Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria: a multi methods study

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Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

Centre for Rural Health

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The following people and institutions contributed to the publication of work undertaken as part of this thesis:

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We, the undersigned, endorse the above stated contribution of work undertaken for each of the published (or submitted) peer-reviewed manuscripts contributing to this thesis:

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Statement of ethical conduct

The research associated with this thesis abides by the international and Australian codes on human and animal experimentation, the guidelines by the Australian Government's Office of the Gene Technology Regulator and the rulings of the Safety, Ethics and Institutional Biosafety Committees of the University.

Jacqueline Sara Goode **Date 7th February 2020**

Abstract

In Australia, homeless adults suffer high levels of untreated oral disease and their oral health related quality of life (OHRQoL) is poor. Having a dental check-up on an annual basis is recommended by dentists, allows preventive dental treatments to be performed and leads to better oral health outcomes. Another means to improve oral health is to increase levels of oral health literacy. The OHRQoL of adults experiencing homelessness is improved following comprehensive dental care. Thus, facilitating regular dental visiting for check-ups, providing comprehensive dental care and promoting oral health will lead to improved oral health and a better OHRQoL for adults experiencing homelessness.

However, even when there is a perceived need for dental care, homeless adults tend not to visit the dentist and instead wait until they have a dental problem. This suggests that certain barriers prevent adults experiencing homelessness from accessing dental care. In Australian capital cities, barriers to dental care including the cost of dental care, a lack of motivation, not knowing where to seek care, fear, a lack of transport and a lack of suitable facilities have been identified.

In addition to adults experiencing homelessness, people living outside of Australian capital cities also have poor oral health. Little is known about the oral health of homeless adults living outside of capital cities or the factors that influence their access to dental care. To improve the oral health of homeless adults who live in a non-capital city area of Victoria it will be important to identify the barriers that prevent their access to and uptake of dental care and develop strategies to overcome them.

The aim of this research was to design a program to be used by dental service providers in a non-capital city area of Victoria that would facilitate visiting for dental check-ups and preventive dental care by adults experiencing homelessness and enable the promotion of oral health.

A two-phase qualitative multi-method research design was used to achieve this aim. Phase 1 included a transcendental phenomenological study involving adults experiencing homelessness and a qualitative descriptive study involving homelessness and housing support workers. The multimethod design explored homeless adults' dental care pathways and the barriers and enablers of dental care, as perceived by homelessness-support workers. Study findings were categorised using a patient-centred access to health care framework. The findings of Phase 1 were used to inform Phase 2 of the study.

Phase 2 of the research involved using the findings from Phase 1 to design a dental program that would facilitate access to and uptake of dental care by adults experiencing homelessness and enable oral health promotion. The dental program design was presented to a group of local stakeholders and its feasibility assessed.

Factors influencing access to and uptake of dental care were identified. Barriers included; the organisation of government-funded dental services, the multiple competing needs of adults experiencing homelessness, the cost of care, the fear of being judged, anxiety and managing appointments. Enablers included; providing outreach dental services, the use of Priority Access Cards (PACs) and co-locating dental health services with other health and support services. A two-stage dental program was designed that utilised outreach dental services to provide dental care and advice, PACs to facilitate access to dental services, the provision of free oral-hygiene products, drop-in dental appointments, and dental services co-located with other health services. Outreach dental services should be organised in collaboration with homelessness-service providers including those providing mental health services. Dental services should focus on building trust and provide care and advice at convenient locations. Stakeholders believed the dental program was feasible but highlighted that it also needed to be sustainable.

The barriers to dental care for adults experiencing homelessness in a non-capital city area of Victoria are complex and include the organisation of government-funded dental services. The dental program designed as a result of this study

incorporated outreach dental services, allowing drop-in dental visits, PACs, free dental care and products, dental services co-located with other health services and represents a change from the traditional dental practice model. The dental program designed in this study will facilitate access to and uptake of dental care for adults experiencing homelessness in a non-capital city area of Victoria and enable the promotion of oral health which will lead to better oral health outcomes and an improved OHRQoL.

