**BAR
BROTHERS
& SISTERS
DARWIN**

SUN
NEWSPAPERS

LITCHFIELD NATIONAL PARK NEEDS YOU, CAMPING ENTHUSIASTS >> P9

RSPCA DARWIN ASKS FOR MORE FUNDING AS DEMAND SKYROCKETS >> P3

NT SENIORS NEED HOUSING SUPPORT AS POPULATION GROWS >> P10

CDU student Zachanah Thorbjörnsen and Gary Overliese are petitioning for an outdoor exercise facility at East Point that also caters to disabled users
Picture: MICHAEL FRANCHI

BREAKING DOWN BARRIERS

Push for two publicly available gyms with wheelchair accessibility in Darwin's suburbs >> P2

Better access at gyms

WILL ZWAR

WITH few places for wheelchair-bound people in Darwin to feel comfortable let alone a place for them to exercise, there is the demand for an accessible fitness playground.

The Bar brothers movement is hoping to open two publicly available gyms with wheelchair accessibility at East Point reserve, and at Charles Darwin University.

Gary Overliese works at CDU, and is wheelchair bound due to brittle bones.

"I rely on exercise to keep my bones strong," he said.

"Just because we're in a wheelchair, it doesn't mean we don't like exercising or don't want to join a team."

Initiatives like this one will help the wheelchair community become recognised and embraced throughout Darwin, rather than ostracised through a lack of consideration.

"It's just having acceptance into the community and actual access to the equipment, being able to exercise outdoors with people who have similar interests," Mr Overliese said. "It will mean we're being actively involved, as well as just being seen in the community — it can be hard for some people to leave the house because generally they're wheelchair friendly."

It's not just the fitness playgrounds that Mr Overliese

"It will mean we're being actively involved"

would like to see introduced, but a more accessible city through it's infrastructure.

"I can transfer in and out of a wheelchair, but I rely on it for mobility," he said. "Even the ramps from the footpath to the street, some of them are steep, which I guess is for the changing weather, but they could also be a bit wider."

Bar Brothers Darwin founder Zachariah Thorbjorsen said there was a demand for the equipment upgrades, with the club collecting 632 signatures during CDU O-Week.

"We'd like to see something that will last and will be inclusive," he said.

Partnered with local equipment company Spartan Parks NT, the group intent on making safe equipment, as well as accessible equipment, particularly at East Point.

"The bars out there have bolts that are coming loose, and the central support beam is unstable," Mr Thorbjornsen said. "It shakes every time the bars are in use, and it could result in a serious accident — we're all surprised it hasn't happened yet."
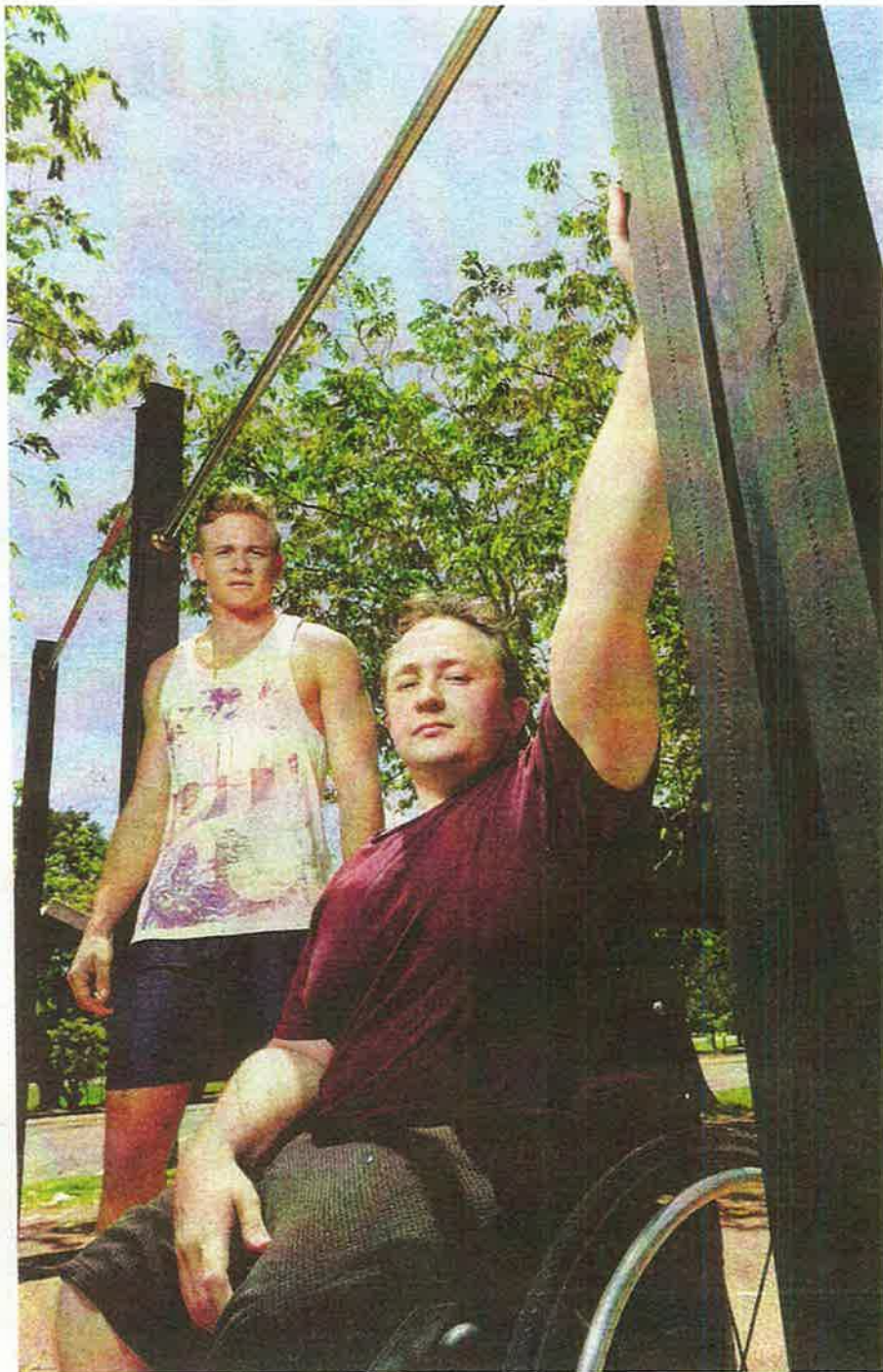
CDU student Zachariah Thorbjornsen, and Gary Overliese are petitioning for a better outdoor exercise facility at East Point that also caters for disabled users   Picture: MICHAEL FRANCHI

SPARTAN PARKS PROPOSAL

East Point
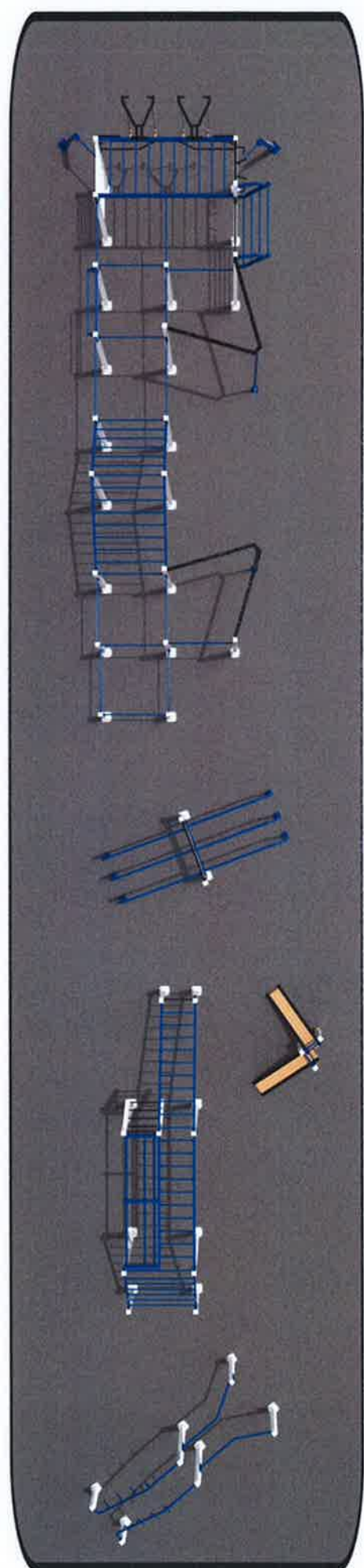
PRESENTATION

**Bar Brothers
& Sisters Darwin**

+

Spartan Parks NT

BAR BROTHERS & SISTERS DARWIN

Upgrade Proposal for East Point Exercise Bars

What is Bar Brothers & Sisters?

A free to join, social exercise group which utilizes publicly available, outdoor exercise equipment to better & maintain the health of group members while promoting and inspiring an active, healthy lifestyle in the community

- Bar Brothers & Sisters Darwin was founded in 2016
- A growing world-wide movement (EU, US, Asia) utilising body-weight for resistance during exercise to build functional body mass

Bondi Park Exercise Station

A Growing Movement

Overwhelming benefits of functional body weight training over conventional weight lifting
- Less injuries
- Holistic approach to a healthy lifestyle

Tim Robards and Sam Wood
- Examples of big names in functional outdoor exercise
- Have launched diet plans and fitness routines
- Strong advocates for functional body weight exercises in unity with healthy diets

Community Health & Wellbeing   healthy darwin ?

- Sedentary lifestyle is the biggest contributor to chronic disease
  - A mix of poor diet, and a non-active lifestyle
- Increasing amount of data and research proving a direct relationship between chronic diseases and a sedentary lifestyle
- A lack of education, accessibility and inclusivity to lead a healthy lifestyle in our city is an ongoing challenge
- Chronic diseases on the rise (CVD, T2DM, Asthma, Obesity) nationwide - a future cost on the horizon
- Sedentary symptoms - mental health, depression, suicide links
- Annual cost to Australian taxpayer is $15 billion
- Cities must take a more proactive role

Backed by the Darwin Community

- O-week Petition - 632 signatures
  (domestic & international students)

- Received letters of support (Council for International
  Students Australia, Integrated Disability Action Inc,
  and local fitness cafe)

- Media Attention: (ABC Radio x3, NT News x2)

- ABC TV interest in running a story

- Jerome collected over 300 signatures in support of
  the proposed upgrade at East Point over Easter
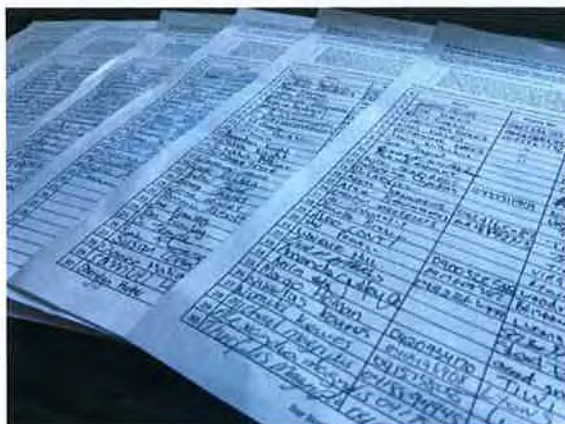
Absence of Australian Standards

There are no standards in place for the (a) manufacturing
quality and safety of the equipment, nor (b) installation
standards. It's an unregulated "anything goes" space.

- Europe has had standards for almost 10 years!

