure.[7]

Cardiac conditions for which endocarditis prophylaxis is recommended:

- Prosthetic heart valves (bio or mechanical)
- Rheumatic valvular heart disease
- Previous endocarditis
- Unrepaired cyanotic congenital heart disease (include palliative shunts and conduits)
- Surgical or catheter repair of congenital heart disease with six months of repair procedure

For people with cardiac conditions, an important goal is prevention of dental caries and periodontal disease. Education and regular dental examination to detect disease, or risk of disease at an early stage, is ideal.

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Oranga niho mō te iwi

Basic oral hygiene: what to tell your patients

Mā mahi ka ora – 'By work one is sustained'
Mahi in this instance is referring to oral hygiene.

Key reviewers:
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Fluoride supplements and fluoridated water

Fluoride is necessary for promoting repair of the teeth by aiding remineralisation of the surface. It works best when used frequently and in low concentrations. Fluoride may be obtained topically from toothpaste and mouthwash or systemically from the water supply or supplements. Both kinds of fluoride are important.

Fluoridated water

In New Zealand, fluoride occurs naturally in all water supplies, but usually the level is too low to protect against tooth decay. Adjusting the water fluoride level to 0.7–1.0 ppm provides extra protection. Approximately half of the New Zealand population receive fluoridated water. Communities vary on whether they have opted for fluoridation of their water supply – 96% of Wellington residents receive fluoridated water compared with 4% of Canterbury residents. Analysis of dental records in these regions showed that decay rates were 30% lower among five-year-old children receiving fluoridated water and 40% lower among 12-year-olds.[1]

People drinking bottled or filtered water as their primary source of drinking water could be missing the decay preventative effects of optimally fluoridated water that may be available from their community water supply. Boiling water does not reduce the fluoride content.

Fluoride supplementation

Fluoride tablets are no longer recommended as a public health measure in New Zealand, as compliance with the daily regimen is poor and the children who use them are normally from more health conscious families, and are therefore not at high risk of tooth decay.[2]

Fluoride tablets can be considered for at-risk children and adolescents living in communities where the water supply is not fully fluoridated. The effectiveness of this form of supplementation is not as clearly documented as water fluoridation.

Sodium fluoride tablets (1.1 mg) can be purchased at pharmacies or prescribed fully funded. Tablets should be

sucked, chewed or dissolved in drinking water (two 1.1 mg sodium fluoride tablets dissolved in 1 L drinking water).

Dose depends on age and the existing fluoride level in the drinking water supply (Table 1).[2, 3] This does not mean that exactly this dose should be taken per day, but that important anti-cavity benefits may be gained with this amount, without causing any adverse effects on health.

Fluoride supplementation in pregnancy and children less than three years old is not recommended

Fluoride supplementation in pregnancy is not recommended because there is little evidence of benefit for the developing foetus.[4] Tooth enamel, the most caries-susceptible area of teeth, calcifies after birth making fluoride given before birth ineffective in decay prevention.

Fluoride supplementation is not recommended for children younger than three years of age, regardless of the fluoride level of the drinking water, because it is associated with dental fluorosis (white spots on the teeth).[2]

Consumption of fluoridated water (e.g. in formula) causes no adverse health effects for infants.[5, 6]

Accidental fluoride poisoning in children

Fluoride can cause symptoms of toxicity at a level of 3 – 5 mg/kg, resulting in nausea, vomiting, diarrhoea and hypersalivation, due to formation of hydrofluoric acid in the stomach. More serious toxicity (e.g. hypocalcaemia) can occur with ingestions over 5 mg/kg.

"Regular strength" toothpaste contains 1 mg fluoride per gram of toothpaste, therefore, symptoms may occur if a 10 kg child ingested 30 g toothpaste (~ ¼ tube) or more.

Poisoning is less common with ingestion of fluoride tablets. Sodium fluoride 1.1 mg tablets contain 0.5 mg fluoride, therefore a 10 kg child would need to ingest around 60 tablets for toxicity to occur.

With small ingestions, milk may be given to relieve gastrointestinal symptoms (calcium binds with fluoride). More serious toxicity requires immediate medical attention.

For further advice on managing fluoride poisoning, contact the National Poison Centre 0800 POISON (0800 764 766)

Table 1: Dietary fluoride supplement schedule[2, 3]

		Fluoride ion level in drinking water (ppm)*		
		Non-fluoridated (<0.3 ppm)	**Partially fluoridated (0.3–0.6 ppm)**	**Fluoridated (>0.6 ppm)**
Fluoride supplement	**Birth–3 years**	none	none	none
	3–6 years	0.5 mg/day** = 1 sodium fluoride tablet	0.25 mg/day = ½ sodium fluoride tablet	none
	6–16 years	1.0 mg/day = 2 sodium fluoride tablets	0.5 mg/day = 1 sodium fluoride tablet	none

*1.0 ppm= 1 mg/L

**1.1 mg sodium fluoride tablet contains 0.5 mg fluoride ion

Brushing teeth, toothbrushes and toothpaste

Teeth should be brushed for two minutes, two times per day (in the morning and last thing at night). All the surfaces of the teeth should be brushed as well as the top surface of the tongue.

Powered toothbrushes with oscillating heads are more effective at removing plaque than standard toothbrushes. Otherwise choose a toothbrush with a small head and soft bristles. Toothbrushes should be replaced every three to four months or sooner if the bristles become frayed. This ensures the brush is producing an effective clean and avoids bacteria build-up. Children should use a child-sized brush for ease of use. Children's brushes often need replacing more frequently than adult brushes.

Toothbrushes should not be shared. Brushes should be rinsed with tap water after use and stored upright in an open container or holder to allow air-drying. Ensure that toothbrushes stored together do not touch to avoid cross-contamination. There is no evidence that toothbrush cleaning solutions or storing brushes in mouthwashes has any additional benefit.

Toothpaste containing 1000 ppm fluoride (0.22% w/w sodium fluoride or 0.76% w/w monoflurophosphate) should be used. Lower strength (400 – 450 ppm) fluoride toothpaste is marketed for children, however regular fluoride toothpaste can be safely used as long as the amount is reduced. Adults and children over six years should use a pea-sized amount, younger children need only a smear of toothpaste. After brushing, spit but do not rinse the mouth as fluoride is effective when applied topically.

Tooth brushing in infants

Parents should start brushing their infant's teeth as soon as the first tooth emerges from the gums. The tooth may be wiped with a soft cloth (e.g. a clean handkerchief) with a small smear of fluoride toothpaste. When appropriate change to a soft, small headed toothbrush with a smear of fluoride toothpaste. The child should spit out when they are able to but not rinse their mouth. Try not to let the child swallow the toothpaste.

Other oral health tips for infants include:

- Do not put a baby to bed with a bottle
- Do not put fruit juices or sweetened drinks into the bottle
- Do not dip dummies (pacifiers) into sugar or honey

Flossing

Dental floss should be used daily (or at least three times per week) to help to remove plaque and food particles between teeth. Dentists may also recommend an interdental brush.

Mouthwash

Fluoride mouthwash helps to reduce and prevent tooth decay, providing slightly more protection than using fluoride toothpaste alone.[7] However for people with healthy teeth and gums, fluoride toothpaste is usually adequate. Fluoride mouthwash should not be used by children aged less than six years, due to the risk of swallowing the product, unless under professional instruction.

Antimicrobial mouthwash (e.g. containing chlorhexidine or triclosan) reduces the bacteria count and inhibits bacterial activity in dental plaque. It can be effective in reducing plaque and gingivitis (an early form of gum disease) but it is usually not necessary for people with healthy gums. Chlorhexidine mouthwash should be used intermittently only as it can stain the teeth and tongue. It should not be used straight before or after tooth brushing as the detergents in toothpaste interact with chlorhexidine.

Resources

The New Zealand Dental Association. Your oral health: Oral health topics.

www.healthysmiles.org.nz

The American Dental Association. Oral health topics A–Z.

www.ada.org/public/topics/alpha.asp

Ministry of Health. Oral health education resources. Free patient information can be ordered from:

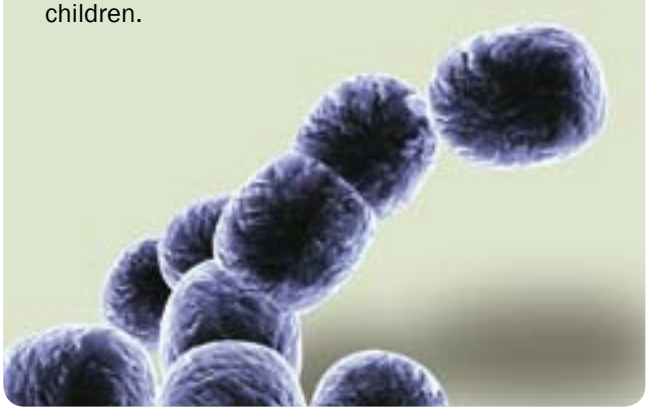
www.healthed.govt.nz/resources
(select category = dental health)

Ministry of Health. Fluoridation in New Zealand.

www.moh.govt.nz/moh.nsf/pagesmh/3578

Transmission of *Streptococcus mutans* from parent to child[8]

The cariogenic bacteria, *Streptococcus mutans* has been shown to be a risk factor for early development of dental caries. These bacteria can be transmitted via the saliva from parent to child in a variety of ways such as sharing spoons, pre-tasting food, putting their infant's dummy into their own mouth and kissing on the lips. There are many other factors involved in the development of caries. These include whether the infant is fed by bottle or breast. If bottle fed, the content and timing of feeds, the overall sugar content of the diet and the frequency and type of snack foods are all factors. An important message for caregivers is that their own oral health impacts on their children.



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Mate tākihi ukiuki

Making a difference in chronic kidney disease

Part1: Catching renal impairment early

He matenga ohorere, he wairua uiui, wairua mutunga kore

The grief of a sudden, untimely death will never be forgotten

Key reviewers:
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Key concepts

- Chronic kidney disease (CKD) and end-stage renal failure is much more common in Māori, Pacific, Asian people and people from the Indian subcontinent
- CKD is a silent condition but can be readily detected with eGFR and urinalysis
- Early intervention gives the opportunity to slow progression to end-stage renal disease and reduce cardiovascular risk

www.bpac.org.nz keyword: earlyrenal

Chronic kidney disease (CKD) is the modern term for chronic renal impairment, diagnosed using estimated glomerular filtration rates (eGFR) and markers of kidney damage, detected with urinalysis, imaging or biopsy (Table 1).

Renal impairment has traditionally been diagnosed using serum creatinine. However serum creatinine does not show an abnormal rise until at least 50% of renal function is lost. Diagnosis is often delayed until symptoms or complications of renal failure develop, missing the opportunity for early protective intervention. Using eGFR facilitates early diagnosis of CKD before any change to serum creatinine.