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Abbreviations

ABS: Australian Bureau of Statistics

AIHW: Australian Institute of Health and Welfare

AIHW DRSU: Australian Institute of Health and Welfare Dental Research and Statistics Unit

ANOHP 2015-2024: Australia's National Oral Health Plan

CF: Consent form

DHSV: Dental Health Services Victoria

DIF: Demographic information form

HREC: Human Research Ethics Committee

NGT: Nominal group technique

OHIP: Oral health impact profile

OHRQoL: Oral health related quality of life

PAC: Priority access card

PIS: Participant information sheet

QCA: Qualitative content analysis

SA: Statistical area

SHS: Specialist homelessness service

UK: United Kingdom

USA: United States of America

1 Introduction

This chapter provides an overview of this study. It begins with a description of the problem that lies at the heart of this thesis and provides an explanation of the purpose of this research. This is followed by an explanation of my personal perspectives as a researcher. This explanation is provided to allow the reader to understand how and why I came to undertake this research. It will also enable the reader to judge for themselves how my personal perspectives may have influenced the study. Following this, an explanation of the logical basis that underpins the study is given and the research aim, and its objectives are stated. An overview of homelessness and homelessness support services in Australia and Victoria is then provided to inform the reader of the contextual background of the study. The methodology selected to fulfil the research aim and objectives is briefly explained. The chapter concludes with an overview of the content of each of the chapters contained within this thesis.

1.1 The purpose of this research

In Australia, adults who experience homelessness suffer a high burden of untreated oral disease and have a poor oral health related quality of life (OHRQoL) (Ford, Cramb, & Farah, 2014). Homeless adults have a high perceived need for a dental filling or tooth extraction (Parker, Jamieson, Steffens, Cathro, & Logan, 2011) yet, tend not to visit a dentist on an annual basis (Ford et al., 2014; Parker et al., 2011). This suggests that, even when there is a perceived need, there are certain factors that prevent adults who are experiencing homelessness from accessing dental care. Factors that prevent access to dental services have been described as barriers that result from, psycho-social factors associated with an individual (Freeman, 1999), and from the organisation of dental services and the systems that govern dental service provision. In the Australian context, several barriers have been identified that prevent homeless adults who live in city areas from accessing dental care. These include a lack of motivation, as evidenced by homeless adults knowing where to seek care but not accessing it (Jago, Sternberg, & Westerman, 1984), fear, a lack of suitable facilities, a

lack of transport (Stormon, Pradhan, McAuliffe, & Ford, 2018) and the cost of dental care (Ford et al., 2014; Parker et al., 2011; Stormon et al., 2018).

Attending for regular dental check-ups leads to better oral health outcomes (Crocombe, Brennan, Broadbent, Thomson, & Poulton, 2012; Ellershaw & Spencer, 2011) and OHRQoL is improved following comprehensive dental care (Abel et al., 2013). Thus, the oral health and OHRQoL of adults experiencing homelessness will be improved by facilitating regular dental visiting for check-ups and providing comprehensive dental care. To achieve this, it will be important to identify the barriers preventing dental attendance and develop strategies to overcome them.

In Australia, in addition to people experiencing homelessness, people who live outside of a capital city also suffer poor oral health (Australian Institute of Health and Welfare Dental Statistics and Research Unit, 2009). This suggests that there are differences between how dental care is accessed and utilised in non-capital city and capital city areas of Australia. To date studies relating to the oral health of adults experiencing homelessness have been capital city based (Ford et al., 2014; Jago et al., 1984; Parker et al., 2011; Stormon et al., 2018). The purpose of this study was to explore how adults who experience homelessness and live in a non-capital city area of Victoria access, or try to access, dental care, to find out what factors affect their access to dental care and to suggest how their access to and uptake of regular dental care and the promotion of oral health could be facilitated.

1.2 Researcher reflexivity

In qualitative research, it is important to make the experiences and opinions of the researcher transparent. This transparency allows the reader to judge how the experiences and opinions of the researcher may have influenced the design and findings of the study (Liamputtong, 2013, p. 30). The following is a reflexive account of my experiences as a dental practitioner working in a non-capital city area of Victoria and of my personal research journey.