- David Eager (UTS, Standards Australia, APIA)
  confirms there are no standards in place but an
  industry push exists to adopt the EN16630

- Suppliers are winning, while rate-payers are losing on
  poor quality equipment

- Replacing moving parts - an ongoing cost to councils,
  and a recurring income for suppliers / installers

East Point Bars - No standards

- Centre support beam is critically unstable - an accident waiting to happen
- Large tree fell over the bars during the cyclone
- Flooring is uneven causing people to sprain their ankles
- Half of the equipment is not functional and never gets used - a waste of space
- No disability access or equipment in place to include users with disabilities
- Petition to upgrade the bars has reached over 300 signatures (mostly Greek signatures)

Interstate Examples / Bondi Beach, Sydney NSW

Kings Beach, Caloundra QLD

Spartan Parks Proposal for East Point
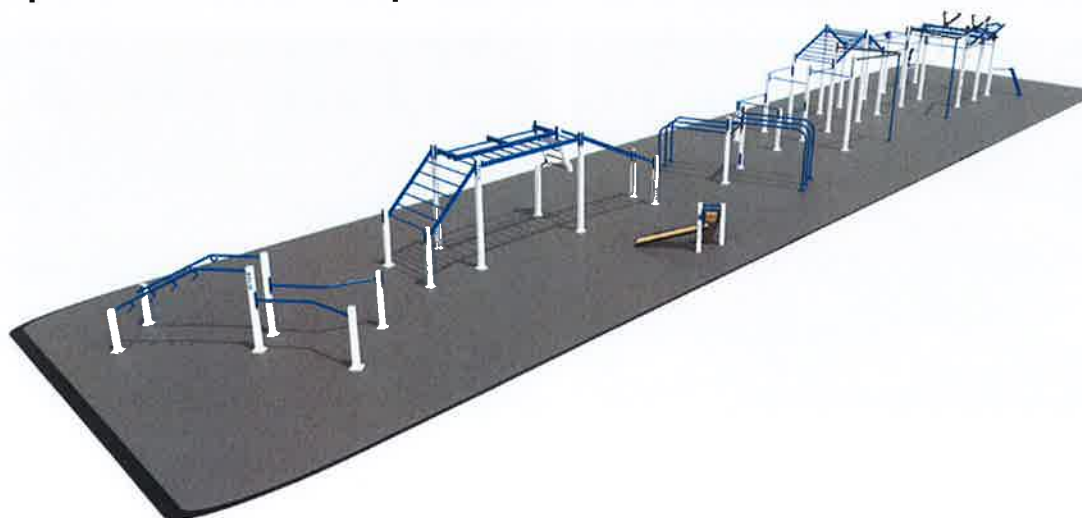
Spartan Parks Proposal for East Point

East Point Upgrade

Darwin - Attraction City

Young Population   Tropical

Modern

Inclusive

Thank You

STOP
THINKING
JUST
CHOOSE
NIPPUR

SPARTAN PARKS NT - 0416 721 248

COMPLETE REALIZATION IN 6 WEEKS

NIPPUR
REVOLUTION 13

Why should you choose RVL13?

Nippur series is characteristic by its compact, space saving design. Each and every park includes various types of horizontal bars, dips, vertical and horizontal wall bars, ring holder and many other features. Thanks to their trendy looks, RVL13 parks are suitable for virtually any place from public parks, school playgrounds or neighborhood meeting areas. We have more than 150 standing street workout parks through the whole Europe while every one of them meets the highest requirements of our customers – top quality, futuristic design and endless color combinations from the RAL palette, delivery anytime between 3 to 6 weeks or use of the steal-proof mediums. Our sophisticated system does not allow for any movement of the bars which you could experience with other methods of fixation. Also, no plastic caps are needed since we carefully weld all the unnecessary holes in each component.

The name itself is derived from an ancient Sumerian city. Nippur used to be a very important business intersection overseen by a god of wind, Enlil.

Nippur is our middle and by far the most popular series. The purposeful layout of all the elements predestines these parks for circular trainings or practice of the special workout moves but it can also provide a satisfactory stretch for the public after a stressful day in the office.

Nippurs comply with all the necessary standards for playgrounds and they are fully certified according to the strictest TUV criteria. All of the parts are made of strength steel with a minimum diameter of 4mm. The surface treatment is also handled through the best available procedures – coverage with a layer of zinc and komaxit coloring are an absolute standard. The static calculations and stress tests confirm that the parts used in our constructions will withstand four times the required set points. During the development and testing of all new elements we collaborate with the national street workout representatives of the Czech Republic and Slovakia – Adam Raw, Martin Viedensky, Jan Kares or Patrik Semerak.

NIPPUR LMAX

Nippur Park Size Lmax

This giant of the middle class doesn't allow for any doubt that everybody will find their perfect workout station. Double ring holder, triple dip bars, straight inclined vertical and horizontal wall bars, dance pole and numerous horizontal bars provide the ideal playground for both men and women of all ages. Nippur L max includes all the elements of the smaller versions and something more. For the first time it presents a micro-rack in the basic setting, which grants an easier practice of the hardest tricks. For the full enjoyment of this beast, we recommend to upgrade it with some of our special workout benches.

31 workout stations

123 m² minimal area

Nippur Park Size L+

Less means sometimes more but this saying definitely doesn't fit our Nippur L+. It is the very first park with a professional dance pole and so it rightfully attracts also girls and women. Together with the impressive foundation of Nippur L it provides an unprecedented versatility and number of workout stations which climbs up to 31. Between the traditional and most popular supplements, you can find a micro-rack or the special workout benches.

TÜV SÜD
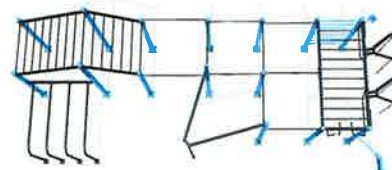
Nippur Park Size L

Nippur L series is a compact solution which includes 29 unique workout stations and allows for countless practice combinations. With two ring holders, inclined wall bars and numerous horizontal bars, Nippur L is a perfect solution for the street workout communities or various sport complexes. Simply put, it is predestined for collective trainings and exhibitions.

23 workout stations

70 m² minimal area
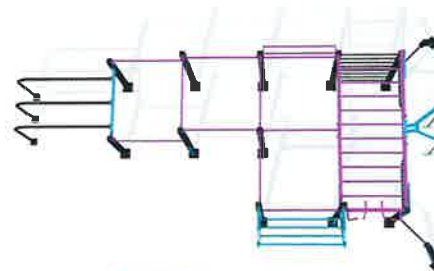
Nippur Park Size M+

It is no surprise that Nippur M+ has the same core as its smaller ancestor. Complemented with some extra bars it greatly improves on the provided possibilities which are to be exploited at 23 unique workout stations. Nippurs M+ stand out among the others with an excellent cost performance. Special workout benches or stalks are to be found between the most popular add-ons of these parks.

17 workout stations

60 m² minimal area

Nippur Park Size M

The golden medium choice of our Nippur selection offers an expansion against the previous version by three lower horizontal bars. These are particularly suitable for practice of more challenging moves or combination of the practice on the bars and on the ground. Ms can easily satisfy up to 17 trainees at the same time. Regarding its layout, Nippur M is perfect for callisthenic enthusiasts as well as freestylers and sporty amateurs. It can be tuned up with our special workout benches or stalks.

NIPPUR S+

Nippur Park Size S+

With this park limited budget won't stand in your way. Nippur S+ can host up to 13 sportsmen at the same time. All of its components are dynamically linked so you can switch from classic workout to bar freestyle without hesitation. The workout experience can be further improved with an extra module called minirack or some of our special benches.
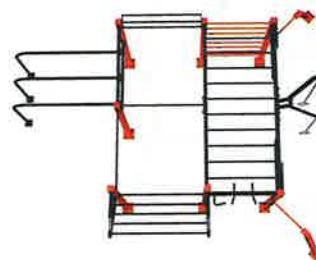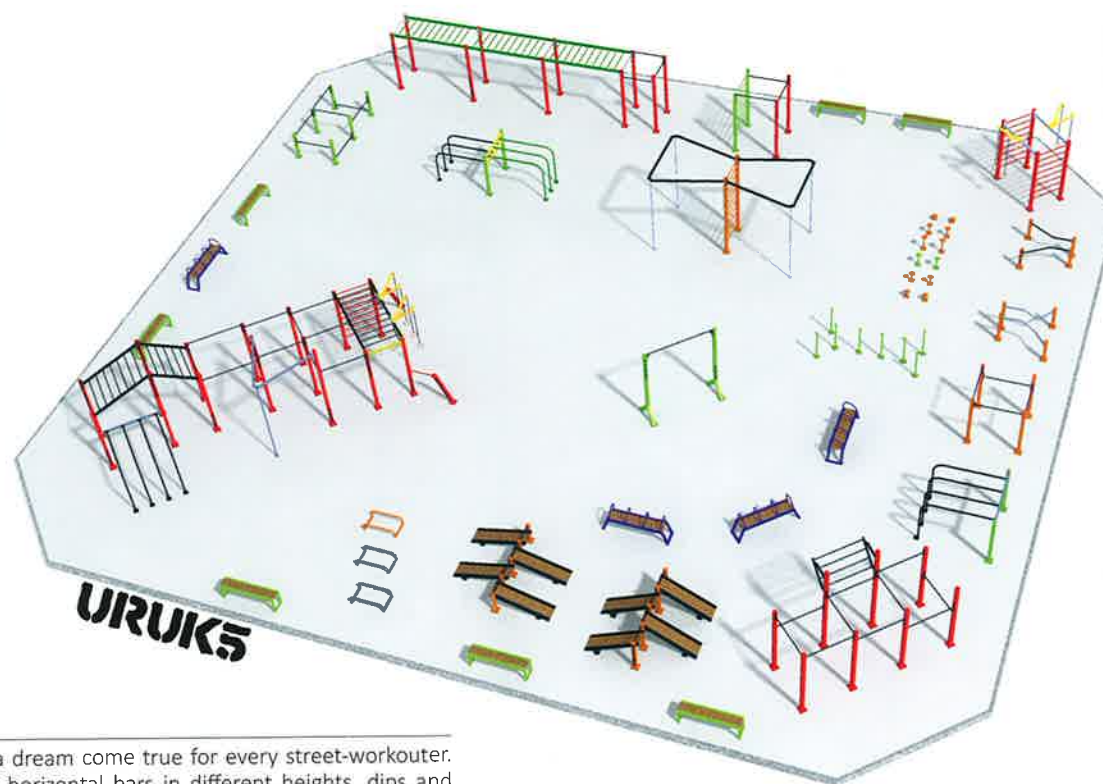
Uruk Park Size 5

The largest park of our portfolio is a dream come true for every street-workouter. Uruk 5 presents a large amount of horizontal bars in different heights, dips and ladders, training benches and special features such as bar ballz, stalks or step-ups. It is a versatile outdoor gym which will test your fitness. This park is particularly suited for larger cities and sports complexes where its potential of 130+ workout stations can be fully exploited.