Chronic kidney disease is common

CKD is estimated to affect approximately 10% of the population. It appears that Māori, Pacific peoples, Asian people and people from the Indian subcontinent have a higher burden of this disease. Māori with diabetes are three and a half times more likely to have renal failure than non-Māori with diabetes.[1]

Only a small proportion of patients with CKD progress to end-stage renal disease. However Māori and Pacific peoples are much more likely to have end-stage renal disease than other ethnic groups in New Zealand. The higher incidence of diabetic and hypertensive end-stage renal disease in Māori and Pacific peoples cannot be fully explained by the underlying disease prevalence. Other factors that may contribute to this difference in incidence are socio-economic disadvantage, which is a known risk factor for end-stage renal disease, and underutilisation of medical services.

People with end-stage renal disease commonly have a progressive fall in eGFR, marked proteinuria and hypertension. Early recognition and management, and appropriate referral can prevent end-stage renal disease in some cases and greatly improve the outcome for others.[2]

Markers of kidney damage include:

- Persistent proteinuria/albuminuria
- Persistent haematuria/WBC in urine
- Red blood cell casts/dysmorphic cells on urine microscopy
- Ultrasound/other radiological abnormalities

Table 1: CKD staging based on eGFR and markers of kidney damage

eGFR (mL/min/1.73 m^2)	Markers of kidney damage (see box)	CKD staging	Description
>60	No	No chronic kidney disease	Renal function declines with age
	Yes	1 = eGFR >90	Normal kidney function but urine findings or structural abnormalities or genetic trait point to kidney disease
		2 = eGFR 60–89	Mildly reduced kidney function, and other findings (as for stage 1) point to kidney disease
<60	Not required for staging	3 = eGFR 30–59	Moderately reduced kidney function
		4 = eGFR 15–29	Severely reduced kidney function
		5 = eGFR <15, or needing dialysis	Very severe, or end-stage renal disease

It is important to note that CKD is an independent cardiovascular risk factor and more people with CKD die from cardiovascular disease than end-stage renal disease.[3]

Being able to detect CKD early allows:[4]

- Early protective intervention to reduce progression towards end-stage renal disease (CKD stage 5)
- Monitoring and treatment of cardiovascular risk factors to reduce cardiovascular disease
- Monitoring and treatment of complications

Quick clinical assessment for kidney health check

History including:

- Any risk factors, particularly hypertension
- Prescribed, OTC and alternative medication
- Symptoms of cardiovascular disease e.g. breathlessness, oedema, chest pain, claudication
- Symptoms suggestive of underlying systemic diseases such as vasculitis, lupus or myeloma e.g. fever, weight loss, fatigue, general aches and pains

Examination:

- Dipstick urine
- Blood pressure
- Weight
- Fluid status (JVP, signs of pulmonary oedema, peripheral oedema)
- Enlarged bladder or kidneys
- Renal bruits
- PR in male with lower urinary tract symptoms

Targeted testing for chronic kidney disease in New Zealand

Targeted testing should be considered for people with the following risk factors:

- Aged over 50 years
- Hypertension
- Any cardiovascular disease (IHD, chronic heart failure, peripheral vascular disease and cerebral vascular disease)
- Diabetes
- Smoking
- Known personal or family history of kidney disease, including recurrent UTIs and lower urinary tract symptoms
- Māori, Pacific peoples, Asian people and people from the Indian subcontinent
- Long-term treatment with nephrotoxic medication such as lithium, cyclosporin, mesalazine (NSAIDs are not nephrotoxic but use increases the risk of kidney damage)

It is recommended to perform a kidney health check at a minimum of every five years. This should be done annually if diabetes, established cardiovascular disease or CKD is present.

Best practice tip: link a kidney health check with a cardiovascular risk assessment by adding in urinalysis and serum creatinine.

Kidney Health Check

The kidney health check includes

- eGFR
- Urinalysis for proteinuria or microalbuminuria
- Blood pressure measurement

Further investigations depend on the results of these tests. Any abnormalities should prompt history-taking and examination.

eGFR results and action required

Laboratories provide the eGFR automatically when reporting serum creatinine results. If the eGFR is greater than 90 no further action is required unless there is suspicion of kidney disease. Levels less than 90 require urinalysis (Table 2).

The confirmation of a new CKD stage is based on a minimum of two eGFR values taken over three months. For newly diagnosed patients it is important to establish the rate of decline.

Table 2: Results of eGFR and required action

eGFR value	Action
>90	"No further action" unless known, or suspected, structural or urinalysis abnormalities.
60–89	Urinalysis required to check for evidence of kidney disease. If negative and no other markers of renal disease "no further action" required. If positive determine CKD stage.
<60	Exclude acute renal failure. Determine CKD stage. Urinalysis required to check for haematuria/proteinuria.

N.B. Most laboratories report the eGFR either as >90 mL/min/1.73m^2 or, if less than this, as an exact figure.[5] Some laboratories only give exact figures if the result is less than 60.

If the eGFR is unexpectedly low, best practice is to exclude acute renal failure by a repeat serum creatinine/eGFR. If the patient is obviously ill with rising blood pressure, oedema, proteinuria, haematuria and an unexpected falling eGFR or rising creatinine, discuss urgently with the nephrology team as this may indicate acute kidney damage e.g. glomerulonephritis.

Urinalysis

Urinalysis can provide indirect evidence of kidney damage. Inflammation or abnormal function of the glomeruli can lead to leakage of red blood cells or protein into the urine, resulting in haematuria or proteinuria.

Urine dipstick testing is recommended as a screening test in general practice. Standard dipstick analysis is adequate to screen for proteinuria and haematuria, but will not detect microalbumiuria unless an albumin specific dipstick is used.

Best practice tip: Most eGFRs in people with risk factors for CKD will be 60–89 and urinalysis will be required to decide if CKD is present. As proteinuria levels may fluctuate during the day an early morning urine for analysis is preferred.

Abnormal results should prompt:

- A mid-stream urine (MSU) looking for red blood cell casts or dysmorphic cells on microscopy or, if nitrates or leucocytes positive, culture for infection

and/or

- Early morning urinalysis for albumin:creatinine ratio (ACR) or protein:creatinine ratio (PCR) (Table 3). ACR and PCR have superseded 24 hour urine collection for quantification of proteinuria.

Table 3: Further tests required after dipstick urine

Dipstick result	MSU	ACR	PCR
No abnormality		✓ if diabetic or hypertensive	
Haemoglobin/ blood +ve	✓		
Albumin +ve (albumin specific dipstick)	✓	✓ if diabetic or hypertensive	
Protein +ve	✓		✓

eGFR is an estimate

Although eGFR is now the basis of diagnosis of CKD it is only an estimate. The eGFR is calculated from the serum creatinine, using the four-variable Modification of Diet in Renal Disease (MDRD) equation, based on age and a standard adult body surface area. Results are reported as mL/min/1.73m^2. As it does not allow for any variation in body weight, a significant error is possible.

eGFR is not valid in pregnant women or in children (<18 years), nor accurate if the serum creatinine is changing rapidly as occurs in acute renal failure.

Creatinine level is dependant on muscle mass and the eGFR is most likely to be inaccurate in people at extremes of body type, e.g. reassuringly high in people with reduced muscle mass such as the frail elderly, amputees, people with chronic liver disease or on low protein diets (vegan).

The MDRD equation was originally validated in the United States. Although it has not been validated for Māori and Pacific peoples, Asian people or those from the Indian subcontinent, the eGFR is still recommended for screening for CKD in these populations.

An alternative calculation, that uses the individual's weight as an approximation of lean body mass, is the Cockcroft-Gault equation for calculating creatinine clearance as mL/min (the proxy measure for glomerular filtration rate). This equation is preferred for drug dosage adjustment, although it has similar disadvantages as the MDRD equation for people at extremes of body type.

$$\text{Creatinine clearance mL/min} = \frac{(140 - \text{age}) \times \text{weight(kg)} \times 0.85\text{(in females)}}{815 \times \text{serum creatinine(mmol/L)}}$$

Transient proteinuria or haematuria is not unusual. Urine dipstick blood or protein that does not resolve should be followed up. Persistent haematuria requires referral to either urology or nephrology.

Other investigations

Ultrasound is the optimal first line test for imaging the renal tract in patients with CKD and identifies obstructive uropathy, renal size and symmetry, renal scarring and polycystic disease. It is recommended where there is lower urinary tract symptoms, eGFR < 60 mL/min/1.73m^2, progressively falling eGFR or refractory hypertension (blood pressure >150/90 mmHg despite three or more antihypertensives).

Further reading

The following guidelines were considered in the development of this article:

- Kidney Health New Zealand (KHNZ). Chronic kidney disease (CKD) management in general practice: summary guide. KHNZ 2009.

  Available from **www.kidneys.co.nz**

- Kidney Health Australia (KHA). Chronic kidney disease (CKD) management in general practice: guidance and clinical tips to help identify, manage and refer CKD in our practice. KHA, Melbourne 2007.

  Available from **www.kidney.org.au** or **www.racgp.org.au**

- Scottish Intercollegiate Guidelines Group (SIGN). Diagnosis and management of chronic kidney disease: a national clinical guideline. SIGN, Edinburgh 2008.

  Available from **www.sign.ac.uk**

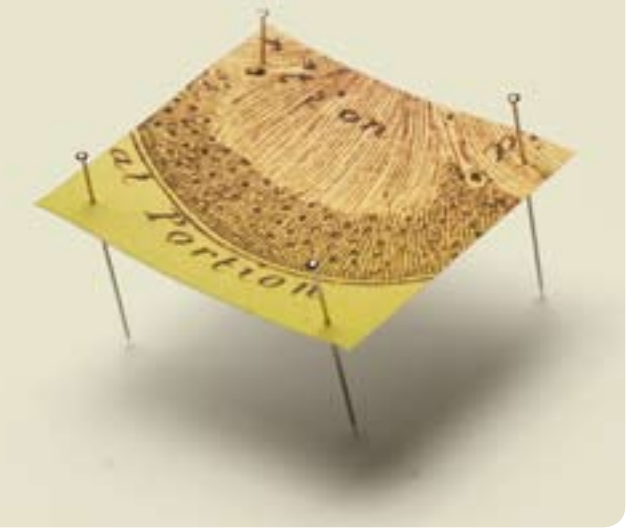
Definitions of microalbumiuria and proteinuria

Detection of an increase in protein excretion has both diagnostic and prognostic value in the initial detection and confirmation of renal disease.

Persistent higher-risk microalbuminuria is defined by an early morning ACR of >2.5 mg/mmol in men or >3.5 mg/mmol in women on two or more occasions.

In non-diabetic CKD significant proteinuria is regarded as >0.3 g/day on two separate occasions. This is equivalent to PCR >30 mg/mmol.

Best practice tip: a PCR of 100 mg/mmol is equivalent to daily protein excretion of 1 g/24 hours.