I practiced dentistry in non-capital city areas of Victoria for twenty years and saw first-hand the high levels of oral disease experienced by the people living there. In my early career, I worked as a dental officer with the Victorian School Dental Service. I travelled around the Loddon Mallee region treating school children in dental vans parked in school playgrounds. The furthest I travelled to work was just over 400 kilometres. I subsequently established a private dental practice located in a regional city.

In my practice, I would occasionally treat patients who were eligible for subsidised dental care in the public-dental system but who were unable to get an appointment at the local public-dental clinic. Usually, the patient had a dental problem that was of concern to them but was assessed by the public-dental clinic as not warranting an emergency dental appointment. This left the person with the option of either, waiting until their dental problem had become bad enough to warrant an emergency appointment at the public-dental clinic, seeking private dental care or seeking care outside of the dental system. As a health care professional, it struck me as wrong that someone suffering a dental problem and seeking help, was denied access to care because their dental problem had been assessed, by the dental service provider, as not bad enough. It was incidents such as this that prompted my interest in research into dental care pathways.

I undertook a master's by research degree that explored the dental care pathways of adults who attended a regional Victorian hospital emergency department with a dental problem. The study illustrated how people who could not access dental services, managed their dental problems outside of the dental system. The consequences of managing dental problems outside of the dental system were significant. They resulted in unnecessary suffering, multiple visits to doctors, stays in intensive care and multiple emergency department visits. However, these consequences often remained invisible to the dental service providers. This highlighted to me how isolated dental services providers were from the rest of the health care system and how dental services were focussed on clinical efficiency.

1.3 Research rationale

Oral health is described as “a standard of health of the oral and related tissues that enables an individual to eat, speak and socialise without active disease, discomfort or embarrassment and that contributes to general wellbeing” (UK Department of Health, 1994). This definition recognises the role oral health plays in an individual’s everyday life and overall sense of well-being. Thus, improvements in oral health contribute to improving overall health and a sense of wellbeing. Australia’s National Oral Health Plan 2015–2024 (ANOHP 2015-2024) identifies population groups that suffer poor oral health and seeks to address the oral health disparities that exist in Australia (Australian Health Ministers' Advisory Council, 2015). It recognises that, among others, individuals who are on low incomes or who are socially disadvantaged, such as people experiencing homelessness, and individuals living in regional and remote (non-capital city) areas suffer a high burden of poor oral health (Australian Health Ministers' Advisory Council, 2015).

Dental diseases are largely preventable and routinely visiting for a dental check-up leads to better oral health outcomes (Thomson, Williams, Broadbent, Poulton, & Locker, 2010). Having a dental check-up once a year is “widely recommended by the dental profession” (Slade, Spencer, & Roberts-Thomson, 2007, p. 143). Regular dental check-up visits allow for preventive treatments such as scaling and cleaning of the teeth which is important in the management of gum disease (Ellershaw & Spencer, 2011). In New Zealand, low socio-economic status adults who make annual dental check-up visits have better clinical oral health than those who do not (Crocombe et al., 2012). Thus, regular visiting for dental check-ups and preventive dental treatment is important for good oral health.

In Australia, the National Survey of Adult Oral Health describes dental visiting patterns as “favourable”, “intermediate” or “unfavourable” (Ellershaw & Spencer, 2011, p. vi). Attending a “usual dental care provider” “at least once a year for the purpose of a check-up” is considered a favourable visiting pattern (Ellershaw & Spencer, 2011, p. 8). Conversely, visiting dental practitioners less frequently than every two years, not

having a usual dental practitioner and making problem-based visits is considered an unfavourable dental visiting pattern (Ellershaw & Spencer, 2011, p. 8). Having an unfavourable dental visiting pattern is associated with having poor oral health (Ellershaw & Spencer, 2011).