URUK4

URUK3

URUK2

URUK1
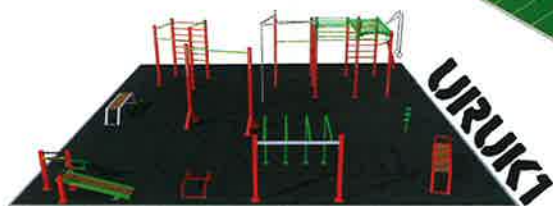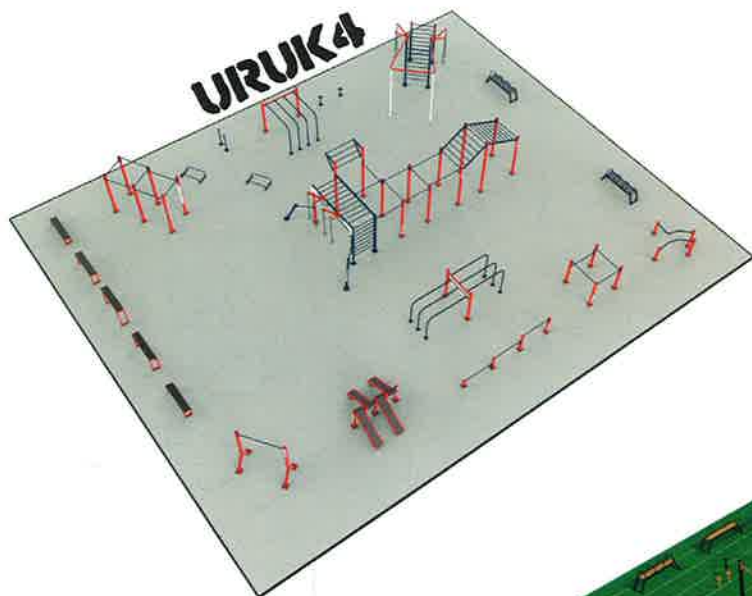
Uruk Park

Bigger cities and bigger communities need bigger parks RVL13. Uruk series brings more space, both freestyle and power elements and with that, more possibilities. Uruk parks present a perfect solution for hosting of regional competitions or sport club practices. They are a little more space demanding, but at the same time they allow for much better customization and compliance with the unique needs of every workout community.

Upgrade your Nippur setup with some of our original segments from the Petum series! We build our parks also with the disabled athletes in our minds and so they are all barrier free. Three of our workout segments are dedicated directly to the handicapped.

BENCH DIP
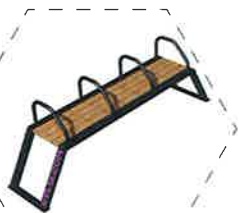
DOUBLE AB
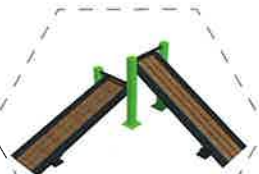
BATTLE BAR

STALKY

VARIO DIP

DVARAKA

BAG HOLDER

MINI RACK
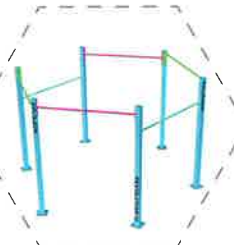
STOP THINKING JUST WORKOUT
RVL13.COM

Mobile Park

This outdoor construction with three horizontal bars and double dip bars has one major advantage. Thanks to the special metal plates and stabilizing elements it isn't necessary to anchor it to the ground. That makes it a perfect candidate for various exhibitions, camps, sports events or just as a portable complement for your garden. This micro-park takes only 8m2 of your space but it can host up to 5 people at the same time.

Mobile Bar Jan Kares Edition

This bar is characterized by an extreme stability and mobility. You can take it apart and move away literally within a couple of minutes. It comes in an endless variety of color combinations and each customer can choose to put a short writing on it. The surface treatment is common with our outdoor parks which grants the bar and extreme durability. Several Guinness world records were accomplished on this very mobile bar and it is widely used by professional teams on exhibitions across Europe.

STOP
THINKING
JUST.
WORKOUT
RVL13.COM

**OPENING
EXHIBITIONS**

**SPECIAL
PERFORMANCES**

RECORS

COMPETITIONS

WORKOUT
CROSS TRAINING
SYSTEM
RVL13.COM

Color combinations from RAL palette

Jan Kareš

Guinness record

6800

Pull-ups on RVL13 bar within 24 hours

RVL13.COM
STREET WORKOUT
SYSTEM COMPANY

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telephone
+420 723 677 666

TÜV
SÜD

www.spartanparks.com.au

NORTHERN TERRITORY

Chronic Conditions
Prevention AND Management

STRATEGY

2010 - 2020

healthy Territory
fresh ideas | real results

Acknowledgements

The Northern Territory Chronic Conditions Prevention and Management Strategy 2010-2020 has benefited from extensive collaboration and consultation across the Territory. The Northern Territory Department of Health and Families gratefully acknowledges all the stakeholders who contributed and provided feedback in the development of this document.

The revision of the Northern Territory Preventable Chronic Disease Strategy (1999) was commissioned by the Northern Territory Preventable Chronic Disease Clinical Reference Group and the Northern Territory Chronic Diseases Network Steering Committee.

A Partnership Approach

The development of this Strategy was guided by representatives of the following organisations:
• Aboriginal Medical Services Alliance of the Northern Territory
• Northern Territory Department of Health and Families
• General Practice Network Northern Territory
• Good Health Alliance Northern Territory.

Contents

Foreword

The Northern Territory has the highest burden of disease in Australia, and our response to improve this situation presents a significant challenge for all Territorians. The Northern Territory Chronic Conditions Prevention and Management Strategy 2010-2020, provides the framework for improving population health and well being across the Territory through reducing the incidence and impact of chronic conditions on our communities.

Building on our achievements and impact on health outcomes over the past ten years, we will continue to provide high quality care for people with chronic conditions as well as extending our current services. The Strategy has a strong focus on health promotion and prevention across the continuum of care and emphasises the need for a more proactive approach.

The strategic nature of this document and the ten year time frame, reflects the importance and complexity of the task. Never before has there been a greater need to empower individuals and the community through an understanding of what causes ill health and what can prevent it. There is not only a need to change lifestyle habits and behaviours to enhance wellness but to create systems and environments that support healthy behaviours.

Historically, our health system has mainly focused on detecting, diagnosing and treating health problems. This essential change in emphasis to prevention requires consolidating a broad range of effective partnerships between individuals, families and communities and their local health and family services, non government organisations and private sector providers.

The Northern Territory Department of Health and Families Corporate Plan 2009-2012 identifies the prevention and management of chronic conditions as priority policy objective. We will achieve this through implementing evidenced based policy that targets common risk factors, important emerging health challenges, and the social determinants of health.

I would like to thank all those involved in the development of the Strategy for their contribution and efforts, and I urge you all to remain engaged and committed to improving the health outcomes of Territorians.

Dr David Ashbridge
Chief Executive
Department of Health and Families

Executive Summary

The Northern Territory (NT) Department of Health and Families has worked with partners in the non-government, private and Aboriginal health sectors and consulted widely with other stakeholders to develop the Strategy. It identifies key evidence based strategies and serves as the framework for building and strengthening a system-wide response to prevent and reduce the impact of chronic conditions for all people in the NT and across the continuum of care. This is from infancy to old age, those living in urban and remote settings, Aboriginal and non Aboriginal people.

The rapid rise in the prevalence of chronic conditions is impacting on health and social systems nationally and internationally and is predicted to increase over the coming decades. The prevalence of chronic conditions in the NT reflects this national trend with the added burden of even higher rates in the Aboriginal population. This situation makes it imperative that the NT places a priority on the prevention and management of chronic conditions.

Strategy aim:

To improve the health and well being of all Territorians by reducing the incidence and impact of chronic conditions.

The Strategy focuses on the following conditions:

- Cardiovascular disease
- Rheumatic heart disease
- Type 2 diabetes
- Chronic airways disease
- Chronic kidney disease
- Chronic mental illness
- Cancers (associated with common risk factors for other chronic conditions)

The Strategy highlights the impact of the **social determinants of health** on chronic conditions and identifies that a broad holistic approach that is equitable and sustainable is required. Reducing inequity through targeting disadvantaged populations underlies the strategy.

To fully achieve the goals of the Strategy a **collaborative approach** is required and needs to be supported by all partners including the Australian Government, various NT Government departments, public and private health professionals, non-government and community organisations, consumer representatives and education and research organisations.

Reducing the incidence and impact of chronic conditions is a key to **closing the gap** between Aboriginal and non Aboriginal health outcomes and this strategy is consistent with Australian and NT Government strategies to close this gap.

The Strategy adopts population wide and at risk group approaches to the key risk factors that underlie many chronic conditions:

Effective actions:

- reducing smoking
- improving nutrition
- increasing physical activity
- reducing rates of harmful and hazardous alcohol consumption
- improving social and emotional well being
- improving socio economic status

There are four key elements to the framework:

1.	Individual, carer, and family centred care
2.	Community capacity
3.	Strategic supports to enable interventions to be effectively implemented • Positive policy environment • Investment and resources • Health system organisation • Delivery system design • Decision support • Information, communication and disease management systems • Workforce capacity
4.	Interventions across the care continuum • Primary prevention • Early detection and secondary prevention • Management and tertiary prevention • Multidisciplinary care planning and review • Care co-ordination • Evidence based clinical management • Self management support • Psycho social support • Ongoing monitoring • Rehabilitation • Palliative care

In order to progress the strategy the following key action areas have been identified:

1.	Action on social determinants of health
2.	Primary prevention
3.	Secondary prevention and early intervention
4.	Self management support
5.	Care for people with chronic conditions
6.	Workforce planning and development
7.	Information, communication and disease management systems
8.	Quality improvement

The ten year time frame of the Strategy reflects the long term approach that is needed to reduce the incidence and impact of chronic conditions in the population. Ongoing three year **action plans** addressing these key action areas complement this document and will provide direction for collaborative actions across the NT.

The implementation of the Strategy will support better access to primary health care, improve and support an integrated and coordinated approach to key risk factors and provide more efficient and targeted use of health resources across the health continuum.

Why treat people...

...without changing what makes them sick?

References to "Aboriginal people" should be taken to mean "Aboriginal and Torres Strait Islander people" throughout this document.

Introduction

1.1 Background

The rapid rise in the prevalence of chronic conditions is impacting on health and social systems nationally and internationally and is predicted to increase over the coming decades. Chronic conditions currently account for 70% of the total disease burden in Australia due to death, disability and reduced quality of life. This is expected to increase to 80 per cent by 2020[1]. This places increasing demand for and expenditure on health care as well as impacting on individuals, families and communities.

In the Northern Territory (NT) the prevalence of chronic conditions in the non Aboriginal population is increasing at similar rates to the rest of Australia. For Aboriginal Territorians, the incidence is much higher. This requires that all health service providers and governments prioritise the prevention and management of chronic conditions.

1.2 Revision and purpose of the Strategy

The Northern Territory Department of Health and Families (NT DHF) has worked with partners in the non government sector (Good Health Alliance of the Northern Territory and General Practice Network Northern Territory) and the Aboriginal Medical Services Alliance Northern Territory to revise the Strategy. The following evidence has informed the revision:
- burden of disease in the NT
- recommendations from the Evaluation of the Northern Territory Preventable Chronic Disease Strategy (NT PCDS) 2007[2]
- evidence in relation to chronic conditions prevention and management from NT, Australia and overseas
- chronic conditions initiatives nationally and in other jurisdictions
- feedback from background papers (A Comparison of Frameworks and Models of Care, and Preventable Chronic Diseases in Aboriginal Populations)[3]
- consultation with a broad range of stakeholders.