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  Available from **www.nice.org.uk**

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Mate tākihi ukiuki

Making a difference in chronic kidney disease

Part2: Management

Key reviewers:
Professor Rob Walker, Nephrologist/Head of Medical and Surgical Sciences, Dunedin School of Medicine, University of Otago

Dr David Voss, Specialist Renal Physician, Kidney Kare Ltd, Auckland

Māna anō e whakamāui ake – *May the person recover. The expression whakamāui comes from a legend in which Māui was waylaid and almost killed. However he restored himself to health using incantations.*

Key concepts:

- ACE inhibitors and angiotensin 2 receptor blockers (ARBs) are indicated in all patients with a stable eGFR less than 60 mL/min/1.73 m^2 with hypertension, or with proteinuria or diabetes irrespective of the blood pressure
- Medicines management is vital – check the recommended doses in renal impairment and avoid NSAIDs if possible

Initial Management

Management is dependent on the CKD stage, the level of cardiovascular risk and the presence of any red flags or indications for referral (Table 1).

Table 1: Red flags and referrals (adapted from McKie et al, 2006)[1]

RED FLAGS urgent/same day referral	▪ eGFR <15 (CKD level 5) newly detected – to Nephrology ▪ Possible acute glomerulonephritis: unwell, dehydrated, rapidly rising creatinine, increasing oedema and blood pressure, proteinuria and haematuria – to Nephrology ▪ Hyperkalaemia >7 mmol/L – to Physician ▪ Acute "obstructive" renal failure – to Urologist

Referral	Indications
Urology	▪ Abdominal/loin mass on examination or ultrasound ▪ Evidence of prostate cancer ▪ Renal colic ▪ Painless macroscopic haematuria (non-UTI)
Nephrology	▪ eGFR 15–29 (CKD level 4) ▪ Progressively falling eGFR e.g. >4 mL/min/1.73m^2 over a year ▪ Suspected multisystem disease such as rheumatoid arthritis, SLE, other vasculitides ▪ Possible nephrotic syndrome: gross proteinuria, oedema, hypoalbuminaemia ▪ Persistent abnormalities of urinalysis: PCR >100 mg/mmol (some clinicians recommend referral at >50 mg/mmol); sterile pyuria; microscopic/macroscopic haematuria, especially if with proteinuria ▪ Blood pressure uncontrolled to 150/90 mmHg despite three or more antihypertensives ▪ CKD complications e.g. Hb <100 g/L with normal iron stores or abnormal potassium/calcium/phosphate/Alk Phos/PTH)

Managing Change

Māori knowledge of chronic kidney disease comes largely from the experiences of whānau members – those who have died and those who have end-stage renal disease. Memories are of tangihanga (funerals) and of loss.

Some Māori who have been diagnosed with chronic kidney disease may avoid contact with any health service. Once they are "lost to the system" it is very difficult for a GP to assist in the management of their care. However it is important not to stereotype Māori as many are fully compliant with treatment. GPs are well equipped to provide important health information to whānau and to assist in managing this disease. However, in order for information to be heard and understood, a connection must be made. The development of a trusting therapeutic relationship with the patient and key whānau members is important.

Listen to the patient and whānau to understand how they feel. Acknowledging whānau experiences and loss can help develop a successful relationship so that together the GP and whānau can plan the next steps – bearing in mind that how the journey is to be walked and shaped will be determined by the patient and whānau.

Accepting and living with this type of significant change is probably one of the most difficult requests we make of our patients.

Indications for referral

Most patients with stable or slowly declining eGFR, minor proteinuria (PCR <30 mmol/mL) with no haematuria, and controlled blood pressure can be managed in general practice, until the CKD declines to the level where decisions need to be made about dialysis (CKD stage 4 onwards).

All patients with an eGFR of 30 or less should be considered for referral to a Nephrologist for guidance with management whether considering renal replacement therapy (dialysis) or palliative care.

Key facts to include in the referral are: any known risks for CKD; lower/upper urinary tract symptoms; medications; oedema, masses and other relevant findings; blood pressure; quantification of proteinuria; current bloods; renal ultrasound results (recent); and all previous serum creatinine results (eGFR) listed by date.

Tests required for monitoring

The tests required for monitoring are dependent on CKD stage (Table 2) and clinical appropriateness.

The six key parameters to monitor for every patient with CKD are:

1. Annual cardiovascular risk
2. Blood pressure
3. Weight
4. Urinalysis (PCR should be measured annually if there is persistent proteinuria)
5. Serum creatinine/eGFR
6. Potassium

It is recommended that cardiovascular risk assessment should be done annually with all CKD stages.

Table 2: Recommended ongoing investigations depending on CKD stage

CKD stage	Minimum frequency	Investigations
1 & 2	Annually	Key parameters
3	Three monthly then six monthly if stable	Key parameters + CBC Calcium Phosphate Alk Phos PTH (at diagnosis and if calcium, phosphate or Alk Phos levels become abnormal)
4 & 5	Three monthly then six monthly if stable	Key parameters + CBC Calcium Phosphate Alk Phos PTH (six monthly)

Best practice tip: As eGFR falls it is necessary to adjust the dose of drugs that are renally excreted and to avoid nephrotoxic medications. As the eGFR drops below 60 mL/min/1.73 m^2 link the regular laboratory tests with a medicines review. Recalculate Cockcroft-Gault creatinine clearance with the new creatinine result and review all medication.

Ongoing management

The main aims of ongoing care of CKD are:

1. Early protective intervention to reduce progression towards end-stage renal disease
2. Monitoring and treatment of cardiovascular risk factors
3. Monitoring and treatment of complications

Maintaining blood pressure below target levels is a key goal

CKD can cause and aggravate hypertension which can accelerate the deterioration of renal function. Reducing blood pressure to target levels is one of the most important goals in the management of CKD. The target level is less than 130/80 mmHg, or less than 125/75 mmHg in people with diabetes or if the PCR is greater than 100 mg/mmol.

With the exception of salt wasting nephropathies e.g. tubular damage after obstruction, salt retention is a major factor in the hypertension related to CKD. Dietary reduction of sodium intake to <80 mmol/day (~ 1 tsp salt) is recommended. Salt reduction can achieve BP reductions equivalent to a single antihypertensive agent. The majority of dietary sodium intake is derived from processed food including bread and dietetic advice is usually required.

ACE inhibitors and diuretics are the main stay of antihypertensive therapy in CKD. Hypertension may be difficult to control and three to four medications are frequently required in CKD stages 3–5.

Start ACE inhibitor or ARB unless contraindicated

Proteinuria is a sign of renal damage. Increasing amounts of protein in the urine correlates directly with an increased rate of progression to end-stage kidney disease. ACE inhibitors and ARBs significantly reduce proteinuria and improve renal and cardiovascular outcomes.

ACE inhibitors are therefore recommended as first-line agents for the control of blood pressure and for all patients with proteinuria (PCR >100 mg/mmol) at CKD stage 3 or worse.

People with diabetes and CKD should be prescribed an ACE inhibitor or ARB irrespective of their blood pressure reading.

Ongoing haematuria

The presence of three or more erythrocytes per high-power field in at least two of three urine samples is considered confirmatory of ongoing haematuria. This requires further investigation and referral.

Macroscopic or microscopic haematuria may be a sign of urinary tract malignancy. In patients with risk factors, such as smoking and older age at presentation, urological investigation is the most appropriate first step.

In the younger age group nephrological and urological aetiologies need to be considered. If in doubt urine cytology is a useful screening tool. When associated with proteinuria and an abnormal eGFR, a medical/nephrological evaluation is indicated.[2]

Tips for reducing salt in the diet

- Look for “no salt added” labels in food
- Use fresh foods rather than canned varieties
- Rinse canned foods e.g. tuna to remove salt
- Do not add salt to cooking
- Avoid “instant” or convenience foods which often have a high salt content

Initiating ACE inhibitors and ARBs

ACE inhibitors and ARBs may cause a significant drop in eGFR and rise in serum potassium and creatinine. Serum potassium and creatinine should be monitored after initiation or when doses are changed (after one to two weeks). Any concerns can be discussed with a Nephrologist.

Most patients with CKD (especially on an ACE inhibitor or ARB) will have mild hyperkalaemia (5.2 – 5.8 mmol/L). This is not an indication to stop their ACE inhibitor. Review dietary potassium intake and discontinue other drugs known to promote hyperkalaemia. Medications that may be associated with hyperkaleamia include potassium supplements, potassium sparing diuretics, NSAIDs, Cox-2 inhibitors, digoxin, lithium and trimethoprim.[3]

The fall in eGFR should stabilise to be less than 15% from baseline (or 20% increase in serum creatinine). If this is exceeded consider volume depletion or concurrent medication, especially NSAIDs, Cox-2 inhibitors and diuretics. If no other cause is found reduce the dose to tolerable levels e.g. halve.

Renal artery stenosis requiring intervention is rare. Where serum creatinine rises rapidly (a doubling or more over three to five days after commencement of an ACE inhibitor) consider urgent discussion/referral to nephrology. Most cases will be managed with medical therapy including an ACE inhibitor.

Cardiovascular risk reduction and diabetic control

The presence of CKD is one of the strongest risk factors for cardiovascular disease. Be aware that the Framingham tables significantly underestimate risk when CKD is present. All people with CKD should undergo cardiovascular disease risk factor modification, especially for smoking and hypercholesterolaemia.

For people with diabetes, intensive blood glucose control significantly reduces the risk of developing CKD, and in those with CKD reduces the rate of progression.

Medicine management: stop unsafe medication

The clearance of many drugs and their metabolites depends on adequate renal function. As eGFR falls below 60 mL/min it is necessary to adjust the dose of drugs that are renally excreted and avoid nephrotoxic medications. If possible NSAIDs and COX-2 inhibitors should be avoided. A combination that can be fatal in CKD is the "triple whammy" of an NSAID, ACE inhibitor and a diuretic.

Best practice tip: Warn patients with CKD on antihypertensives to:

- Stop diuretics (and NSAIDs, if using them) if they become unwell with diarrhoea and/or vomiting
- Discuss what to use for pain relief with a pharmacist or GP

The Cockcroft-Gault equation should be used for calculating creatinine clearance (mL/min) when adjusting medications in renal impairment (Table 3). Dosages of all medications should be checked with prescribing guidelines e.g. BNF Appendix 3 on renal impairment, datasheets from Medsafe and MIMS.

Infections are a major cause of death in people with end-stage renal disease

Infections are a major cause of death in people with end-stage renal disease, second only to cardiovascular disease. Patients with CKD are immunocompromised but can be vaccinated successfully with augmented immunisation regimens.

Vaccination against influenza and pneumococcus are recommended from CKD stage 3. Influenza vaccine, in particular, seems to provide adequate protection with standard dosing regimens, while pneumococcus requires an augmented regimen with re-vaccination every three to five years.

Hepatitis B vaccination is recommended for those expected to go on to dialysis (consider from CKD stage 4) and requires booster doses when the antibody titre drops below 10 UI/L.[5, 6]

Complications of CKD

The rate of complications increases as the eGFR drops below 60 mL/min/1.73 m^2.