Unfavourable dental visiting patterns are common amongst adults experiencing homelessness (Ford et al., 2014; Parker et al., 2011). In Brisbane and Adelaide, only 15% of adults experiencing homelessness visit a dental practitioner for a dental check-up and the majority (85%) visit with a dental problem (Ford et al., 2014; Parker et al., 2011). ANOHP 2015-2024 suggests that improving access to dental services is an important factor in improving the oral health of those suffering a high burden of oral disease (Australian Health Ministers' Advisory Council, 2015). Therefore, facilitating access to dental services and encouraging regular visiting for dental check-ups is an important factor in improving the oral health and OHRQoL of adults experiencing homelessness.

In addition to people experiencing homelessness, ANOHP 2015-2024 recognises that non-capital city dwellers suffer a high burden of oral disease (Australian Health Ministers' Advisory Council, 2015). Non-capital city dwellers are more likely to have; no teeth, to have an inadequate dentition of less than 21 teeth, to have untreated decay and to have had an extraction of a tooth within the last year than their capital city counterparts (AIHW DSRU, 2009). In addition, non-capital city dwellers are less likely to receive a preventive dental service when they visit the dentist (Harford, & Islam, 2013). Almost 40% of non-capital-city dwellers aged 15-34 years have untreated tooth decay (AIHW DSRU, 2009). Because non-capital city dwellers are more likely to attend a dentist with a dental problem and receive care from different dentists, they are more likely to have a less favourable dental visiting pattern than their capital-city dwelling counterparts (AIHW DSRU, 2009). Therefore, adults experiencing homelessness who live in a non-capital city area are likely to have less favourable dental visiting patterns than homeless adults who live in a capital-city area.

Although one reason for not having a favourable dental visiting pattern is the perception that there is no need to go to the dentist (Simmons, Culliney, Joshy, McKenzie, & Morgan, 2006), this is not the case for Australian adults experiencing homelessness (Parker et al., 2011). In Adelaide, two thirds (68%) of adults experiencing homelessness reported needing a dental filling or tooth extraction compared to less than one third (32%) of the general population (Parker et al., 2011). Similar findings were reported in Toronto, Canada by Figueiredo et al. (2013), where three quarters (76%) of adults living in homeless shelters believed they had an "untreated dental condition" (p. 76). However, perceiving a need for dental care does not always result in seeking and receiving dental care with almost three quarters (74%) of homeless study participants in Adelaide reporting they had not visited a dentist in over a year (Parker et al., 2011). It should be acknowledged that not visiting a dentist may be a personal choice of adults experiencing homelessness and that they may be happy with the dental services they receive. However, the high levels of perceived need for dental care coupled with the lack of dental attending suggests that there are certain factors preventing adults experiencing homelessness from accessing dental care (Parker et al., 2011). To facilitate dental visiting, it will be important to identify and overcome these factors.

Thus, both adults who are housed and adults experiencing homelessness who live in a non-capital city area are likely to have poorer oral health and greater barriers to accessing dental care than their capital city dwelling counterparts (Australian Health Ministers' Advisory Council, 2015; AIHW DSRU, 2009). Encouraging regular dental visiting for check-ups and improving oral health literacy through oral health promotion are strategies that will improve the oral health of adults experiencing homelessness (Australian Health Ministers' Advisory Council, 2015). This study focusses on adults experiencing homelessness who live outside of an Australian capital-city. It explores how they access, or attempt to access, dental care, and recommends how access to dental care could be improved and how oral health could be promoted.

1.4 Research aim and objectives

The aim of this study is to design a program to be used by dental service providers in a non-capital city area of Victoria that will facilitate visiting for dental check-ups and preventive dental care by adults experiencing homelessness. This will also enable the promotion of oral health.

The study has the following objectives:

1. Explore the care pathways and experiences of homeless adults who seek dental care in a non-capital city area of Victoria.

2. Explore the factors influencing access to dental care by homeless adults living in a non-capital city area of Victoria and discover where opportunities exist to promote oral health.

3. Design and explore the feasibility of a dental program that can be used in a non-capital city area of Victoria to promote preventive dental visiting and improve oral health amongst adults experiencing homelessness.