The Strategy provides an overarching framework for the prevention, early detection and management of chronic conditions by identifying evidence based strategies at the individual, whole of population and system wide levels. The strategy is for all Territorians - from infancy to old age, those living in urban and remote settings, Aboriginal and non Aboriginal people. It is intended that this document will be used by policy makers, health care providers, public health specialists, the wider health community including Aboriginal Community Controlled organisations, government departments, the non-government and private sectors, research and education organisations and consumers.

1.3 Related policies and programs

At the NT level
- Northern Territory Department of Health and Families Corporate Plan 2009-2012
- Closing the Gap of Indigenous Disadvantage: The NT Government Generational Plan of Action
- Local disease or risk factor strategies e.g. GoNT, Tobacco Action Plan, Northern Territory Nutrition and Physical Activity Action Plan 2007–2012.
- Aboriginal health and families: a five year framework for action 2005.
- NT Renal Services Strategy.

A framework for the prevention, early detection and management of chronic conditions at the individual, whole of population and system wide levels.

4

At the National level
• National Chronic Disease Strategy 2005
• National Primary Health Care Strategy (2009 draft)
• National E-Health Strategy
• National Mental Health Policy 2008.

Resources have been provided to improve care planning and quality improvement, with funding from:
• Australian Primary Care Collaboratives Program
• Sharing Health Care Initiative
• Enhanced Primary Care Program
• Council of Australian Governments' National Action Plan on Mental Health 2006-2011.

Behavioural risk factors
• National Preventative Health Strategy 2009
• National Tobacco Strategy 2004-2009
• National Public Health Partnership's Nutrition Strategy and Action Plan - Eat Well Australia 2000-2010
• National Alcohol Strategy 2006-2009
• Be Active Australia: A Framework for Health Sector Action for Physical Activity 2005-2010
• Smoking, Nutrition, Alcohol, Physical Activity (SNAP) Framework for General Practice.

Maternal, Child and Youth Health
• Report of the Maternity Services Review 2009

Aboriginal Health
• National Partnership Agreement on Closing the Gap in Indigenous Health Outcomes 2008
• The National Strategic Framework for Aboriginal and Torres Strait Islander Health 2004
• Healthy for Life Program
• National Strategic Framework for Aboriginal and Torres Strait Islander Peoples' Mental Health and Social and Emotional Well Being 2004–2009.

The Australian and NT Government commitments to closing the gap between Aboriginal and non Aboriginal Australians provides many opportunities to address chronic conditions in Aboriginal populations. Primary Health Care (PHC) Reform initiatives are providing significant funding increases for both Aboriginal Community Controlled Health Organisations (ACCHO) and NT DHF health services to ensure that all Aboriginal people have access to a basic suite of comprehensive PHC services. This provides opportunities for improving a broad range of programs for Aboriginal people in urban and remote areas related to the prevention and management of chronic conditions.

A Healthier Future for All Australians - Final Report of the National Health and Hospitals Reform Commission (NHHRC) 2009[4] identifies further opportunities for improving prevention and management of chronic conditions. A number of reviews and long-term planning processes are being undertaken in specific areas relevant to chronic conditions e.g. the work of the National Preventative Health Taskforce, review of rural health programs, development of a Fourth National Mental Health Plan, National Men's Health policy, National Women's Health Strategy and the work of the National Advisory Council on Mental Health.

1.4 The Northern Territory context

The NT population is unique in many ways. It has 1% of the total Australian population, the smallest jurisdiction in Australia in population and in density, occupying a land area of 1.3 million square kilometres. It has the highest proportion of Aboriginal people (29% compared with 2.4% for Australia). It is a relatively young population with a median age of 30 years compared the Australian median age 36 years.

The initial NT Preventable Chronic Disease Strategy (PCDS) was launched by the Department of Health and Families (formerly Territory Health Services) in 1999. Based on the best available evidence, this was a strategic attempt to bring about change in the prevention, early detection, and management of chronic diseases in the NT, and at all levels of the health care system. The key documents related to the strategy were the 'NT PCD Strategy - Overview and Framework'[5] and 'The Evidence Base'[6]. This was a ground breaking development in Australia and informed the first National Chronic Disease Strategy[7] in 2001.

Evaluation of the NT PCDS[8] in 2007 identified changes in approaches to chronic diseases in remote communities across all health sectors. It identified key outcomes from the strategy as significant improvements in maternal and child health, increased vaccination coverage in remote communities, development and use of best practice guidelines across the NT, expansion of dedicated chronic disease staff, inclusion of chronic disease issues in orientation and training and more systematic approaches in primary health care to chronic disease programs. There were limited additional resources dedicated to health promotion or prevention. Recommendations were to:
• increase the focus on prevention and health promotion programs
• strengthen partnerships
• improve clinical information systems
• increase workforce capacity with a specific focus on the Aboriginal workforce
• develop an implementation plan and evaluation framework.

1.5 A collaborative approach to the social determinants of health

Many factors determine and influence health including a complex interaction of social, economic, environmental, behavioural and genetic factors. They have either a positive or a negative influence on health at the individual or population level.

The social determinants of health are the key drivers of chronic conditions and include early life circumstances, education, employment, occupation, income, social inclusion, nutrition and substance use. To fully achieve the goals of the Strategy a collaborative, whole of government approach supported by the non government, private and industry sectors is required.

It is imperative that the health sector provides leadership in strengthening this approach. This leadership has to date focused predominantly on an advocacy role however to effectively address chronic conditions requires that the health system take action to ensure that interventions are ongoing and system-wide, and at a level sufficient to achieve broad based population-wide outcomes, as well as reduce health inequalities across population sub-groups. The World Health Organisation recommends focusing on three broad areas to improve the social determinants of health:
• improve daily living conditions
• tackle the inequitable distribution of power, money and resources
• measure and understand the problem and assess the impact of action[9].

Chronic Conditions and Risk Factors in the Northern Territory

2.1 Defining chronic conditions

The terms chronic disease, preventable chronic diseases, chronic conditions, long term disease/conditions are commonly used interchangeably. In this Strategy, the term 'chronic conditions' is used as an overarching term. Chronic conditions are those which in most cases can not be cured, only controlled. They have a gradual onset but are long term and persistent; occur across the life cycle although they become more prevalent with older age; are usually not immediately life threatening but can compromise quality of life through physical limitations and disability. Chronic conditions are influenced by the underlying social determinants of health that are largely preventable, and if addressed can minimise the onset of chronic conditions. The table below illustrates the difference between acute and chronic conditions.

Differences between acute and chronic conditions

	Acute	Chronic
Onset	Abrupt	Generally gradual and often insidious
Duration	Limited	Lengthy and indefinite
Cause	Usually single	Usually multiple and changes over time
Diagnosis and prognosis	Usually accurate	Often uncertain
Outcome	Cure possible	No cure
Knowledge	Professionals knowledgeable and patients inexperienced	Professionals and patients have complementary knowledge and experiences

2.2 The burden of disease

The NT has the highest burden of disease among all jurisdictions in Australia, due to a higher rate of burden for most causes, particularly cardiovascular disease, diabetes, and injury. Despite improvements there are a number of areas where the chronic conditions burden is increasing in part due to population ageing, improvements in health care and the changing risk profile of the population.

The leading category of burden of disease for both males and females in the NT in 2003 was mental health conditions (16.3%). This was followed by cardiovascular disease (12.4%), diabetes (10.5%), cancer (9.4%) and chronic respiratory disease (7%). Females had a greater proportion of mental health conditions (18.3%) and males a greater proportion of cardiovascular disease (13.9%)[10].

NT has highest burden of disease in Australia

Proportions of disability adjusted life years by disease category, Northern Territory, 1999-2003
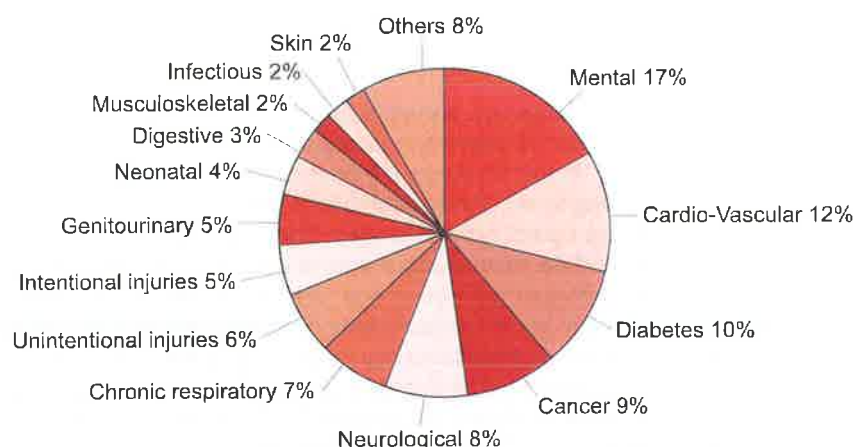
Others 8%
Skin 2%
Infectious 2%
Musculoskeletal 2%
Digestive 3%
Neonatal 4%
Genitourinary 5%
Intentional injuries 5%
Unintentional injuries 6%
Chronic respiratory 7%
Neurological 8%
Cancer 9%
Diabetes 10%
Cardio-Vascular 12%
Mental 17%

Source: Zhao Y, You J and Guthridge S 2008. Burden of Disease and Injury in the Northern Territory, 1999-2003 Unpublished[11]

2.3 Avoidable hospitalisations

'Avoidable hospitalisations' measure the proportion of morbidity that could be avoided by timely and effective care outside hospital and involve a selected group of conditions for which hospitalisation could be avoided by preventive measures or early diagnosis and treatment in primary care. This is used as an indicator of access to primary care and its effectiveness and as a measure of the potential health gains from primary care interventions.

Chronic conditions and their complications constitute the largest proportion of avoidable hospitalisations in the NT in all population groups. The top four causes were diabetes complications, chronic obstructive pulmonary disease, congestive heart failure and angina. The rate of avoidable hospitalisations for non Aboriginal people was similar to the Australian rate however the rate for Aboriginal Territorians was four times the Australian rate. The average annual increase was 11.6% in Aboriginal people and 3.9% in non Aboriginal[12]. The significantly higher and increasing rates in Aboriginal people reflect the increasing level of disease, highlight the impact of barriers to Aboriginal people accessing effective primary health care and emphasise the potential health gains with appropriate interventions.

2.4 Risk factors for chronic conditions

Risk factors are characteristics or behaviours that are associated with an increased risk of developing a particular disease or condition. Some risk factors cause diseases, others indicate risk, and others may be statistically associated for unknown reasons.

It is important to identify these risk factors to provide opportunity to address these at the individual or community level before disease develops or once disease has developed to reduce progression to complications. The factors associated with the social determinants of health are equally as important in reducing the risk factors. The rise in obesity in populations across the world is a clear example of how the environment has changed in ways that promote consumption of excess energy and reduce the expenditure of energy through physical activity.

Chronic conditions and their complications constitute the largest proportion of avoidable hospitalisations in the NT in all population groups.

The following risk factors impact significantly on conditions identified in this Strategy as well as on other conditions and reduction may therefore have a broader impact on overall health.