Key complications that require referral are:

- Mineral bone disorders (classically with raised serum phosphate, alk phos and PTH and low calcium and vitamin D levels)
- CKD-related anaemia. Exclude other causes of Hb <100 g/L e.g. low ferritin, TSH. Local renal units may have arrangements for shared care with general practice.[7]

Others complications, as renal function continues to decline, include:

- Anorexia, nausea and poor food intake resulting in malnourishment
- Metabolic acidosis (low serum bicarbonate)
- Hyperkalaemia
- Restless legs syndrome
- Sleep apnoea
- Depression

Management of uraemia in end-stage renal disease (CKD stage 5)

End-stage renal disease (CKD stage 5), is associated with very high levels of serum urea and creatinine from the accumulation of breakdown products of protein metabolism. The symptoms of uraemia include anorexia, nausea, vomiting, pruritis, lethargy, muscle twitching, muscle cramps, polyuria, peripheral oedema and dyspnoea. Pain is a common symptom in this group of patients, often from co-morbidities. Hiccoughs, confusion, convulsions and coma are rarely seen and indicate very severe renal disease.

Ideally patients should be referred to nephrology at CKD stage 4, well before the onset of uraemic symptoms, for discussion of the available choices, including consideration of and planning for possible renal replacement therapy (dialysis or kidney transplant).

Table 3: Some commonly prescribed drugs that require dose adjustment in renal impairment (adapted from Faull et al, 2007).[4]

Class	Examples
Antibiotics/antifungals	Aminoglycosides (e.g. gentamicin), flucloxacillin, ciprofloxacin, fluconazole
Antivirals	Aciclovir
Anticoagulants	Low molecular weight heparins (e.g. enoxaparin)
Cardiac drugs	Digoxin, sotalol, atenolol
Diuretics	If creatinine clearance is less than 30 mL/min: – Use potassium-sparing diuretics with caution due to risk of hyperkalaemia – Thiazide diuretics have limited efficacy at standard doses, consider swapping to frusemide
Opioids	Morphine, codeine, pethidine (due to risk of accumulation of active metabolites)
Psychotropics/ anticonvulsants	Gabapentin, haloperidol, lithium, risperidone
Hypoglycaemic drugs	Metformin, glibenclamide, insulin
Drugs for gout	Allopurinol, colchicine
Others	NSAIDs, methotrexate, penicillamine

Some people reaching CKD stage 5 will be clinically unsuitable for dialysis. This is generally due to functional decline, frailty and/or coexisting conditions, all of which make successful dialysis therapy very unlikely. Some individuals choose not to have dialysis for personal reasons or to withdraw from the dialysis programme.

A patient with end-stage renal disease who chooses not to have dialysis has an average survival of six to eight months.[8] Symptom management is challenging in this group and referral to the local palliative care team, in conjunction with the nephrology service, may be appropriate.[9] Māori providers may also be able to assist.

In general if a patient does not undergo dialysis:

- A low protein diet will help control gastrointestinal symptoms–advice from a dietitian is recommended
- Fluid control should be strict to avoid pulmonary oedema
- Avoid unnecessary medications
- Seek specialist advice on appropriate drugs and dose modification for symptom management

Further reading

The following guidelines were considered in the development of this article:

- Kidney Health New Zealand (KHNZ). Chronic kidney disease (CKD) management in general practice: summary guide. KHNZ 2009.
  Available from **www.kidneys.co.nz**
- Kidney Health Australia (KHA). Chronic kidney disease (CKD) management in general practice:

Patient support and information

As with any chronic disease, people with CKD need to have their ideas, concerns and expectations explored.[10] Many patients will believe "kidney disease" means dialysis and a shortened life. The following is a selection of appropriate educational material:

"Chronic Kidney Disease: What it is - What it means" provides information relevant to the majority of patients. From the RCGP and National Kidney Foundation (UK). Available from:
www.renal.org/pages/modules/download_gallery/dlc.php?file=285

"Chronic renal failure and its progression" plus other articles from the Renal Unit of the Royal Infirmary of Edinburgh (EdREN) is more suited to those at higher risk of progressive renal disease. Available from:
http://renux.dmed.ed.ac.uk/EdREN/EdRenINFObits/CRFLong.html

"Kidney patient guide" is a web guide to the function of the kidney, kidney failure and its treatment including animations. Available from:
www.kidneypatientguide.org.uk/site/physical.php

Kidney Society (Auckland) provides information on end-stage renal disease and its treatment. Available from:
www.kidneysociety.co.nz/home/about-kidneys-and-kidney-failure.html

They also provide a telephone help-line 0800 235 711 (9am to 5pm) and home visits in the Auckland and Northland region.

The New Zealand Kidney Foundation has a series of factsheets mainly on end-stage renal disease, and support centres throughout the country (includes Māori language resources). Ph: 0800 543 639.
www.kidneys.co.nz

guidance and clinical tips to help identify, manage and refer CKD in our practice. KHA, Melbourne 2007. Available from **www.kidney.org.au** or **www.racgp.org.au**

- Scottish Intercollegiate Guidelines Group (SIGN). Diagnosis and management of chronic kidney disease: a national clinical guideline. SIGN, Edinburgh 2008.
  Available from **www.sign.ac.uk**
- National Institute for Clinical Excellence (NICE). Chronic kidney disease: national clinical guideline for early identification and management in adults in primary and secondary care. NICE, London, 2008. Clinical Guideline 73.
  Available from **www.nice.org.uk**
- Rosenberg M, Kalda R, Kasiulevicius V, Lember M. Management of chronic kidney disease in primary health care: position paper of the European Forum for Primary Care. Qual Primary Care 2008;16:279-94.

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4. Faull R, Lee L. Prescribing in renal disease. Aust Prescr 2007;30:17-20.
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6. Centre for Disease Control and Prevention. Guidelines for vaccinating kidney dialysis patients and patients with chronic kidney disease. 2006. Available from: http://www.cdc.gov/vaccines/pubs/downloads/b_dialysis_guide.pdf (accessed June 2009).
7. Madhan KK, Chamberlain M, Anderson E. Anaemia in patients with chronic kidney disease: management with epoetin beta in primary care setting in New Zealand. Nephrology 2008;13:428-32.
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9. Cohen LM, Moss AH, Weisbord SD, Germain MJ. Renal Palliative Care. J Palliat Med 2006;9(4):977-92.
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Rongoā for kidney complaints

There are a number of traditional Rongoā Māori treatments for kidney and urinary complaints. These include Kawakawa (Māori Pepper Tree), Karamu (Coprosma), Manuka (Red tea tree) and Kanuka (White tea tree). The leaves and shoots are generally boiled in water and the liquid ingested.

Ask patients about any Rongoā or other alternative remedies they are taking. It is important to be aware of this so any possible conflict with conventional medicine or treatment can be assessed.

Tohatohaina atu ki te iwi – He kaupapa hauora Māori angitu

Takin' it to the people – Successful Māori health initiatives

He iti te kōpara kei te rērere ana i runga i te puhi o te kahika – *Although the bellbird is small it flies to the crown of the white pine. Achievement is not the result of stature. Even a person of humble station can attain success*

Uruuruwhenua Health and the Rural Otago PHO

Key contributor:
Francie Diver, Uruuruwhenua Health and Rural Otago PHO Māori Board member.

The Central Otago landscape is vast with significant numbers of seasonal workers coming into the area to service the fruit, wine and wool industries. From past experience the local Māori provider, Uruuruwhenua Health, and the Rural Otago PHO were aware that in particular the wool industry workers (the majority of whom are Māori) and whānau coming into the area had unmet health needs, for example, asthma, diabetes, CVD and sexual health.

Although Uruuruwhenua Health was actively engaging these workers and whānau, it was often difficult and problematic getting timely access to primary care services. The workers worked long hours, sometimes seven days a week, and had little knowledge of available health services. Nor were there effective relationships in place with health professionals.

To address these issues Uruuruwhenua Health and the Rural Otago PHO initiated a series of clinics using Services to Improve Access funding during 2008.

Evening clinics were held at various shearing quarters across Central Otago staffed by a GP and other health professionals, including a practice nurse, public health nurse, whānau ora worker and Māori mental health worker. The clinics were advertised through community networks, posters and flyers and importantly supported and promoted by the shearing contractors themselves - including information enclosed in workers pay packets.

The clinics were timed to begin at the start of the season and were well attended by the workers, their whānau and also the local community. As well as treating presenting issues, health promotion and better management of asthma and diabetes, the clinics enabled successful therapeutic relationships to be initiated between the health professionals in the region, the workers and their whānau. Along with the ongoing support of the whānau ora worker the initiation of these relationships "kanohi ki te kanohi" (face to face) ensured appropriate access throughout the season by workers and whānau to the required primary health services.

The health professionals knowledge of the wool industry and working with whānau was also greatly enhanced. This knowledge was able to be taken back and passed on to colleagues and clinical staff.

Similar clinics at shearing quarters within South Otago are also underway with the support of the Otago Southern Region PHO and Tokomairiro Waiora, a Māori provider based in Milton.

Hamilton East Medical Centre

Key contributor:
Gill George, Mobile Practice Nurse, Hamilton East Medical Centre

This mobile practice nursing service is a joint venture between the Hamilton East Medical Centre (HEMC) and Waikato Primary Health with 28 hours per week funded by the PHO and seven hours by the practice. The practice also provides additional outreach immunisation resource.

The service improves access to primary health care for HEMC patients who for a range of reasons do not present to the clinic and are potentially experiencing health inequalities as a consequence. Key outcomes are focused on improved immunisation rate, care of the elderly and healthcare for patients identified as being at risk.

This service follows a similar model of care to that used successfully by many Māori providers and the former rural public health nurses by providing face to face visits to whānau within their own homes. Care is taken not to duplicate work being done by other services, e.g. wound care is still undertaken by district nurses.

The nurse assesses the patients health needs including analysis of the wider issues affecting their health, e.g. poor housing, lack of transport. A management plan is developed with the patient using the Flinders assessment model and the GP is kept fully informed at every stage.

Significant outcomes of the service, identified by independent evaluation include:

- Significant improvements in the number of Diabetic Annual reviews completed
- Improved monitoring and care of patients with complex problems and chronic disease(s)
- Increased referrals to other health and social services
- Reconnection of children with secondary services
- An increase in the percentage of children fully immunised at HEMC from 83.4% to 95.1%.

The service is successful in bringing care to people with known difficulties who are not accessing primary health care.

"It is hard for me to unravel some complex health and social problems in a short consultation with people with chronic conditions – to put my finger on things that might make a difference. She goes to their home and sorts it out."– GP comment.

These successful initiatives for improving Māori health were forwarded in response to our request in BPJ 18.

Te aukatinga kai paipa

Smoking cessation for Māori

Key reviewer:
Dr Hayden McRobbie, Consultant, Inspiring Ltd, Auckland

Ahakoa he iti te matakahi, ka pakaru i a ia te tōtara

Although the wedge is small, it overcomes the tōtara tree (meaning: A little effort applied properly can achieve good results)

Key concepts:

- Smoking cessation does not need to be difficult. People who smoke can be helped to stop
- The more times smoking cessation advice is offered and the more quit attempts that are made, the greater the likelihood of stopping for good
- Follow the "ABC for smoking cessation" and offer Māori the choice of providers such as Quitline or Aukati KaiPaipa
- DHB smokefree coordinators and public health services can assist or visit **www.smokefreecontacts.org.nz** for a list of services

The incidence of lung cancer in Māori is the highest in the world. The mortality rate for Māori from lung cancer is three times higher than for non-Māori, and the average age of death is lower (63 years compared to 70 years).