1.5 Study setting

This study is set in Victoria, Australia. Australia is the largest island in the world (Geoscience Australia, 2019) and is divided into six States and two Territories (Figure 1). In 2018, Australia had a population of 25,180,234 (Australian Bureau of Statistics, 2019a Table 3). The State of Victoria covers only 3% of the total area of mainland Australia (Geoscience Australia, 2019). Despite its relatively small size, in 2018, just over one quarter (25.9%) of Australia's population (6,526,400 people) live in Victoria making it the second most populated State or Territory in Australia (ABS, 2019a). Over three quarters (76%) of Victorians live in the capital city area of Greater Melbourne meaning that over 1.5 million Victorians live in a non-capital city area (ABS, 2019a).

Figure 1: Map of Australian States and Territories (Wikimedia Commons the free repository)

1.5.1 Dental care in Australia and Victoria

In 2016-2017 roughly $10.2 billion was spent on dental care in Australia and of this, over $5.8 billion was paid directly by individuals (Australian Institute of Health and Welfare, 2019b). Dental care is mostly provided via the private fee-for-service dental system (AIHW, 2018b). Private dental care is expensive, and its cost affects access to dental care. Nearly half (45%) of adults aged 25-44 delayed or avoided dental treatment due to cost (AIHW, 2016). Government funded public-dental services provide subsidised dental care to children and eligible adults on low incomes (Australian Health Ministers' Advisory Council, 2015). Each Australian State and Territory independently manages its own public-dental services (Australian Health Ministers' Advisory Council, 2015).

In Victoria, adults on low incomes who hold a government issued Health Care Card or Pensioner Concession Card are eligible for care at public-dental clinics (Dental Health Services Victoria, 2019b). Dental services, including dental specialist services, are provided to eligible adults by Dental Health Services Victoria (DHSV) at the Royal Dental Hospital in Melbourne (Dental Health Services Victoria, 2020). Dental services in regional and rural areas are purchased by DHSV from local agencies who provide community dental services (Dental Health Services Victoria, 2020). Victorian public-dental services are heavily subsidised and provided at little or no cost to the patient (DHSV, 2018a). However, funding for the public-dental system only covers the cost of treating approximately 20% of people eligible to receive care and waiting lists are used to manage the demand for services (Australian Health Ministers' Advisory Council, 2015). In the first quarter of 2019, the average waiting time for a general dental appointment at a Victorian public-dental clinic was 18.8 months (Victorian Agency for Health Information, 2019). There are no waiting lists for emergency dental appointments which are managed using a triage system (DHSV, 2019a).

In Victoria, people experiencing or at risk of homelessness are afforded priority access to public-dental clinics (DHSV, 2019b). Individuals who are homeless or at risk of homelessness do not have to go on the public-dental waiting list, can have the next available appointment for general dental care and receive treatment free of charge at public-dental clinics (DHSV, 2019b). Arguably then, adults experiencing or at risk of homelessness have better access to publicly funded dental care than public-dental service eligible non-homeless adults. However, offering dental care at no charge and in a known location does not always result in a homeless person making a dental visit (Ford et al., 2014). Ford et al. (2014) reported that in Brisbane, four out of ten (41%) homeless individuals did not attend a free dental check-up which had been organised for them. If access to dental care is to improve for adults experiencing homelessness, it will be important to better understand why existing free-of-charge dental services are not used.

1.6 Defining homelessness

Homelessness is a complex issue that is defined differently in different countries (Amore, Baker, & Howden-Chapman, 2011; Australian Bureau of Statistics, 2012). Expectations of what constitutes adequate housing and living standards vary widely between developed and developing nations (Speak, 2013). The European Typology of Homelessness and Housing Exclusion (ETHOS) (Amore et al., 2011) is a widely used conceptual framework that defines homelessness. The ETHOS framework is structured around three separate domains; physical, social and legal (Edgar, 2009). The physical domain describes a home as a "decent dwelling (or space) adequate to meet the needs of the person and his/her family", the social domain considers a home to be a place where people can "maintain privacy and enjoy social relations" and the legal domain considers "having exclusive possession, security of occupation and legal title" as requirements for a dwelling to be a home (Edgar, 2009, p. 15).