Modifiable risk factors		Broad influences (may or may not be modifiable)	Non modifiable risk factors
Behavioural	**Biomedical**		
• Tobacco smoking • Poor diet • Excess alcohol • Physical inactivity	• Excess weight • High blood pressure • High blood cholesterol • Albuminuria	• Socio environmental factors • Psycho social factors • Early life factors • Political factors • Socio economic factors	• Age • Gender • Indigenous status • Ethnic background • Family history • Genetic make up

Source: AIHW Chronic Diseases and Associated Risk Factors in Australia 2006[13]

The largest contribution to the burden of disease in the NT was low socio economic status that accounted for 26.8% of the burden of disease[13]. Poverty is associated with chronic conditions in many ways e.g. high fat foods are cheaper than lower fat foods, environments may not be conducive to physical activity, higher rates of smoking among people from low socio economic groups makes it harder for people to stop smoking.

Major health risk factors and contribution to the total burden of disease in NT

Risk Factor	Attributable Proportion
Low socio-economic status	26.8%
High body mass	11.1%
Physical inactivity	11.0%
Tobacco	8.1%
Alcohol	4.5%
High blood cholesterol	4.2%
High blood pressure	3.9%
Low fruit and vegetable intake	3.3%

Source: Zhao Y, You J and Guthridge S 2008. Burden of Disease and Injury in the Northern Territory, 1999-2003 (Draft) Unpublished.[14]

Behavioural and biomedical risk factors are often able to be modified at the individual level by changes in behaviour or through medical intervention. However for these risk factors and the broader influences on health, interventions at the community and population level are frequently needed to produce change. The non modifiable risk factors can be used to identify groups at increased risk to ensure that strategies are targeted and appropriate to these groups.

Much of the burden of disease caused by chronic conditions can be prevented by effectively taking action against key risk factors that underlie many chronic conditions:
• reducing smoking
• improving nutrition
• reducing rates of harmful and hazardous alcohol consumption
• increasing physical activity
• improving social and emotional well being
• improving socio economic status.

Effective actions:
• *reducing smoking*
• *improving nutrition*
• *reducing rates of harmful and hazardous alcohol consumption*
• *increasing physical activity*
• *improving social and emotional well being*
• *improving socio economic status.*

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The addition of social and emotional well being as a risk factor recognises the increasing impact of social stress on health outcomes including those associated with chronic conditions. These stresses impact on individual, family, community and the broader society across all populations.

2.5 Co-morbidity

Co-morbidity between chronic conditions is high. This includes co-morbidity between physical chronic conditions e.g. heart failure and chronic obstructive pulmonary disease, as well as between physical chronic conditions and mental ill health e.g. cardiovascular disease and depression.

A recent study in NT remote communities[15] showed that: 40% of people had at least two chronic conditions before the age of 50 years. After the age of 50 years 60% had at least two conditions and 30% had at least three conditions. The more common interactions were between hypertension, diabetes, ischaemic heart disease and kidney disease. Co-morbidities and complications of chronic conditions were common and strongly associated with increasing age.

Co-morbidity of chronic condition has been shown in international studies to increase health care costs with rates of hospitalisation increasing linearly with each chronic condition.

Health System and Service Delivery Reform

Important health system changes during the life of this Strategy are many of the reforms identified in the Final Report of the National Health and Hospitals Reform Commission 2009. Other National and NT health reforms also provide many opportunities for improving the prevention and management of chronic conditions. The effective management of chronic conditions is predominantly provided in the primary health care setting, with support from specialist services and tertiary care.

3.1 Urban primary health care and General Practice

Reform in the urban primary care setting is currently being addressed with an increasing focus on a multidisciplinary team approach and integrated care coordination within the practice team and with external providers. National initiatives to improve collaboration and information sharing between practitioners are being led by NT DHF, GPNNT and Aboriginal Community Controlled Organisations. These reforms include:
• changing the focus from healing the sick to preventing chronic illness
• promoting wellness
• improving referral pathways and communication with allied health professionals
• slowing the progression of diagnosed illness
• promoting better self management
• implementation of a shared electronic health record
• a focus on quality improvement.

NT DHF Community Care Centres are contributing to this reform through an increased focus on chronic conditions including improving health promotion and prevention; and collaboration and integration of care between General Practitioners and other service providers.

3.2 Aboriginal primary health care

Australian and NT Government PHC reform initiatives provide opportunity to ensure that all Aboriginal people have access to a suite of comprehensive PHC services including those related to the prevention and management of chronic conditions. Significant funding increases for Aboriginal Community Controlled Health Organisations (ACCHO) and NT DHF services are being provided through the Council of Australian Governments Indigenous health reforms. This will increase the number of practitioners as well as increasing Aboriginal community control of health services.

3.3 Primary / tertiary care interface

Reform of service delivery that integrates primary and tertiary care has been shown to improve care for individuals through providing care closer to home, facilitating continuity of care and enabling individuals and families to access high quality clinical care. These reforms need to be supported by policy initiatives and engagement of service providers at all levels. Care coordination is a comprehensive approach that has been shown to achieve continuity of care for people with chronic kidney disease to ensure care is delivered in a logical, connected and timely manner so that the health and personal needs of people are met[16]. This approach facilitates improved integration between primary and tertiary care sectors and can be applied to other complex conditions.

Effective management is predominantly provided in primary health care settings.

Reducing Inequity Through Targeting Disadvantage

Chronic conditions are experienced disproportionately by different population groups. Underlying these inequities is a complex interaction between socio-economic and other factors as opposed to individual modifiable behaviours that may be seen as inherent weakness in individuals rather than situational restraints.

The Strategy uses a targeted population health approach to address health inequities. Aboriginal people in particular experience significantly greater morbidity and mortality from chronic conditions. Other disadvantaged groups are those in low socioeconomic circumstances; people from rural and remote areas, and prison inmates. These groups require targeted attention.

4.1 Aboriginal populations

A high priority in the NT is the Aboriginal population. The NT has the shortest 'health-adjusted' life expectancy at birth (67.7 years) among all jurisdictions, 5.2 years shorter than the national average (72.9 years)[17]. The cause of this gap in life expectancy is the gap of 17 years between the life expectancy of Aboriginal people and all other Australians[18]. Recent analyses show that while there have been some improvements in life expectancy for Aboriginal women there has been no improvement for Aboriginal men.

Most of the extra burden of disease experienced by Aboriginal people occurs in chronic conditions with modifiable risk factors such as ischaemic heart disease, diabetes, chronic kidney disease and chronic airways disease. Aboriginal people have a higher prevalence of some risk factors that contribute to chronic conditions e.g. 54% of NT Aboriginal people smoke, 28% are overweight and 29% are obese[19].

It is important to view this disparity in the broader context of the social determinants of health and the socio-cultural disruptions experienced by Aboriginal people including the effect of racism on health[20].

Evidence indicates that improvements in health status require strategies that address structural issues such as Aboriginal community control and reliable access to comprehensive primary health care (including health promotion and prevention) as well as addressing the social determinants that underlie poor health outcomes.

4.2 People in low socio-economic circumstances

Compared with those who have social and economic advantages, disadvantaged Australians are more likely to have shorter lives, higher levels of disease risk factors and lower use of preventive health services[21]. There are large differences between higher and lower socio-economic groups in relation to chronic conditions. This is not only at the opposite ends of the social spectrum but there is a graded relationship between social position and health with a recent study showing that death rates decrease progressively with increasing socio-economic status[22]. In the NT, low socio-economic status contributes 26.8% of the burden of disease[23].

While Aboriginal populations account for a significant proportion of the burden of disease due to low socio-economic status, there is also a substantial proportion of non Aboriginal people living in poverty in the NT.

4.3 Rural and remote communities

People living in rural and remote areas tend to have shorter lives and higher levels of illness and disease risk factors compared with those in major cities[24]. Aboriginal people make up a significant proportion of the rural and remote population in the NT. According to the Australian Institute of Health and Welfare (AIHW)[25], this poorer health and lower life expectancy in rural and remote areas is due to factors such as higher levels of low socio-economic status; higher levels of behavioural and biomedical risk factors; less access to health services; poorer access to employment and other environmental issues.

4.4 Prison inmates

Prison inmates tend to have poor mental health and high levels of health risk behaviours, such as drug and alcohol use and smoking[26]. A disproportionate number of prison inmates in the NT are Aboriginal males.

NT Framework

5.1 The scope, aim, goals and principles

5.1.1 Scope

The approach to chronic conditions described in the Strategy can be applied to all chronic conditions, however the conditions below are prioritised for the following reasons:

- cause the greatest burden of disease in the NT
- are preventable
- share common risk factors
- have complex causes
- have a gradual onset but are long term and persistent
- occur across the life cycle although they become more prevalent with older age
- are usually not immediately life threatening but can compromise quality of life through physical limitations and disability.

These conditions are commonly associated with the social determinants of health and contribute significantly to the gap in life expectancy between Aboriginal and non Aboriginal people.

The following conditions are the focus for the strategy:

Cardiovascular disease	Ischaemic heart disease, heart failure, hypertension, stroke
Rheumatic heart disease	
Type 2 diabetes	
Chronic airways disease	Chronic obstructive pulmonary disease, asthma
Chronic kidney disease	Micro/macro albuminuria, decreased GFR
Chronic mental illness	Depression anxiety, psychoses
Cancer	Those cancers associated with the common risk factors for other chronic conditions

Chronic mental illness and cancer were not identified in the NT PCDS in 1999. They are included in this Strategy as both contribute significantly to the burden of disease in the NT, have risk factors common to other identified chronic conditions and the approach to prevention, early detection and management using a systematic approach to service delivery are similar to other chronic conditions. Chronic mental illnesses, particularly depression, are a common co-morbidity with other chronic conditions. Cancer incidence among Aboriginal Territorians is increasing particularly cancers related to tobacco and alcohol abuse.

5.1.2 Aim

To improve the health and well being of all Territorians by reducing the incidence and impact of chronic conditions.

5.1.3 Goals

- Promote and support healthy lifestyles and well being in the community.
- Reduce the prevalence of risk factors in the population.
- Prevent or delay the onset of chronic conditions.
- Maximise the well being of those living with chronic conditions.
- Reduce health disparities among different population groups with regard to the conditions and risk factors in the framework.
- Reduce the gap in life expectancy associated with chronic conditions between Aboriginal and non Aboriginal people.
- Increase self management.
- Improve collaboration and integration across all sectors.

5.1.4 Principles

The Strategy recognises that an effective response to chronic conditions requires a focus at three major levels - whole of person, whole of community and whole of government. The following guiding principles underpin all aspects of the Strategy and provide an impetus for continuing improvements in the NT.

- Addressing the social determinants of health
- Demonstrating effective leadership and governance
- Working in partnership and collaboration
- Encompassing prevention across the continuum of care
- Focusing on the early years of life
- Addressing services for Aboriginal populations
- Promoting respectful and committed person centred care
- Addressing social and emotional well being
- Promoting active self management support
- Providing evidence based care
- Promoting integrated multidisciplinary care
- Providing care coordination by multidisciplinary teams
- Promoting effective organisational and service delivery systems
- Demonstrating commitment to monitoring, outcomes and evaluation

Addressing the social determinants of health

Addressing the underlying social, economic, political, cultural and environmental contexts that enable or hinder the adoption of healthy behaviours is pivotal to effectively addressing chronic conditions and achieving health equity. This is in contrast to the focus on 'lifestyle' approaches that are limited to behavioural risk factor reduction and are less likely to enable the populations most at risk to take action.

Consideration needs to be given to ensuring accessible and equitable services that are inclusive of ethnicity, culture, religion, linguistics, sexuality, stage of development, age, gender and geographic diversity.