The 2006/07 New Zealand Health Survey shows that for people aged 15 to 64:[1]

- 19.9% of all New Zealanders are smokers
- 42.2% of Māori are smokers
- 26.9% of Pacific peoples are smokers

While Māori smoking rates are decreasing, they remain unacceptably high. Māori women are twice as likely to smoke. For Māori men the rate is 1.5 times higher. Smoking prevalence amongst Māori women of child bearing age ranges from 39% to 61%.[2] This has grave consequences not only for the smoker's health and wellbeing, but also for the health and wellbeing of their whānau. This is especially important for babies and children who, when exposed to smoke in their homes, are more likely to develop asthma, chest infections (e.g. bronchiolitis), ear infections and many other problems.

Helping Māori who smoke to stop is a high priority. Some health professionals may view this as difficult, but a more rapid decline in smoking prevalence is possible. Encouraging more Māori who smoke, to make more quit attempts, supported by effective smoking cessation, is key to achieving this.

The New Zealand Smoking Cessation Guidelines, structured around ABC, provide support for all health care workers who have contact with people who smoke.

Māori smokers want to quit and try to quit

Smoking cessation interventions that work in the general population (cessation support plus medication) are equally as effective for Māori. For example Māori who call Quitline are just as likely to stop smoking as non-Māori callers. Most quit attempts by Māori, just as in the general population, end in relapse. The average smoker may make around 14 quit attempts before quitting successfully long term. The key is to encourage and support another quit attempt as soon as possible.

Some Māori may be more likely to undertake smoking cessation programmes if they are informed that culturally appropriate services are available, e.g. Aukati KaiPaipa and Quitline's Māori Advisers. Health professionals should make themselves familiar with the cessation support services for Māori, that are available both in their area and nationally, so that they can offer a choice and refer appropriately.

Like Māori, lowering the smoking rates within Pacific communities will significantly contribute to reducing Pacific health inequalities. There is also likely to be higher uptake of smoking cessation interventions amongst Pacific peoples, if they are presented in a culturally appropriate way.

Māori smoking cessation providers

Aukati KaiPaipa

Aukati KaiPaipa is a free nationwide programme that aims to reduce smoking prevalence amongst Māori and increase the number of positive changes in smoking behaviour, such as maintaining smokefree environments, particularly for tamariki (children). It is a kanohi ki te kanohi (face to face) service delivered to whānau as an intensive programme for between 8 – 12 weeks by providers around the country.

Aukati KaiPaipa is especially effective for Māori, producing 12 month abstinence rates close to 30%.[3] This is significantly better than the 3% chance of quitting long-term seen with unaided "cold turkey" quit attempts.

The programme offers whānau the opportunity to address smoking addiction through a range of services including NRT, motivational counselling and ongoing support. It includes:

- Assessment – Quit Coaches identify the client's readiness to quit and develop a personalised programme.
- Reduction plan (two to four weeks) – to help identify coping skills to overcome smoking triggers and encourage cigarette reduction towards becoming smokefree.
- Intensive programme (eight weeks) – In this stage clients actively become smokefree. Nicotine Replacement Therapy (NRT) patches and gum are provided to make the smokefree transition easier, and with the support of a Quit Coach, at the eighth week clients should be able to maintain their smokefree lifestyles.
- Three, six, nine and 12 month follow-ups provide support, assisting with relapses and encouraging clients to keep up the good work.

Kanohi ki te kanohi counselling sessions help to support clients through the lifestyle changes required for a successful smokefree transition. Breaking the psychological behaviour that is associated with smoking is ongoing and Aukati KaiPaipa aims to provide the skills necessary to achieve this.

A list of providers is available on the Aukati KaiPaipa website: **www.aukatikaipaipa.co.nz/contact.htm**

Aukati KaiPaipa provider profiles

Aukati KaiPaipa
Kokiri Marae Health and Social Services
Lower Hutt
www.kokiri-hauora.org.nz/services/aukati_kai_paipa.html

Quitting smoking has a domino effect in changing lifestyles. For whānau, Aukati KaiPaipa is more than a smoking cessation programme, it is a catalyst for many other life style changes.

Sharon Reid is a passionate and determined advocate for Aukati KaiPaipa. She has witnessed first hand the difference quitting can make to whānau. Some of the most inspiring and encouraging changes can be attributed to the people themselves; through support by highly trained staff and through sheer effort and will, many smokers have been able to make significant changes to their lifestyle.

"We have seen long term smokers entering the Aukati KaiPaipa programme, after smoking for 30 – 40 years and quitting. Many have succeeded in staying smokefree, some have relapsed but the key for us is having a no fail system. They can come back and access our services as many times as needed." – Sharon Reid

Aukati KaiPaipa recognises that quitting is a long term process, and the Aukati KaiPaipa programme adapts to meet the needs of those smokers for whom quitting presents an extraordinary challenge.

Face to face meetings conducted in the homes of clients or workplaces have encouraged many people to access the service. Clients are visited every week for up to 12 weeks, support is provided with nicotine replacement therapy and after the initial 12 weeks, contact is maintained on a monthly basis for nine months.

Sharon attributes the success of the Aukati KaiPaipa programme to a holistic approach in conjunction with other health and social services. Referral between services is common, e.g. Tu Kotahi Māori Asthma Service. Aukati KaiPaipa also delivers specific smoking cessation services to young people and people with mental illness.

"What keeps staff motivated are the changes they see in people quitting; their confidence increases, they feel good about themselves and even though some may not succeed immediately, they make changes that remain over time. Quitting smoking will result in the biggest health gains for Māori and this outcome is the main driver for our Aukati KaiPaipa Programme." – Sharon Reid

Te Haa Ora
Te Oranganui Iwi Health Authority
Whanganui
www.teoranganui.co.nz

"It's about having a passion for the mahi (work). We are there to support clients who want to quit, without having to judge. Kanohi ki te kanohi (face to face), is best for our people." – Mel Maniapoto

Mel Maniapoto is one of a team of three dedicated smoking cessation practitioners based within Te Oranganui Iwi Health Authority PHO. They run a number of very successful smoking cessation clinics in rural and urban settings and use the Aukati KaiPaipa approach to deliver a "for Māori, by Māori" cessation programme.

Te Hotu Manawa Māori

Te Hotu Manawa Māori was one of three organisations which established Quitline and set up a Māori Tobacco Control advocacy organisation. It is also responsible for training the national Māori cessation service, Aukati KaiPaipa. Te Hotu Manawa Māori can provide support and training for any medium to large scale innovation in cessation developments or programmes for Māori.

www.tehotumanawa.org.nz

Recently at the request of a local employer, they delivered an eight week, workplace smoking cessation programme. The team worked with 32 clients on a weekly basis, motivating lifestyle changes, encouraging peer support and providing NRT. The workers were allowed 30 minutes of paid time each week to attend the cessation programme on site. Their whānau were also encouraged to attend. Although some attrition did occur (eight had left the programme at the end of eight weeks), 37% managed to quit on completion of the eight week programme. Follow up visits will be continued every three months.

Overall, this Aukati KaiPaipa team has achieved a quit rate of approximately 38%.

"Aukati KaiPaipa works because it is ideally suited to Māori. Our clients can choose to attend a rural clinic, come to our offices in town or have a practitioner visit them at home. This is one of the most popular ways that we work with clients – one on one or working with the whole whānau in the comfort of their home, is a powerful way to help people quit smoking." – Mel Maniapoto

Te Roopu Me Mutu – The Quit Group

The Quit Group
TE ROOPU ME MUTU

Quitline 0800 778 778
www.quit.org.nz

Any health professional who believes that Māori who smoke are a "lost cause" may be surprised by statistics from The Quit Group.

In the past few years there has been a steep increase in the number of Māori callers to the Quitline – 10,000 in 2008, double the number in 2005.

Almost a quarter of new callers each month are Māori. This number is even higher (one in three callers) for the Txt2Quit service, through which smokers can receive support and advice through text messages.

The intention to quit is clearly strong, and growing. Dr Peter Martin, medical advisor to the Quit Group, says that there is no medical reason why Māori are more likely to smoke or should find it harder to quit. "People who grow up in a family where smoking is common are more likely to become smokers, and are more likely to socialise and live with other smokers. Hence the problem is a social one which transfers from one generation to the next. However a problem which has been produced by social factors can also be helped by social changes, and as more Māori become non-smokers - and buildings such as those on Marae become smoke free - the more we can expect to see young Māori as non-smokers."

The Quit Group offers various services to which health professionals can refer. The Quitline is a support centre where smokers receive advice and help from trained staff. Advisors discuss the person's addiction, and create a Quit Plan to help them through the entire process – including relapse.

Txt2Quit is proving attractive to smokers with an average age of 20 (compared to Quitline callers who are generally in their 30s). After an initial registration, smokers receive a series of text messages up to and beyond their Quit Day. Running for 26 weeks, the service offers ongoing support and advice.

Dr Martin would like to see more referrals from health professionals. "Few callers to the Quitline have been referred by health workers, which is disappointing, but it may indicate that we have not been successful in informing health professionals of the services which we can offer! However it could also mean that many health workers have become Quitcard providers and are able to offer a cessation service themselves."

Quitcards for Subsidised Nicotine Replacement Therapy

- Quit cards are available from the Quitgroup: **www.quit.org.nz** or 0800 778 778
- Quit cards can be completed by a prescriber or a person who has completed smoking cessation training and registered as a quit card provider (see page 46).
- Quit cards enable a person to purchase one months supply of a NRT product from a community pharmacy for the cost of $5
- A separate Quit card should be completed for each product being prescribed.

See BPJ 18, 19 and 20 for more information on smoking cessation.

Smoking cessation campaigns

Around one-third of New Zealanders believe that the dangers of smoking have been exaggerated.[4] Face the Facts is a new initiative to inform all New Zealanders about the facts surrounding tobacco use. The initial Face the Facts messages are:[5]

- 5,000 New Zealanders die annually from smoking.
- Nicotine replacement therapy (NRT) is safe and doubles chances of quitting.
- Children who have a parent who smokes are three times more likely to become smokers.
- Smoking robs your loved ones of 15 years of your life.
- All cigarettes are deadly (including those with various descriptors e.g., light and mild, rollies and tailor-made).