In Australia, three definitions of homelessness are commonly used. One considers the subjective qualities required for a place to be a home. It considers 'home' as a place where an individual can feel safe, stable and secure and can control their living space and enjoy privacy (Australian Bureau of Statistics, 2012). Using this definition, people experiencing homelessness are those with no option but to be living

- in a dwelling that is inadequate;
- have no tenure, or if their initial tenure is short and not extendable; or

does not allow them to have control of, and access to space for social relations (Australian Bureau of Statistics, 2018)

A second Australian definition focusses on a person's living arrangements and is used for statistical purposes. It describes five categories of homelessness:

- Persons who were in improvised dwellings, tents or sleeping out
- Persons in supported accommodation for the homeless

- Persons who were staying temporarily with other households
- Persons who were staying in boarding houses
- Persons in other temporary dwellings (Australian Bureau of Statistics, 2018)

The third definition considers homelessness as either primary, secondary or tertiary. Primary homelessness is described as sleeping rough or living on the streets, secondary homelessness as frequently moving and residing in crisis accommodation and tertiary homelessness as residing in hostels or boarding houses for a period of 13 weeks or longer (Chamberlain & MacKenzie, 2006). The lack of a globally accepted conceptualisation and definition of homelessness has resulted in difficulties in measuring and estimating the number of people experiencing homelessness worldwide (Busch-Geertsema, Culhane, & Fitzpatrick, 2016).

1.6.1 Homelessness in Australia

On Census night in 2016 an estimated 116,427 Australians identified themselves as being homeless (Australian Bureau of Statistics, 2018. Table 1.1). Nearly two thirds (61%) of Australians experiencing homelessness are under 35 years of age (Australian Bureau of Statistics, 2018. Table 1.2). Males are more likely to experience homelessness than females with the rate of homelessness for males being 58 per 10,000 and the rate for females 41 per 10,000 (Australian Bureau of Statistics, 2018. Table 1.2). The highest rate of homelessness is recorded in the Aboriginal and Torres Strait Islander population where 361 people per 10,000 of the population experience homelessness compared to the average rate of 49.8 persons per 10,000 for the non-indigenous population (Australian Bureau of Statistics, 2018. Table 1.5). The 2016 census found the majority of homeless people, 51,088 (44%) lived in severely crowded dwellings, a further 21,235 (18%) lived in supported accommodation for the homeless, 17,725 (15%) were staying temporarily in other households, for example sleeping on the couch in a friend's house, 17,503 (15%) were staying in boarding houses, 678 (1%) were in other temporary lodgings and 8,200 people (7%) were living in impoverished dwellings, tents or sleeping on the streets (Australian Bureau of Statistics, 2018).

1.6.2 Causes of homelessness

The causes of homelessness are complex and can be explained by the interplay of individual and relational factors, structural factors and the failure of government systems (Gaetz, Donaldson, Richter, & Gulliver-Garcia, 2013). Individual and relational factors include, “domestic violence”, “mental illness, family breakdown and drug and alcohol abuse”, structural factors include “a shortage of affordable housing” and “unemployment” (Commonwealth of Australia, 2008, p. iii) and the failure of government systems relates to people being discharged from health care facilities or released from prison with no home to go to (Gaetz et al., 2013). Because the causes of homelessness are complex, people who experience homelessness have differing needs and abilities to manage their situation. Gaetz et al. (2013) stated “individuals and families who wind up homeless may not share much in common with each other, aside from the fact they are extremely vulnerable, and lack adequate housing and income and the necessary supports to ensure they stay housed” (Gaetz et al., 2013, p. 13).

In Australia, homelessness is closely associated with poverty and disadvantage. Living in poverty is determined by having an income level which is 50% or less than the national median disposable household income (Davidson, Saunders, Bradbury, & Wong, 2018). In 2015-16 more than one in eight (13%) Australians lived below the poverty line including 739,000 children (Davidson et al., 2018). In 2015-16, a weekly income of $433 for a single adult was the cut off point for poverty, at the same time, almost half (46%) of homeless people aged over 15 years had an income of less than $400 per week (Australian Bureau of Statistics, 2018 Table 1.10). In addition to living on a low income, homelessness, or being at risk of homelessness, is linked to a history of trauma and neglect in childhood. Over half of individuals who are homeless or at risk of homelessness report having suffered violence (60%) and neglect (58%) as a child and over one quarter (27%) reporting being sexually abused (Keane, Magee, & Lee, 2015).