Demonstration effective leadership and governance

Ensuring mechanisms for clinical and management leadership are in place to drive and support organisational change processes needed for effective chronic care and ongoing monitoring of quality of care. Effective leadership and governance also involves ensuring appropriate community participation in service planning and development processes.

Working in partnership and collaboration

Effective interventions for the prevention, early detection and timely management of chronic conditions requires intersectoral action and commitment and goodwill from the community, government, non-government and private sectors. The establishment of partnerships on a number of levels is critical to improving carethrough clarification of roles and service providers, reducing duplication of services and better utilisation of resources. This includes partnering with people with chronic conditions, their families and carers, their communities and other service providers involved in their care. Of particular importance is the crucial role of establishing partnerships between general practitioners and other providers.

There is also increasing recognition that citizens and communities should be involved in decisions about how health services are delivered at a broader level with a variety of mechanisms such as citizens juries and public consultations being useful in priority setting and health service planning.

Encompassing prevention across the continuum of care

The Strategy encompasses primary, secondary and tertiary prevention and health improvement into all aspects of the continuum of care, from infancy to old age, and in the full range of health settings and other sectors. This includes identifying and minimising risk at the population level, early detection, management, rehabilitation and end of life care.

Focusing on the early years of life

Early child development, including the physical, social/emotional and language/cognitive domains, has a determining influence on subsequent life chances and health through skills development, education, and occupational opportunities.

The focus on the early years of life needs to include prenatal nutrition, maternal health, pregnancy outcomes, exclusive breast feeding for six months, and child and adolescent health with strategies that promote healthy lifestyles and prevent the uptake of risky behaviour. With the high incidence and prevalence of chronic conditions in the Aboriginal population, proactively addressing the needs of Aboriginal children and young people is of particular importance.

Addressing services for Aboriginal populations

Community control of primary health care services enhances effective service delivery. The NT Aboriginal Health Forum (NT AHF) describes the principles associated with community control in *Pathways to Community Control; An agenda to further promote Aboriginal community control in the provision of primary health care services*[27]. These principles include support for Aboriginal communities in the

'... Aboriginal communities control the planning, development and management of primary health and community care services in a manner that is both commensurate with their capabilities and aspirations and consistent with the objective of efficient, effective and equitable health systems functioning'.

NT Aboriginal Health Forum (NT AHF) *Pathways to Community Control; An agenda to further promote Aboriginal community control in the provision of primary health care services.*

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planning, development and management of primary health and community care services in a manner that is both commensurate with their capabilities and aspirations and consistent with the objective of efficient, effective and equitable health systems functioning.

Cultural security is critical in the provision of health services.
The principles underlying cultural security are described in *Aboriginal Cultural Security: An outline of the Policy and its Implementation*[28].

Promoting respectful and committed person centred care

The needs of individuals living with chronic conditions require positioning at the centre of care, including their interaction and experience with the health system, for particular episodes of care, in different clinical settings and across the course of life. It involves tailoring of care for and working in partnership with individuals and their carers and families.

Addressing social and emotional well being

This issue has become more pressing in recent years with increasing recognition of the relationship between social and emotional well being and chronic conditions. Guiding principles to support people in this area include
• recognition of individual differences in relation to the experience of chronic conditions for the individual and the family e.g. depression and anxiety are common
• assessment of psychological and social health status and appropriate responses and referral.

Promoting active self management support

Active self management support recognises that individuals live with their conditions on a daily basis and are experts in the management of their health in collaboration with health professionals. This approach recognises the person in their totality of physical, psychosocial and spiritual needs. Promotion of this approach requires commitment to incorporating self management support into all relevant models of care and related programs. A key to self management support is the approach by all health professionals in contact with the individual, carer or families and the design of systems that support the individual.

Providing evidence based care

Effective interventions are those that achieve the desired outcome, based on the best available evidence at the time. Evidence based interventions may also be amenable to modification to suit the context of a particular individual, family or community. The evidence needs to be made available for health service providers to inform decision-making and care delivery. This includes implementing and building on best practice models of service delivery and policy development, disseminating and evaluating best practice models and progressing research to inform the evidence base.

Promoting integrated multidisciplinary care

Integrated care recognises the total care and support needs of people with chronic conditions or those at risk of developing these conditions, including consideration of care planning, psychosocial issues, co-morbidities and regular monitoring and reviews. Integrated care also recognises the importance of other sectors in the development, care and community response to chronic conditions. The focus is on health professionals and health services working together in an integrated, seamless, and coordinated way and enhancing the interface between health and other sectors.

Providing care coordination by multidisciplinary teams

Ensuring that care for people with specific complex needs related to chronic conditions or social circumstances is coordinated by one or more members of the multidisciplinary team involved in service delivery. Care coordination relates to both chronic care and social and other support services, and is based on ongoing assessment and review of the needs and goals of individuals with chronic conditions.

Promoting effective organisational and service delivery systems

Robust and efficient systems are required to support effective service delivery. Continuous quality improvement strategies can be utilised to identify system issues and improvement strategies. Systems should maximize the benefits of technologies and available resources.

Demonstrating commitment to monitoring, outcomes and evaluation

Embedding systems in all levels of service delivery to monitor outcomes and effectiveness and ensure the provision of care within a quality and safety framework.

5.2 NT Framework

This framework builds on the initial NT Preventable Chronic Disease Strategy 1999 and adaptations of the *Queensland conceptual framework for chronic disease prevention* and management[29] and the *NSW Chronic Disease Strategic Framework*[30].

Key components of the framework are:

1.	Individual, carer, and family centred care
2.	Community capacity
3.	Strategic supports to enable interventions to be effectively implemented
4.	Interventions across the care continuum • from a population level to an individual level • across the spectrum of care, including prevention, early detection, treatment, continuing care (including rehabilitation) and palliative care • across the lifespan, including infants, children and young people, adults and older people • across primary, secondary and tertiary health services.

Northern Territory Chronic Conditions Prevention and Management Framework
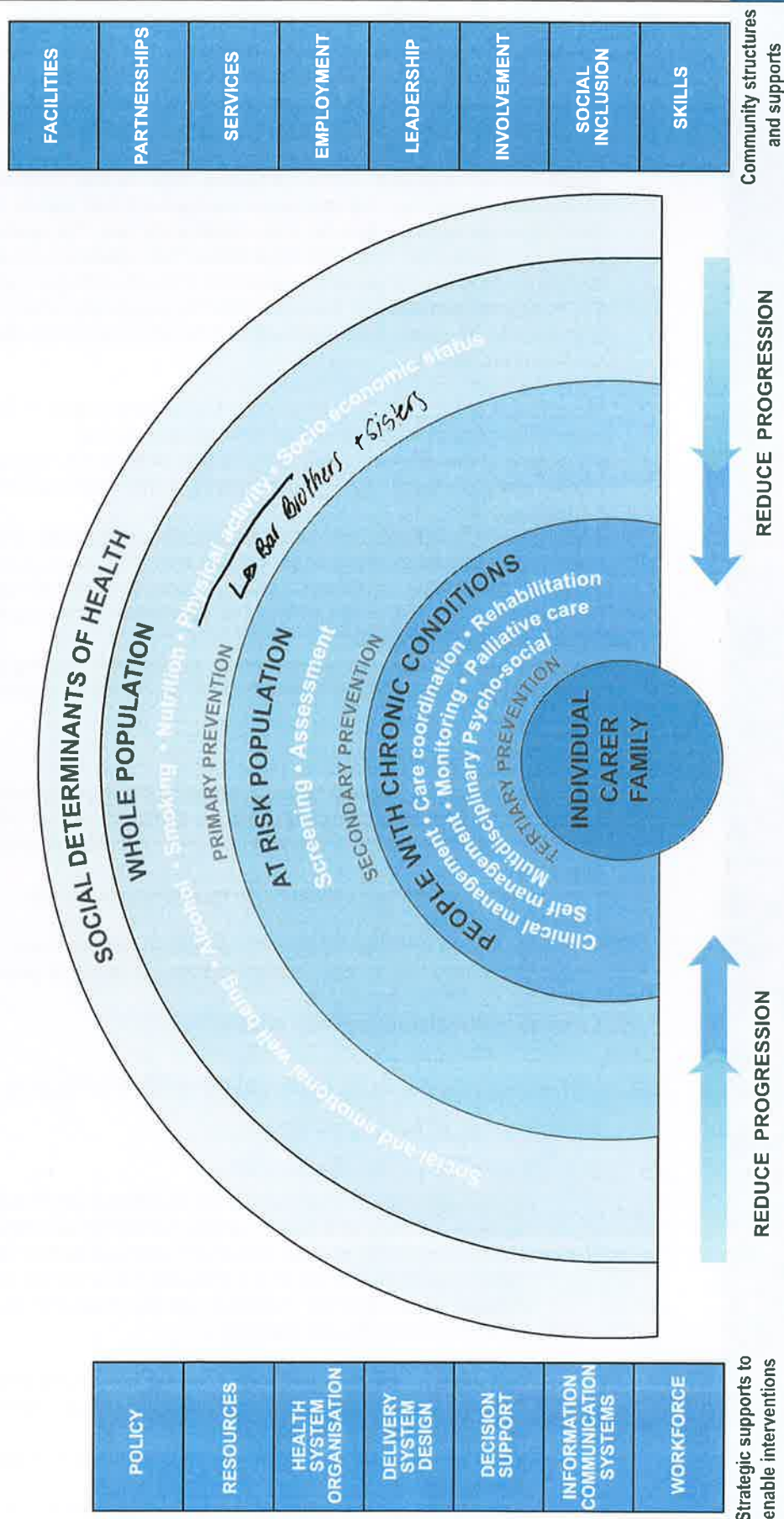
5.3 Individual, carer, and family centred care

The person with chronic conditions, their carer and family are at the centre of chronic care service delivery. All aspects of care are centred on the individual and their needs. Until recently a person centred approach to chronic care relegated carers, families and the social context to a secondary role of providing positive social support. The carer and family focused approach in this framework requires their involvement in decisions regarding care and acknowledgement that carers, families and the social setting play a far more substantial role. For example, evidence increasingly supports the premise that a person's emotional and psychosocial environment impacts on their physiologic systems. For Aboriginal populations, the important role played by extended family and community must be acknowledged in supporting individuals with chronic conditions.

An effective individual, carer and family focused approach requires:
• understanding of relationships and the cultural context
• inclusion of the home environment and the carer, family members and community in interventions as appropriate to the individual's needs and expectations
• addressing the educational, relational and personal needs of the carer and family as well as those of the person with the chronic condition
• viewing the conditions not as a series of acute episodes but as an ongoing process requiring continuity of care between the health care team and the carer/family
• involvement of carers and family members in decision making processes
• including the individual and carer/family in outcomes assessment.

5.4 Community capacity

Community capacity is a key factor in reducing the impact of chronic conditions through supporting preventative strategies and providing ongoing support for people with chronic conditions. Partnerships with communities can:
• strengthen partnerships between community organisations and other sectors
• mobilise and co-ordinate community resources and services
• raise community awareness, reduce stigma and facilitate positive attitudes to chronic conditions
• provide leadership support and advocacy.

5.5 Strategic supports to enable interventions to be effectively implemented

5.5.1 Positive policy environment

A positive policy environment is the combined set of policies at national, Territory and health service levels that provides the overall context for the prevention and management of chronic conditions for all sectors of the population and across the lifespan. These policies include those that impact on the social determinants of chronic conditions.