In an evaluation of the Me Mutu/New Zealand Quit Campaign, it was identified that the key motivator for smoking cessation for Māori was the concept of maintaining whānau. The campaign used the message "It's about whānau". Stopping smoking gives a choice to be around for tamariki/mokopuna (children, grandchildren), to be around on the marae and to experience the continuation of their whakapapa (family history).[6]

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1. A Portrait of Health - Key Results of the 2006/07 New Zealand Health Survey: Second-hand smoke exposure and Tobacco use. Available from: www.moh.govt.nz/moh.nsf/pagesmh/7440/$File/second-hand-smoke-and-tobacco-use-nz-health-survey-jun08.pdf (Accessed March 2009).
2. Ministry of Health. Tobacco Trends 2006; Monitoring Tobacco Use in New Zealand. Wellington; Ministry of Health. 2006
3. Aukati Kai Paipa. About Aukati Kai Paipa. Available from www.aukatikaipaipa.co.nz/about.htm (Accessed May 2009)
4. Premium Research. Pack Warnings ad campaign evaluation benchmark report. The Quit Group New Zealand: Wellington. 2008
5. Face the facts. Available from: www.facethefacts.org.nz (Accessed May 2009).
6. Grigg M, Waa A, Kawenata Bradbrook S. Response to an indigenous smoking cessation media campaign - it's about whanau. Aus NZ J Pub Health 2008;32(6):559-64.

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He akoranga aukatinga kai paipa kore utu mā te kaimahi

Free smoking cessation training for health professionals

He rei ngā niho, he paraoa ngā kauae – *A whale's tooth in a whale's jaw (meaning; one must have the right qualifications for great enterprises)*

"Health professionals when trained in smoking cessation achieve significant reductions in smoking prevalence"[1]

All smoking cessation training is based on the New Zealand Smoking Cessation Guidelines 2007.

"Brief advice – which can be delivered in as little as 30 seconds can increase the chances of quitting two-fold. For every 40 smokers given brief advice to stop, one will quit smoking long-term who would not have otherwise managed to do so."[1]

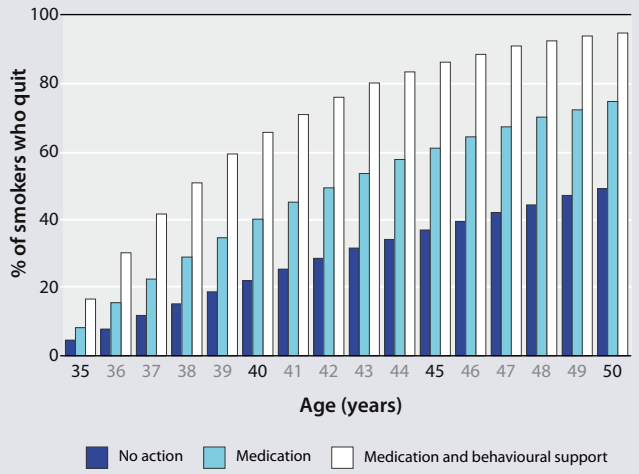

Figure 1: Effects on smoking prevalence, of strategies to help smokers if all smokers made one attempt per year to stop, starting at age 35.[2]

ABC – Smoking cessation e-learning tool

The Ministry of Health is committed to encouraging smoking cessation and an e-learning tool has been developed to aid this. This tool:

- Provides practical information about ABC and NRT
- Is endorsed by RNZCGP, awarding CME points
- Allows health professionals to print a certificate as evidence of professional development
- Allows non-prescribing health professionals to register as a Quit Card provider
- Takes 20 – 40 minutes to complete

It can be completed online at:

www.smokingcessationabc.org.nz

National Heart Foundation

The Heart Foundation provides a range of smoking cessation training free of charge, including; ABC for smoking cessation, nicotine addiction, brief intervention, cessation resources, pharmacotherapy, NRT Quit Card programme, behavioural counselling and cognitive strategies.

www.nhf.org.nz

Pacific Smoking Cessation Training

Pacific Heartbeat offers free smoking cessation training to address the high smoking prevalence among Pacific peoples. The unique Pacific specific approach combines scientific evidence with what is regarded as "best practice". The training places a strong emphasis on the need to interact meaningfully with Pacific people and its diverse cultures.

www.pacificheart.org.nz

1 Ministry of Health. New Zealand Smoking Cessation Guidelines. Wellington. Ministry of Health. 2007.

2 Aveyard P. West R. Managing Smoking Cessation. BMJ 2007;335:37-41.

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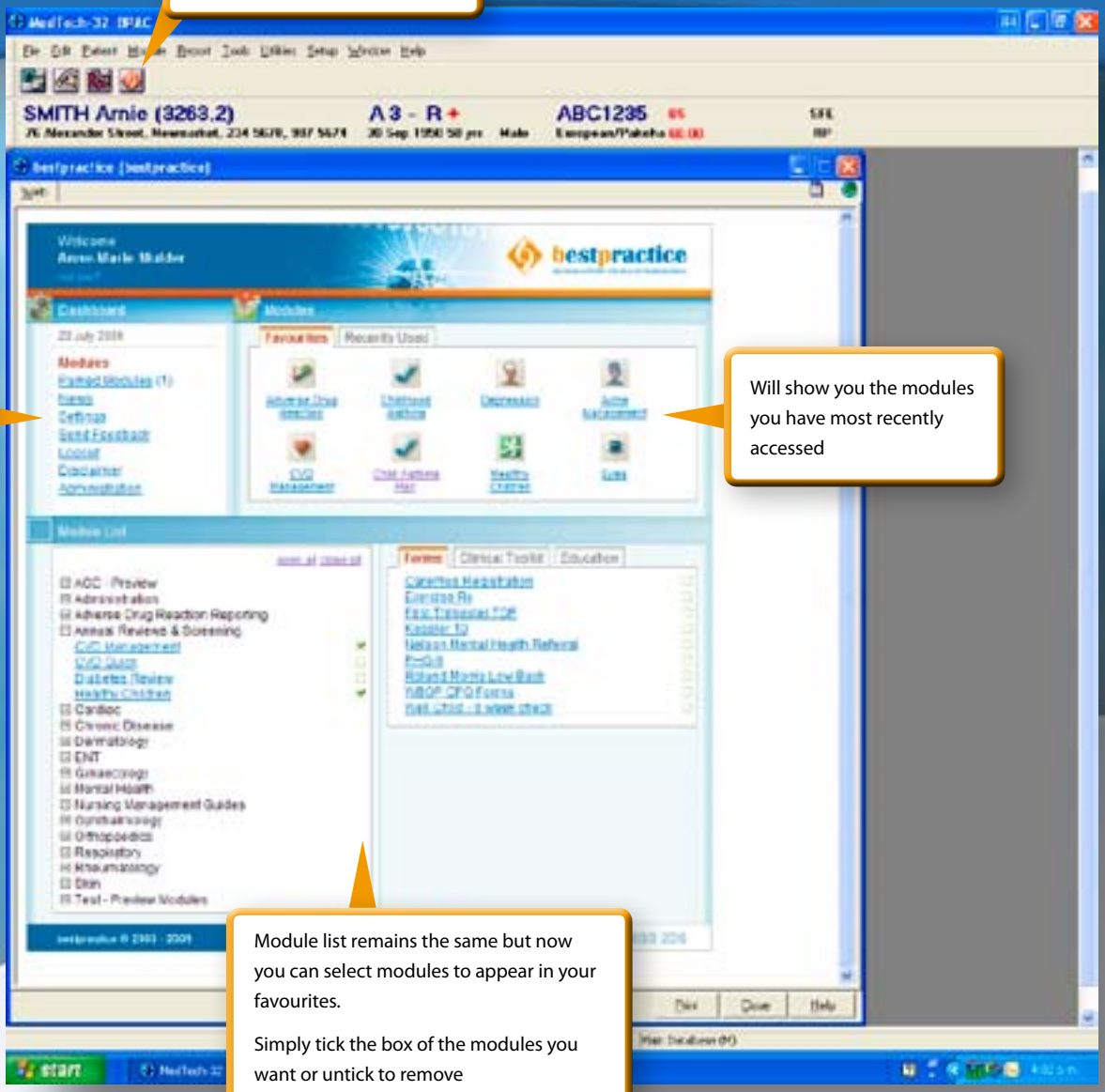

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DECISION SUPPORT FOR HEALTH PROFESSIONALS

He manawa takitahi, he iwi takitini

One Heart Many Lives Update

www.bpac.org.nz keyword: ohml

He kokonga whare ka kitea, he kokonga ngākau e kore e kitea.

'All corners of a room may be seen, not so the recesses of the heart'. The original meaning of this whakataukī refers to the desires of the heart. In this context the whakataukī is used to refer to the health of the heart to go alongside the social marketing campaign for heart disease.

What is One Heart Many Lives?

The PHARMAC One Heart Many Lives programme is about the primary prevention of cardiovascular disease. It was a developed in 2003 when analysis of national data showed Māori and Pacific Island men in New Zealand, aged 35+ die 10–14 years earlier than their European counterparts. Not only do they die earlier, they do not get the right medications to treat heart disease.

The key messages of the One Heart Many Lives programme, tell men to:

- Get your heart checked
- Know about heart disease and how to prevent it
- Inspire your fathers, brothers and friends to do the same

Activities to support the OHML programme have been focused in three key regions – Lakes, Northland and Hawke's Bay. "Local heroes" – Bro' files in Northland and Tamati's story in Hawke's Bay – have been used to motivate and encourage people to get their hearts checked and do something about it if the results are not good . Community activities, advertising and media campaigns have been used to maintain awareness.

Local providers drive the OHML programme at the community level with initiatives focused around a common theme. Project teams actively promote the consistent message "Get your heart checked" to work places and general practices help to motivate and sustain the programme.

Outcomes of this programme include an increase in statin use. Increased CVD risk screening, smoking cessation uptake and cost utility are other indicators being monitored.

Although One Heart Many Lives targets Māori and Pacific Island men, many Māori women have been motivated to take action and get their hearts checked too.

One Heart Many Lives in Hawke's Bay

Bpac has been involved in promoting OHML in the Hawke's Bay region to general practice.

The key strategies were:

- Clinical facilitator visits to all PHOs and practices
- Providing the ability to do point-of-care testing
- Developing practice and patient information including a handbook and patient information cards

The One Heart Many Lives handbook

This handbook presented ideas on how practices could:

- Encourage Māori and Pacific men to attend general practice
- Assess their risk when they do present
- Identify manageable interventions
- Encourage them to return
- Gradually increase the amount of care they receive

Identifying at risk patients: Be prepared to seize the opportunity

Research shows that Māori and Pacific men, aged over 35 years, rarely attend primary care; any presentation then represents a "golden opportunity". This can be made easier by identifying these patients, setting up alerts on PMS software and being able to offer opportunistic risk assessments. At risk patients could also be invited to attend the practice for a free "heart check".

Engaging patients in managing their cardiovascular risk: Get patients involved

For many men in this target group healthcare is accessed only when symptoms are experienced. As many of the factors contributing to cardiovascular risk, such as blood pressure or cholesterol levels, usually have no symptoms, this can make communicating the risk particularly challenging.

People are likely to respond better to learning they have an increased cardiovascular risk if:

- Increased risk is explained in an understandable and positive way
- They understand that reducing their risk is achievable and worthwhile
- They have support from whānau when they need it

Modifying risk factors: Make a start on lifestyle risk factors

It is unrealistic to expect patients to make all lifestyle changes at once. Changes are more likely to occur if each individual prioritise lifestyle changes and sets realistic targets.