1.6.3 Pathways into homelessness

Chamberlain and Johnson (2011) describe five common pathways into homelessness. They include; a housing crisis pathway which results from financial difficulties; a family breakdown pathway, which is often related to domestic violence or relationship breakdowns; a substance abuse pathway, which occurs when recreational drug users become addicted to drugs; a mental health problem pathway, which often comes to the fore when an individual has mental health problems and family support is lacking and a 'youth to adult' pathway which includes children who experience homelessness before the age of 18 years (Chamberlain & Johnson, 2011).

Chamberlain and Johnson (2011) suggest there is a relationship between a person's pathway into homelessness and their response to becoming homeless. People becoming homeless as a result of housing crisis or family breakdown usually do not expect to be homeless for long, do not want to be thought of as homeless, resist making friends with other homeless people and tend not to use illicit drugs (Chamberlain & Johnson, 2011). In contrast, people on the youth to adult and substance abuse pathway tend to move into boarding houses, fit well into the homeless subculture and in find it easy to access illicit drugs (Chamberlain & Johnson, 2011). Consequently, almost two thirds (63%) of people on the youth to adult homelessness pathway start abusing drugs after becoming homeless (Chamberlain & Johnson, 2011). People on the 'mental health' pathway, characterised by a breakdown in personal support networks, tend to feel isolated, do not fit well into the homeless subculture and become marginalised within it (Chamberlain & Johnson, 2011). As a result, long term homelessness is common for people with mental health issues (Chamberlain & Johnson, 2011).

1.6.4 Specialist Homelessness Services (SHS) in Australia and Victoria

In Australia, support for individuals experiencing homelessness is provided through specialist homelessness services (SHS). SHSs help people experiencing or at risk of homelessness find and maintaining housing as well as referring them to other support services such as, financial, drug and alcohol, mental health, family and domestic

violence and legal services (Australian institute of Health and Welfare, 2019d). Only people determined by a SHS as experiencing or at risk of homelessness can access services from a SHS. A SHS considers an individual to be homeless if they are "living in either; non-conventional accommodation or 'sleeping rough', or short-term or emergency accommodation due to a lack of other options" (Australian institute of Health and Welfare, 2019d). Individuals are considered to be at risk of homelessness if they are "at risk of losing their accommodation or they are experiencing one or more of a range of factors or triggers that can contribute to homelessness" (Australian institute of Health and Welfare, 2019d).

In Victoria, SHSs operate under the Opening Doors framework (persons, 2019). The framework aims to "provide a timely service response to people when they first make contact with the homelessness services system by; providing clear entry points to the system, supporting a consistent service response for people seeking assistance" and by "enabling a more transparent allocation of available resources" (State Government of Victoria, 2018, p. 2). Opening Doors recognises the importance of each client's engagement with, and trust in, the SHS (State Government of Victoria, 2008). At an individual's first contact with the SHS a process of initial assessment and planning (IAP) of their specific needs occurs (persons, 2019; State Government of Victoria, 2008). IAP services are accessed through a limited number of accredited SHSs (persons, 2019). Limiting the number of organisations that can provide IAP services reduces confusion about where services can be accessed (State Government of Victoria, 2008). Certain SHSs focus on helping specific groups, such as young people, Aboriginal and Torres Strait Islander people and women and children experiencing family violence, and exclude other people (State Government of Victoria, 2019). The IAP process enables clients' specific needs to be identified and managed by referral to other services.

Across Australia, over 288,000 individuals accessed help from a SHS in 2017-18, equating to 117.4 people per 10,000 population (Australian Institute of Health and Welfare, 2019e). Females were more likely to seek help from a SHS than males (Australian Institute of Health and Welfare, 2019c). Over half (57%) of all SHS clients were at risk of homelessness, rather than homeless and over half (54%) had sought

help at a SHS previously (Australian Institute of Health and Welfare, 2019e). Overall, four out of ten people (116,872) seeking help from a SHS in Australia were in Victoria (Australian Institute of Health and Welfare, 2019b).