A positive policy environment for chronic conditions involves:
• leading and facilitating change management and advocacy across health and related sectors
• sharing and building consensus and commitment among all stakeholders
• strengthening inter-sectoral liaison and collaboration between government and non-government agencies

Positive policy environment

Investment and resources

Health system organisation

Delivery system design

Decision support

Information, communication systems

Workforce capacity

- developing and implementing supportive policy and legislative frameworks across government sectors
- supporting continuous development and implementation of chronic conditions care within a quality framework
- acknowledging and addressing the socio-economic determinants
- increasing public awareness of chronic conditions
- ensuring appropriate placement of chronic conditions care in organisational structures
- developing and integrating policies across health and community organisations.

5.5.2 Investment and resources

Recognition of the importance of chronic conditions and the services and systems that need to be in place to deal with this requires adequate investment from the NT and the Australian governments across a range of sectors. Appropriate allocation of resources needs to be made for high needs populations e.g. Aboriginal people. Securing appropriate investment and resources also requires the identification of supplementary resources from related initiatives and funding sources which are not chronic conditions specific.

Appropriate investment and resources for chronic conditions involves:
- ensuring adequate designated resourcing of and advocacy for chronic conditions initiatives
- promoting equitable and consistent financing and resourcing across regions and across diseases and population groups
- ensuring long term investments in chronic conditions infrastructure
- allocating/targeting quarantined funds for high need population groups
- identifying and linking with related initiatives that are not chronic conditions specific
- supporting reinvestment of resources and savings from the acute health sector into the primary health sector
- seeking opportunities for synergy of effort and optimisation of resources which can benefit chronic conditions service delivery.

5.5.3 Health system organisation

The organisation of the health system underpins the capacity to maximise the available resources. Evidence from continuous quality improvement initiatives shows that improvements in system organisation impacts significantly on health service delivery.

System organisation needs to:
- encourage safe, high quality care
- increase the emphasis on primary prevention
- focus on the needs of disadvantaged groups
- focus on home or community based care
- strengthen partnerships between the community, primary care providers and the acute sector
- improve co-ordination across the acute and primary care sectors and across the continuum of care.

5.5.4 Delivery system design

Assists teams to deliver systematic, effective, efficient clinical care and self management support and requires:
• integrated service and workforce planning
• multi disciplinary care
• clear roles for all health team members
• embedding community resources in health service design
• coordinated and integrated care
• support self management and prevention
• cultural competency
• workforce education and training.

5.5.5 Decision support

To ensure clinical care is consistent with evidence based guidelines involves:
• ensuring evidence based information for clinical decision making is up to date
• links to specialist clinical advice
• integrated service and workforce planning
• workforce education and training.

5.5.6 Information, communication and disease management systems

Organising information for quality clinical care involves the use of tools such as disease registers, care plans, recall systems, follow up systems, intake and appointment booking systems that operate in an efficient, timely and accessible manner. It also includes ensuring appropriate information is available for people with chronic conditions and community members regarding the prevention and management of chronic conditions. Improving all of these areas would be facilitated by the use of common systems across all health sectors.

Optimal use of information systems requires the following:
• Providing clinical decision support systems for service providers.
• Integrating information systems to reduce duplication.
• Developing patient held or accessible records and information systems.
• Providing training and support for the workforce to ensure optimal use of information systems.
• Monitoring and reviewing the quality of chronic disease care and standards for chronic disease care.
• Making available organised and current population data including information on specific populations for service planning.
• Making available appropriate and accessible information for people with chronic conditions, carers and the community relating to the prevention and management of specific chronic conditions and support and services available.
• Ensuring that information is available in culturally appropriate formats and is appropriate to literacy levels.
• Disseminating research and best practice widely to all stakeholders including community members.

5.5.7 Workforce capacity

A highly skilled and well-supported workforce able to demonstrate clinical leadership and to work in providing multidisciplinary care is required. The increasing numbers of people with chronic

conditions along with the ageing health workforce requires a particularly clear focus on building workforce capacity. Capacity needs to be built beyond clinical service delivery to include policy, research, workforce supply, education and training and for specific needs groups such as Aboriginal populations.

5.6 Interventions across the care continuum

Using an evidence-based approach, the following elements of care are considered to be critical to the provision of optimal chronic care across population groups and settings.

5.6.1 Primary prevention

The focus of primary prevention is on prevention and reduction of risk factors in the well population to prevent movement of the well population to the 'at risk' population. An important focus is paying particular attention at sensitive developmental periods in the lifespan.

The chronic conditions identified in the Strategy are linked by common modifiable risk factors related to lifestyle and behaviours - tobacco use, unhealthy diet, alcohol misuse, physical inactivity and emotional well being. They are also strongly related to the social determinants of health and therefore actions to prevent these conditions should not only focus on lifestyle and behaviour modification but also on broader community strategies.

Since most of the modifiable risk factors are associated with many different conditions, prevention and management of these risk factors can have substantial benefits. Action should focus on controlling the risk factors in an integrated manner using a multidisciplinary approach. Of particular importance is a focus on the early years of life, including the antenatal period, childhood and adolescence, given the evidence that the early years provide a window of opportunity to affect health and development throughout life.

In any population, those at moderate risk contribute more to the total burden of disease than those at high risk. Consequently, a comprehensive prevention strategy needs to blend an approach aimed at reducing risk factor levels in the population as a whole with one directed at high-risk individuals. Substantial reduction in the levels of risk factors and disease outcomes requires investment in a multi-strategy approach at a level of sufficient population reach and intensity over time. Even modest changes in risk factor levels at a population level will have a substantial public health benefit.

5.6.2 Early detection and secondary prevention

Secondary prevention strategies are important for those already diagnosed with chronic conditions and associated disease markers. Addressing the risk factors in these populations through

- *Primary prevention*
- *Early detection and secondary prevention*
- *Management and tertiary prevention*

brief intervention and the provision of advice, support and referral where appropriate, in addition to exposing these populations to universally targeted initiatives (such as social marketing campaigns), can prevent progression to established conditions and prevent or delay progression to complications.

Screening

This focuses on the early detection and early management of risk factors and disease markers to reduce the likelihood of progression from wellness to having an established chronic condition or developing worsening conditions. Screening should focus on risk factors and early markers for which there is evidence that the provision of screening is both effective and ethical.

Screening may be opportunistic or targeted. Targeted screening identifies different levels of the population:
• whole population who are not identified on the basis of risk
• population groups at increased risk of disease
• population groups at very high risk of chronic conditions.

Particular attention is required for Aboriginal populations where a high proportion of people are at risk of developing chronic conditions.

It is essential that there is a systematic approach to following up those people with identified risk factors or early markers of disease and for referral for assessment for the presence and severity of disease and subsequent referral for management.

Assessment

Comprehensive assessment to establish the presence and severity of chronic conditions is an essential first step to appropriate ongoing care for individuals with a chronic condition. The requirement for assessment is not confined to any one stage of the patient journey but applies across the disease continuum.

Targeting and streamlining of care can result in better outcomes for the individual. This can be achieved more effectively by stratifying people by disease severity and complexity of care requirements.

5.6.3 Management and tertiary prevention

Tertiary prevention focuses on reducing the consequences of established disease through effective management of the person to reduce the progress or complications of established disease and improve patient well being and quality of life.

Multidisciplinary care planning and review

This is a dynamic, collaborative process involving the individual, their carer/family and appropriate multidisciplinary service providers including:
• identifying and assessing the needs of the person
• developing a practical care plan that includes specific goals and actions aimed at achieving desired or optimal outcomes
• regular monitoring and review to ensure that the care plan is revised and adjusted as required over time to meet changing needs and goals.
Effective communication between members of the

multidisciplinary team through well de-lineated communication structures and processes enhances multidisciplinary team effectiveness. A linkage between hospital and primary health care providers as well as other sectors is also important.

Care coordination

Care coordination is a collaborative and ongoing process that ensures services are used in a timely and appropriate way. Care provided by a range of clinical and social providers is coordinated and enables optimal disease management and chronic care. It should be targeted at those people with the most complex needs.

Critical to care co-ordination is assessment of life problems and goals, care planning with the individual, management, communication between service providers, ongoing monitoring and review.

Evidence based clinical management

Evidence-based clinical management refers to the systematic defining and application of the best available evidence to guide clinical decision-making and management.

Self management support

Self management support aims to improve the ability of individuals to manage their condition effectively. It involves the person with the chronic condition engaging in activities that protect and promote health, monitoring and managing the symptoms and signs of illness, managing the impact of the condition on functioning, emotions and interpersonal relationships and adhering to treatment regimes[31].

The principles of self management are applicable to all chronic conditions across all settings and to all health encounters with people with chronic conditions. The role of health professionals and partnerships with other organisations is critical. Self management support promotes collaborative care planning, goal setting, the provision of health information and referral to specific services where needed.

Psycho social support

Psychosocial support is the provision of psychological, social and spiritual care that is tailored to meet individual needs. People with chronic conditions face practical, emotional and psychological challenges in addition to dealing with physical aspects of their medical condition. These psychosocial needs have a significant impact on the well being of individuals but are often unrecognised and unmet. It is widely recognised that optimal chronic care must incorporate effective physical and psychological care.

Ongoing monitoring

Ongoing monitoring is a key activity that guides and informs service providers and people with chronic conditions in tailoring the elements of chronic care to changing individual requirements. Self monitoring, a key component of self management, plus ongoing contact with and monitoring by health professionals help with:
• improving symptom control
• managing treatment and medication

• *Multidisciplinary care*
• *Care coordination*
• *Evidence based clinical management*
• *Self management support*
• *Psychosocial support*
• *Ongoing monitoring*
• *Rehabilitation*
• *Palliative care*

- identifying and addressing changes in psycho social status, self management capacity and care plan requirements
- providing self management and psycho social support.

Rehabilitation

Rehabilitation aims to maximise the physical, psychological and social functioning of people with a chronic condition. It is a coordinated, multidisciplinary approach designed to maximise a person's function and independence and reduce the risk of developing further complications. It requires a multifaceted approach that can include assessment, education, counselling, risk factor modification and other appropriate interventions and involves the person with a chronic condition and, where appropriate, their family and carer.

The efficacy of rehabilitation using established models of service delivery is well documented as are its positive outcomes in terms of symptom control and management, improved adherence, improved psychological health, functional capacity and quality of life.

Rehabilitation is provided in many settings, with a variety of disease groups, to meet local needs and resources. A major challenge is providing these services for a small number of individuals in remote settings where flexibility is critical to ensure maximal benefit for individuals.

The functioning and quality of life for people with other chronic conditions can also be enhanced through health promotion programs targeting key risk factors.

Palliative care

Palliative care is care provided for people of all ages who have a life-limiting illness, with little chance of cure, and for whom the primary treatment goal is quality of life. It aims to reduce pain and other distressing symptoms and supports people to live as actively as possible until death. The palliative care approach is well developed for people with cancer however this model is also suitable for people with other chronic conditions. This has been demonstrated in relation to people with chronic kidney disease and can be applied to people with other chronic conditions.

Service providers need to think proactively and holistically about the care of people with progressive chronic conditions including:
- early recognition of worsening illness and appropriateness of palliative care
- developing links between chronic conditions and palliative care services that facilitate referral
- training and supervision for staff
- incorporating advance care planning and advance care directives into routine chronic conditions care
- close consultation with carers and family.

The NT Palliative Care framework 2005[32], describes the key principles and elements for effective palliative care.