For each lifestyle change the recommended approach is to; **assess** a patient's behaviour, **advise** about the benefits, **agree** on patient centred goals, consider how your practice can assist patients attaining these goals and **arrange** follow-up.

What happened as a result of the OHML programme?

- Increased number of cardiovascular risk assessments
- Increased patient involvement and satisfaction with healthcare
- Increased health professional satisfaction

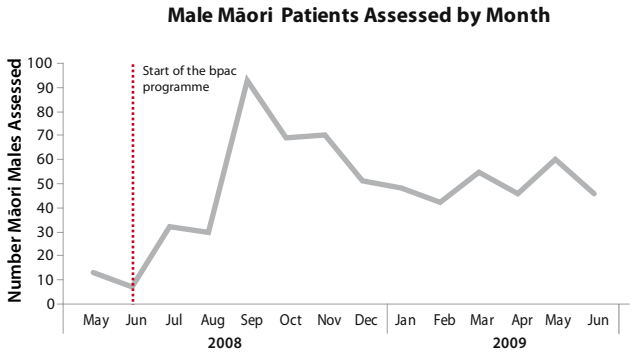


Figure 1: Number of Māori male patients assessed in all Hawke's Bay PHOs

Increased number of cardiovascular risk assessments

After the programme started there was an increase in the number of cardiovascular risk assessments carried out on Māori males (Figure 1). The numbers now appear to be stabilising so it is clear that continued reinforcement is needed.

Increased patient involvement and satisfaction with healthcare

Many of the individuals who came in for a heart check had not been part of the healthcare system for years. This process also provided opportunities for patients with other conditions to be seen by a doctor.

"One 58 year old male had a total cholesterol reading of 9.2 and a HDL reading of 0.776. This gentleman felt really well and had not attended the practice for around two years. He was very glad that this threat to his future health had been discovered before it was too late!"

"Another male, aged in his early 50s, had a very high BP reading – he believed that he was healthy and was quite stunned to be told of this result. Fortunately we had the time for him to work his way through the implications of this recording (both parents had died of heart problems in their early 60s). A free consultation with his GP was gratefully accepted, he had not seen a doctor for around four years!"

Increased health professional satisfaction

Feedback from practices revealed that they had found the programme very positive. They felt that the programme enabled them to make contact, and form relationships with patients who did not attend health care services, and it was positive to see patients when they were feeling well instead of only when they are unwell.

"Because the consultations are focused on health rather than illness, I have found that patients are really interested in health education over a wide number of topics all related to keeping healthy. This is not often the case with illness focused consultations."

"Quite a few of the patients who attended for CVD risk assessments had not attended the practice for around two years, so being able to offer patients a free health assessment enabled us to make contact with these patients, and hopefully rebuild a good relationship with them for the future."

"All patients who had a CVD risk >15% were also given a free appointment with their GP to review the key factors that were indicated in the review. This contact further cemented and re-established the patient's relationship with our practice."

The future of One Heart Many Lives

Targeting the group of patients most at risk increases the health care provided to all others. In Hawke's Bay, not only did the rates of cardiovascular risk assessment increase for Māori men, they also increased for Māori women and for the rest of the population (Figure 2).

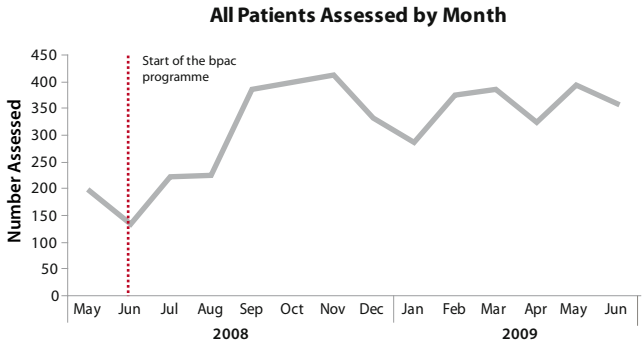


Figure 2: Total number of patient assessments in all Hawke's Bay PHOs

How One Heart Many Lives ideas can be adapted to other areas

Obtain funding for free CVD/health checks – PHOs can apply for Services to Improve Access funding to support these types of initiatives. For example, some PHOs have funding for targeted health checks for Māori, Pacific peoples and those living in areas of high deprivation. Talk to your PHO about what funding is available and what services they offer.

Implement practice specific interventions to encourage the target population to attend for a free CVD/health check – target patients can be identified using your PMS software. Various options exist once patients are identified, including inviting patients in for a free check, or adding alerts to patient files for opportunistic assessment.

How Tu Meke First Choice PHO in the Hawke's Bay made One Heart Many Lives work

1. Obtained funding for free CVD/health checks. The PHO assisted in making the One Heart Many Lives project reach its full potential by using Services to Increase Access funding to make the CVD/Health assessment free to the patient. The PHO also funded follow up consultations.
2. Developed practice specific interventions to encourage the target population to attend for a free CVD/health check. One practice phoned patients in the target group to offer free assessment. Another practice sent out invitations to those in the target group. Both reported an overwhelming response and had very few patients decline the free check.
3. CVD assessments were conducted by practice nurses using point-of-care testing, to obtain non-fasting total cholesterol, HDL and glucose. These results were used to calculate an initial estimate of CVD risk. Patients preferred to have the result at the time of consultation and outcomes could be discussed immediately or referred to the GP.

For more information contact:
Karen Jacobs – National Programme Manager, One Heart Many Lives.
karen.jacobs@pharmac.govt.nz
Phone: 04 460 4990

www.bpac.org.nz keyword: paying

He tika te utu rongoā, te utu ratonga hauora rānei?

Are whānau paying the right amount for pharmaceuticals and health services?

E kore e kitea he toki huna – *'A hidden adze cannot be seen'. Hidden intentions are not easily discovered. Used in this context to say that many who pay for the medicines and services will not be aware whether or not the costs are appropriate or not.*

www.bpac.org.nz keyword: childasthma

Te huango o te tamaiti

Childhood Asthma: Guide and Decision Support Module

New Zealand has one of the highest rates of childhood asthma in the world with 25% of children aged six to seven years and 30% of adolescents 13–14 years reporting asthma symptoms. The prevalence has fallen in the last decade, but significant challenges remain. Among these are diagnosis, adherence and ethnic disparities in treatment.

Bpac has recently published and circulated a guide to the management of childhood asthma which is based on the New Zealand childhood asthma guidelines and other international sources. The guide is designed to complement the *bestpractice* childhood asthma decision support tool.

Inequalities in asthma prevalence, morbidity and mortality

Key results of the 2006/07 New Zealand Health Survey, show that one in seven children aged 2–14 years (14.8%) had been diagnosed with asthma and were taking medication for this condition. Adjusted for age, there were significantly more Māori children taking medication for asthma than other children in the total population.

Prevalence rates for asthma are higher for Māori (26%) and Pacific children (22%) than for European/other children (20%) and this disparity increases with age.

bestpractice Decision Support module

The module will assist the practitioner in the diagnosis, management and monitoring of asthma in children, including the generation of an individual action plan.

This module is available free to general practice. For further information contact:

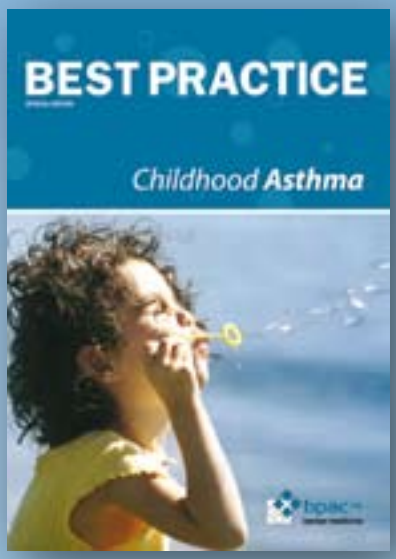
Jamie Murley
bestpractice Decision Support
Phone: 03 479 2816
Fax: 03 479 2569
Email: jamiem@bpac.org.nz

Māori and Pacific children with asthma suffer more severe symptoms than other children, are hospitalised more frequently, and have more days off school as a result of their asthma.

The guide emphasises the ethnic disparities that exist in the prevalence, treatment and outcomes of childhood asthma and suggests strategies to improve management in all groups.

Reliever to preventer ratio

Data shows that the ratio of reliever to preventer dispensings is higher in Māori and Pacific children than in European/other children This means that Māori and Pacific children are more likely to depend on an asthma reliever (such as salbutamol) and less likely to use inhaled corticosteroids than European/other children. Māori also appear to be less likely to be prescribed a long acting beta-2 agonist. Both the guide and the bestpractice decision support module provide guidance on diagnosis, medicines management and patient/carer information.



Best Practice Journal Special Edition – Childhood Asthma. Available at:
www.bpac.org.nz

New Health target

"Better help for smokers to quit" is one of the six health targets announced by the Minister of Health. The target is that 80% of hospitalised smokers will be provided with help and advice to quit by July 2010; 90% by July 2011, and 95% by July 2012. A similar target for primary care will be introduced by July 2010 through the PHO Performance Programme.

Best Practice tip: If you are arranging for a patient who smokes to be admitted to hospital it may be a good time to discuss quitting or at least temporary abstinence and prescribing of NRT.

Recent change to the Pharmaceutical Schedule

Bupropion

Bupropion hydrochloride is a dopamine-noradrenaline reuptake inhibitor that has demonstrated benefits when used in the treatment of nicotine dependence. When provided concomitantly with counselling, bupropion increases the chances of a quit attempt being successful.

Bupropion became available fully subsidised on the Pharmaceutical Schedule on July 1 2009 under the brand name Zyban.

Chemical	Presentation	Brand	Pack size
Bupropion hydrochloride	Tab modified-release 150 mg	Zyban	30

Safe use of colchicine

Once again the Safe and Quality Use of Medicines group (SQM) reminds prescribers about the high risks associated with the use of colchicine. They have also identified a problem with outdated dosage recommendations on electronic discharge summaries from secondary care.

Colchicine should only be used for acute gout when there are no other alternative treatment options. Prescribe a minimal number of tablets only and ensure that the instructions for use are clearly understood by the patient and whānau.

- Recommended dose: 2 x 0.5 mg initially, followed by 1 x 0.5 mg every six hours, up to a maximum of five tablets (2.5 mg) in the first 24 hours (or maximum of 1 mg if elderly, renal or hepatic impairment or less than 50 kg)
- Do not exceed a cumulative oral dose of 12 tablets (6 mg) over four days. Wait for three days before administering further colchicine.
- Check dose instructions received by patients discharged from secondary care

See **www.safeuseofmedicines.co.nz** and BPJ 8 (Sept 2007) "A slow death from colchicine" and "Gout – hit the target: treatment of gout" for further information.

First void urine

Does first void urine (FVU) mean:

a. First void urine of the day
b. First part of the urine stream

If you answered "a" then you agree with 68% of surveyed GPs in Australia. The correct answer is actually "b".

FVU is an ambiguous and commonly misunderstood term. For effective chlamydia testing, it is important to get this right.

Reference: Lusk, J, Uddin R, Ferson M, et al. Primary health care providers surveyed commonly misinterpret 'first void urine' for chlamydia screening. Sex Health 2009;6(1):91-3.

Do you have a brilliant idea that you would like to share with your colleagues? Can you tell us about a mistake that you have learnt from so others don't fall into the same trap? What's new in primary care that people would want to know?

Share your practice tips with us.
Email: **editor@bpac.org.nz**

Intensive Efforts Could Improve Smoking-Cessation Rate

Journal Watch, Vol. 29, No.11, June 1, 2009

In two separate studies, researchers evaluated whether more-intensive smoking-cessation efforts can improve outcomes.

In the first study 127 adult smokers in New Jersey who had medical illnesses (e.g., cardiovascular disease, diabetes, chronic pulmonary disease) were assigned randomly to transdermal nicotine alone or to combination therapy (transdermal nicotine, nicotine inhaler and bupropion). At 26 weeks more people assigned to combination therapy than to transdermal patches alone were abstinent (35% vs. 19%).

In the second study, 750 smokers who visited Kansas primary care practices were offered free treatment every six months for two years, regardless of their readiness to quit (70% were in pre-contemplation or contemplation stages). Randomisation was to transdermal nicotine or bupropion alone, either pharmacotherapy plus two counseling phone calls, or pharmacotherapy plus six phone calls. The counseling groups also received educational newsletters with smoking-cessation tips and progress reports for their physicians. Most patients (77%) requested at least one course of treatment. Abstinence during any six-month treatment period was more common in the intensively counseled group than in the less-intensively counseled group and was more common in the counseled groups than in the non-counseled group (odds ratio, 1.4 for both comparisons). However, at 24 months (the primary study endpoint), no significant differences were found in abstinence rates (23%–28%), or in receipt of counseling or pharmacotherapy.

Comment

In the first study, researchers demonstrated the efficacy of more-intensive pharmacotherapy for smoking. The second study also suggested a benefit for more-intensive treatment; however, to me, the more important point is that most smokers requested smoking-cessation treatment, despite not being ready to quit, and a relatively high proportion (approximately one quarter) were abstinent at two years. Together, these findings suggest that more-intensive treatments, along with greater efforts to reach people who might benefit, hold promise for improving treatment of nicotine-dependent patients.

— Richard Saitz, MD

References

Steinberg MB et al. Triple-combination pharmacotherapy for medically ill smokers: A randomised trial. Ann Intern Med 2009 Apr 7; 150:447.

Ellerbeck EF et al. Effect of varying levels of disease management on smoking cessation: A randomized trial. Ann Intern Med 2009 Apr 7; 150:437.

Cannabis Smoking Is Bad for Oral Health

Journal Watch Pediatrics and Adolescent Medicine March 12, 2008

Tobacco smoking is the primary behavioural risk factor for periodontal disease, which can adversely affect general health. Researchers in New Zealand prospectively examined whether cannabis smoking, like tobacco smoking, is associated with destructive periodontal disease. Cannabis smoking behavior was reported in 903 people at ages 18, 21, 26, and 32, and exposure levels were categorised as high (>40 occasions yearly; 20% of

cohort), some (1–40 occasions; 47%), or none (32%). Dental examinations were conducted at ages 26 and 32.

After controlling for tobacco smoking and use of dental services, the risk for severe periodontal disease at age 32 was significantly higher in the high-exposure group (relative risk, 3.1) and the some-exposure group (RR, 2.5) than in the no-exposure group. Risk for new disease between ages 26 and 32 also was significantly higher in the high-exposure and some-exposure groups. The severity of periodontal disease correlated with the amount and duration of exposure. More than one third of new cases of periodontal disease that developed between ages 26 and 32 could be attributed to cannabis. Tobacco use was associated with cannabis exposure and was independently associated with periodontal disease.

Comment: This study adds periodontal disease to the list of potential adverse effects of cannabis smoking. Among study participants, cannabis use often began during adolescence, and the duration of exposure, in addition to the amount of exposure, was associated with worse disease. Clinicians might want to inform patients that both tobacco smoking and cannabis smoking have adverse effects on oral health.

— F. Bruder Stapleton, MD

Reference

Thomson WM et al. Cannabis smoking and periodontal disease among young adults. JAMA 2008 Feb 6; 299:525.

Modest Weight Loss Benefits Obese Women with Incontinence

Journal Watch, Vol. 29, No.4, February 15, 2009

Obesity is an established risk factor for urinary incontinence in women, but few data confirm that weight loss will diminish the problem or indicate how much weight loss is required.

Researchers randomised 338 obese women (mean age, 53; mean baseline body mass index, 36 kg/m^2; mean weekly number of incontinence episodes, 24) to follow a behavioural weight-loss programme featuring a strict low-calorie, low-fat diet (1200–1500 kcal daily) or to attend four classes on standard diet and exercise recommendations. Most participants were white and college educated; exclusion criteria included frequent urinary tract infections and histories of diabetes requiring medication.

At six months, dieters lost a mean 8.0% of body weight (7.8 kg), and controls lost a mean 1.6% (1.5 kg; P<0.001). Mean number of reported incontinence episodes dropped by 47% among dieters and by 28% among controls (P=0.01). This difference reflected a greater reduction in episodes of stress incontinence among dieters than among controls. Dieters were subjectively happier than were controls, regarding relief of incontinence, and 24-hour urinary-pad assessment showed that dieters lost smaller volumes of urine than did controls (although this difference did not achieve statistical significance).

Comment

This straight forward study confirms that relatively modest weight loss can make a substantial difference in lessening frequency of urinary incontinence among women. Perhaps the promise of this tangible benefit will motivate weight loss when the less tangible goal of lowering cardiac risk fails.

— Abigail Zuger, MD

Reference

Subak LL et al. Weight loss to treat urinary incontinence in overweight and obese women. N Engl J Med 2009 Jan 29; 360:481.

Drink Water to Prevent Obesity

Journal Watch, Vol. 29, No.11, June 1, 2009

To determine whether promoting water consumption will prevent children from becoming overweight, investigators conducted a clinical trial in a random sample of 32 schools, located in economically depressed areas of two neighbouring German cities.

In the intervention schools, one or two water fountains were installed, children were given water bottles at the beginning of the school year and four months later, and teachers delivered four prepared classroom lessons about water needs of the body.

At baseline, 24.5% of children were overweight. At the end of the school year, 23.5% of children in the intervention group and 27.8% of children in the control group were overweight — a significant difference. Children in the intervention group reported consuming significantly more water than those in the control group (mean difference, about 240ml daily).

Comment

Could an answer to obesity be this simple - drink more water? In similar trials, designed to lower intake of sugar-sweetened beverages, researchers found that positive behaviours were difficult to sustain. Nevertheless, encouraging children (and parents) to drink more water seems to be an easy and reasonable way to fight the obesity epidemic.

— Howard Bauchner, MD

Reference

Muckelbauer R et al. Promotion and provision of drinking water in schools for overweight prevention: Randomised, controlled cluster trial. Pediatrics 2009 Apr; 123:e661.

Long-Term Follow-Up of Kidney Donors

Journal Watch, Vol. 29, No.6, March 15, 2009

Although life expectancy of kidney donors is thought to be normal, long-term follow-up data are limited. Researchers from the University of Minnesota sought to determine the health status of the 3698 people who had donated kidneys at their institution between 1963 and 2007.

Eleven donors developed end-stage renal disease (ESRD) during an average of 22 years of follow-up and 268 donors (7%) died during follow-up. The adjusted incidences of both ESRD and death were similar to those in the general U.S. population. A random sample of 255 donors underwent measurements of renal function and quality of life at an average of 12 years after donation: mean serum creatinine level was 1.1 mg/dL, 86% of donors had glomerular filtration rates >60 mL/minute/1.73 m^2, 12% had microalbuminuria, 1% had macroalbuminuria and about one third had developed hypertension. Mean quality-of-life score was higher than U.S. population norms.

Comment

These results are reassuring, even allowing for limitations of the study (i.e. single institution, with follow-up measurement of renal function in a small, albeit randomly selected, minority of subjects). Kidney donors appear to have normal long-term survival with preserved renal function.

— Allan S. Brett, MD

Reference

Ibrahim HN et al. Long-term consequences of kidney donation. N Engl J Med 2009 Jan 29; 360:459.

Pneumonia in children

Dear bpac,

In the article "Antibiotic choices for common infections" (BPJ 21 June 2009), I was interested to read that your recommended antibiotic for childhood pneumonia is amoxycillin. In "Rational use of antibiotics" (August 2006) you list erythromycin 40 mg/kg/day for 5–12 year olds as best for home treatment of lower respiratory tract infection. Can you clarify this?

GP, Bay of Plenty

Well spotted and a very good question.

Amoxycillin is the antibiotic of choice in children aged less than five years because it is effective against the majority of pathogens causing community-acquired pneumonia in this age group. It is also well tolerated and inexpensive. In children aged over five years, amoxycillin is the antibiotic of choice for *S. pneumoniae* infection and a macrolide antibiotic is the choice for atypical infections. However there is no simple way to distinguish between these infections therefore it is reasonable to use amoxycillin initially as macrolides are often less well tolerated than amoxycillin.

For simplicity, we recommend amoxycillin as the initial empiric choice for pneumonia in children. For amoxycillin failure or when atypical infections are circulating in the community, a macrolide (e.g. erythromycin) may be used for children aged over five years.[1]

References:

1. Clinical Knowledge Summaries. Cough – acute with chest signs in children. Community-acquired pneumonia 2007. Available from: http://cks.library.nhs.uk (Accessed June 2009).

Alternative to amizide

Dear bpac,

I have read Tim Maling's comments in regards to the potential hazards of Amizide (BPJ 16, September 2008).

I have a 65-year-old patient whose blood pressure has been perfectly well controlled on amizide for many years. Specifically, what would you suggest I switch him to?

Dr Bill Daniels, GP, Auckland

Amizide is a combination of a thiazide diuretic (hydrochlorothiazide 50 mg) and a potassium sparing agent (amiloride 5 mg). It is now well recognised that the dose of thiazide in this preparation is unnecessarily high for the treatment of hypertension and confers an increased risk of electrolyte and metabolic disturbances. Amizide has been associated with reports of hyponatraemia and hypokalaemia especially in the elderly (See BPJ 16).

It is particularly important that elderly patients are reviewed and the drug combination discontinued if possible. Where there is a clear indication for ongoing use of a thiazide, low dose bendrofluazide 2.5 mg is appropriate. If the Amizide has been prescribed with potassium sparing in mind it should be withdrawn as the hydrochlorothiazide dose is too high for efficient potassium sparing action. In this situation it is important to confirm persistent hypokalaemia with further investigation to exclude hyperaldosteronism. Non-oedematous patients including those with mild heart failure, who are taking thiazides, generally do not require potassium supplements.

(bpac consulted with Dr Tim Maling in providing this response)

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