Implementation and Evaluation

6.1 Implementation and funding

Implementation of the Strategy requires reform of current practice by all partners, support for change management and redirected or new investment.

The key objectives and strategies are outlined in section 9. The actions required to achieve these strategic objectives are documented in the *Northern Territory Chronic Conditions Prevention and Management Strategy Action Plan*. This is available on the NT DHF website at www.health.nt.gov.au/Preventable_Chronic_Disease

Agreements on responsibility for actions and partnerships between NT DHF, General Practitioners, non government organisations and the Aboriginal Community Controlled sector will be critical to achieving the changes needed to implement the Strategy. The action plan will be updated every three years to reflect further investment by partners and changes in implementation indicated through the evaluation and the emergence of new evidence.

6.2 Monitoring and Evaluation

Monitoring and evaluation throughout the life of the Strategy is critical to measure effectiveness, efficiency and outcomes. The development and application of an evaluation framework will be incorporated into the action plan.

Indicators and collection systems already in existence will be utilised where possible. These indicators may require modification as new evidence or new data becomes available or new strategies are implemented.

A formal evaluation and report will be undertaken in 2014 and 2018 and will inform further action plans and strategy development.

Timeline for monitoring and evaluation

Financial year	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20
Strategy 2010-2020											
Action plan											
Annual Monitoring											
Review/update action plan											
Update strategy											
Evaluation											

7 Key action areas

1. Social determinants of health
2. Primary prevention
3. Early detection and secondary prevention
4. Self management
5. Care for people with chronic conditions
6. Workforce planning and development
7. Information, communication and disease management systems
8. Continuous quality improvement

For each key action area an objective and a number of strategies and indicators have been developed. These key action areas can be used to direct the planning, implementation and evaluation of future services in the prevention and management of chronic conditions in the NT. A comprehensive action plan is to be developed for each key action area that will accompany this document.

Key action area 1: Social determinants of health

Objective

Contribute to improving the social determinants of health (SDOH) impacting on chronic conditions through improving living conditions, food security, education, employment and health literacy.

Strategies	Indicators
• Raise awareness of the impact of SDOH on chronic conditions and increase capacity to take action.	• Health professionals and community members awareness of the impact of SDOH on chronic conditions.
• Provide leadership to strengthen intersectoral collaboration in relation to chronic conditions.	• Intersectoral action on SDOH led by the health sector.
• Improve access to health services for all Territorians.	• Standard of daily living conditions in remote communities is similar to rural and urban communities.
• Increase Aboriginal employment in the health sector.	• Access to health services for people in disadvantaged populations.
	• Level of Aboriginal employment in the health sector.

Key action area 2: Increase the focus on primary prevention to prevent and reduce risk factors

Objective

To reduce the impact of behavioural and lifestyle risk factors and create supportive environments for healthy behaviours.

Strategies	Indicators
• Increase community awareness about risk factors and promote consistent messages.	• Community awareness of risk factors and impact on chronic conditions.

• Encourage behaviours that promote health and well being. • Support communities to create healthy environments. • Increase the focus on the early years of life, children and young people. • Build workforce capacity to plan, implement and evaluate primary prevention strategies. • Ensure health sector reforms are responsive to the need for primary prevention. • Increase monitoring and surveillance, evaluation and intervention research.	• Health professionals level of knowledge, understanding and action on the prevention of chronic conditions. • Behaviours and environments that promote health and well being. • Initiatives that focus on early years of life, children and young people. • Health sector reforms that support primary prevention. • Evidence of utilisation of risk factor data and best practice in relation to primary prevention.

Key action area 3: Early detection and secondary prevention

Objective

Increase the early detection and management of disease markers in the at risk population to delay or halt the progression of chronic conditions.

Strategies	Indicators
• Enhance primary health care capacity to implement a coordinated, systematic approach to early detection and management of disease markers that targets vulnerable/at-risk populations. • Develop implement and evaluate flexible approaches to early detection and follow up of disease markers in a range of settings based on local needs of at risk populations.	• Health professional knowledge, understanding and action on early detection and risk factors. • Implementation of systems that increase the uptake of adult health checks in at risk populations. • Implementation of systems that address risk factors through supporting behaviours that promote health and well being.

Key action area 4: Self management

Objective

Implement a Territory wide approach to self management.

Strategies	Indicators
• Develop and implement a framework for self management to support consistent approaches for people with chronic conditions across the NT. • Empower and prepare individuals/carers to be active participants in monitoring and management of their chronic condition. • Develop a workforce skilled to support individuals to manage their health and health care.	• NT framework for self management agreed by key stakeholders. • Health professional's knowledge, understanding and support of self management approaches. • Uptake of self management programs in the community. • Participation in self management by people with chronic conditions.

Key action area 5: Care for people with chronic conditions

Objective

Ensure clients with chronic conditions receive high quality clinical care and co-ordinated and integrated multidisciplinary care across services, settings and time.

Strategies	Indicators
• Improve communication and education about chronic conditions for Individuals / carers / families. • Provide access to high quality evidence based clinical care. • Provide access to quality, co-ordinated and integrated multidisciplinary care. • Implement care co-ordination for people with complex chronic conditions. • Raise awareness of co morbidity of chronic mental illness with other chronic conditions and enhance early detection, appropriate management and referral for care for these people. • Improve rehabilitation services for people with chronic conditions to maximise function, improve quality of life and reduce the risk of further complications. • Provide people with chronic conditions access to integrated palliative care services.	• Prevalence/incidence of priority chronic conditions. • Mortality from priority chronic conditions. • Reduction in avoidable hospitalisations. • Utilisation of chronic disease management plans in care for people with chronic conditions. • Early detection of chronic mental illness and referral to appropriate care. • Access to multidisciplinary care, rehabilitation and palliative care for people with chronic conditions. • Utilisation of care co-ordination process for people with complex chronic conditions.

Key action area 6: Workforce planning and development

Objective

Recruit, develop and retain an appropriately skilled workforce.

Strategies	Indicators
• Provide education, training and professional development opportunities that encompass all aspects of the chronic conditions prevention and management strategy. • Build workforce capacity to meet future population needs through research and innovation initiatives. • Develop and support employment of Aboriginal people in management, policy and operational areas related to chronic conditions.	• Increase in chronic conditions education provided across disciplines and settings. • Increase the number of Aboriginal people employed in chronic conditions area.

Key action area 7: Information, communication and disease management systems

Objective

To improve connectivity, sharing of useful information and access to appropriate services to support chronic conditions prevention and management.

Strategies	Indicators
• Utilise existing and emerging information management (IM) and information communication technology (ICT) to facilitate efficient and effective chronic conditions prevention and management including decision support tools. • Support and develop continuity of care initiatives that support health professionals and health services working together in an integrated,seamless, and coordinated way and enhancing the interface between health and other sectors. • Utilise up to date ICT to share information about chronic conditions prevention and management with health professionals and community members.	• Number of health services with electronic care planning and recall systems. • Number of health service IT systems that communicate effectively with other services and sectors. • Number of health professionals and consumers accessing information through information communication technology. • Utilisation of decision support tools by health professionals.

Key action area 8: Continuous quality improvement

Objective

Improve chronic conditions prevention and management through continuous quality improvement activities.

Strategies	Indicators
• Increase continuous quality improvement (CQI) activities in all aspects of chronic conditions prevention and management. • Disseminate information about effective CQI strategies and promote incorporation of learnings into practice. • Improve service delivery through research and innovation initiatives.	• Health services in which continuous quality improvement is integral to service delivery.

Acronyms

ACCHO	Aboriginal Community Controlled Health Organisation
AIHW	Australian Institute of Health and Welfare
AMSANT	Aboriginal Medical Services Alliance Northern Territory
GHANT	Good Health Alliance Northern Territory
GPNNT	General Practice Network Northern Territory
NHHRC	National Health and Hospitals Reform Commission
NT AHF	Northern Territory Aboriginal Health Forum
NT DHF	Northern Territory Department of Health and Families
NT PCDS	Northern Territory Preventable Chronic Disease Strategy
PHC	Primary Health Care

Glossary

References to "Aboriginal people" should be taken to mean "Aboriginal and Torres Strait Islander people" throughout this document.

Aboriginal community control
Aboriginal communities control the planning, development and management of primary health care and community care services in a manner that is both commensurate with their capabilities and aspirations and consistent with the objective of efficient, effective and equitable health systems functioning.

Avoidable hospitalisations
Measure the proportion of morbidity that could be avoided by timely and effective care outside hospital and involve a selected group of conditions for which hospitalisation could be avoided by preventive measures or early diagnosis and treatment in primary care.

Burden of disease
Burden of disease is a measure of population health that uses fatal health outcomes (years of life lost) and non fatal health outcomes (years of life lost due to disability) to measure health outcomes by conditions, causes and risk factors.

Care coordination
Is a collaborative and ongoing process that ensures that services for people with specific complex needs related to chronic conditions or social circumstances is coordinated and enables optimal disease management and chronic care.

Chronic conditions
Chronic conditions are those which in most cases can not be cured, only controlled. They have a gradual onset, are long term and persistent; occur across the life cycle, become more prevalent with older age; are usually not immediately life threatening and can compromise quality of life through physical limitations and disability.

Determinant:
Any factor that can increase the chances of ill health (risk factors) or good health (protective factor) in a population or individual.

Health literacy
Having access to the information necessary, as well as the skills and resources required, to make decisions for one's own health.

Health promotion

Health promotion is the process of enabling people to increase control over, and to improve, their health. To reach a state of complete physical, mental and social well being, an individual or group must be able to identify and to realise aspirations, to satisfy needs, and to change or cope with the environment. Health is, therefore, seen as a resource for everyday life, not the objective of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities.

Lifestyle

Lifestyle is a way of living based on identifiable patterns of behaviour which are determined by the interplay between an individual's personal characteristics, social interactions, and socioeconomic and environmental living conditions.

Living conditions

Living conditions are the everyday environment of people, where they live, play and work. These living conditions are a product of social and economic circumstances and the physical environment - all of which can impact upon health - and are largely outside of the immediate control of the individual.

Prevention

Approaches and activities aimed at reducing the likelihood that a disease or disorder will affect an individual, interrupting or slowing the progress of the disorder or disability.

Primary Health Care

PHC encompasses a range of health services and activities spanning the prevention, early intervention and management continuum. PHC services are supported by a holistic view of health that recognises that many factors influence the health and well being of individuals, families and communities such as healthy environments, access to employment and the degree to which people can exert control over their lives.

Primary prevention

Primary prevention incorporates widespread changes that reduce the average risk in the whole population or reduce particular exposures among identified higher risk groups or individuals.

Risk factors

Any factor that represents a greater risk of a health disorder or other unwanted condition. Some risk factors are regarded as causes of disease, others are regarded as contributors.

Secondary prevention

Secondary prevention interrupts, prevents or minimises the progress of a disease or disorder at an early stage.

Self management

Self management requires the person, the family and carers, service providers and the health system to work together to achieve better health outcomes. Self management is underpinned by the person being at the centre of their own health care and involves the skills and resources that a person needs to negotiate the health system and maximise their quality of life across the continuum of prevention and care.

Social determinants of health

The range of personal, social, economic and environmental factors which determine the health status of individuals or populations.

Tertiary prevention

Tertiary prevention focuses on reducing the consequences of established disease through effective management of the person to reduce the progress or complications of established disease and improve patient well being and quality of life.

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