In Victoria, over a third (37%) of people seeking support from a SHS were homeless at the time (Australian Institute of Health and Welfare, 2019b). The most common reason for seeking support from a Victorian SHS was domestic and family violence which accounted for almost half of all presentations (47%) (Australian Institute of Health and Welfare, 2019b). More than three quarters (78%) of individuals seeking support because of domestic and family violence were female (Australian Institute of Health and Welfare, 2019c). Other common reasons for seeking support from a SHS in Victoria were, suffering financial difficulties, which affected four out of ten people (40%) and experiencing a housing crisis, which impacted over two thirds of people (37%) seeking help (Australian Institute of Health and Welfare, 2019b).

1.7 Overview of the research methodology

This study adopted a "qualitatively driven approach" to achieve its aim (Hesse-Biber, Rodriguez, & Frost, 2015, p. 2). The approach was broadly aligned with the constructivist paradigm however; it did not rigidly follow any traditional paradigmatic approach. Instead the study used multiple methods that shared similar relativist ontological and subjectivist epistemological outlooks. The beliefs that underpinned the research were that multiple realities exist and can change over time and that discussing personal experiences produces knowledge that is socially constructed. The philosophical underpinnings of the study are explained in detail in Chapter 3.

The study employed a two-phase design to achieve the research aim and objectives. Phase 1 utilised a multi analytic multimethod concurrent research design to fulfil objectives one and two of the research. This design included two studies, a transcendental phenomenological and qualitative descriptive study. The findings of Phase 1 provided a qualitative description of the barriers and enablers of dental care experienced and suggestions about how oral health could be promoted. The barriers and enablers identified in the studies were categorised using a patient-centred access

to care framework and used to inform Phase 2 of the study (Levesque, Harris, & Russell, 2013).

Phase 2 of the study fulfilled the third research objective. Phase 2 involved designing a dental program and evaluating the dental program design. The barriers and enablers of care and suggestions regarding promoting oral health identified in Phase 1 were incorporated into the dental program design. The program design was presented at a small group workshop of local stakeholders. The nominal group technique (NGT) was used to evaluate the program's feasibility and suggest what would need to be done to get the program up and running.

1.8 Structure of the thesis

The six chapters that constitute this thesis are briefly described in the following section.

- Chapter 1 – Introduction: describes the purpose of this thesis and the rationale that underlies it. It examines the literature and provides an overview of the provision of oral health services in Australia, homelessness in Australia, the causes of homelessness and the support mechanisms that exist for Victorians who experience homelessness. It also argues that facilitating regular visiting for a dental check-up and promoting oral health will lead to better oral health outcomes for homeless individuals.
- Chapter 2 - Literature Review: provides an overview of the oral health status of adults experiencing homelessness and the links between oral health, general health and mental health. Two literature reviews are presented that explore where adults experiencing homelessness seek dental care and advice, the barriers they face when trying to access dental care and the strategies used by dental service providers to increase access to dental care. The chapter concludes with an explanation of the conceptual framework that underpins this study.
- Chapter 3 - Research Methodology: provides an explanation of the philosophical underpinnings of the thesis, describes the methodology that

guides the research process and justifies the selection of the methods chosen to fulfil the research aim and objectives.

- Chapter 4: Findings: presents the findings of Phase 1 and Phase 2 of the study.
- Chapter 5: Discussion: considers how the research findings relate both to the objectives of the research and to the existing literature. The barriers to dental care are discussed in relation to the Levesque et al. (2013) patient centred access to primary care conceptual framework. In addition, both the strengths and limitations and my personal reflections on the research are discussed.
- Chapter 6 Conclusion: considers the significance of the research and recommends further areas for research.

1.9 Chapter 1 Summary

This chapter has provided a synopsis of the study. It has described the contextual background of the study, explained its rationale and stated the study's aim and objectives. A description of my personal thoughts and feelings about dental care pathways and access to dental services has been provided to enable readers to judge how my own outlook may have influenced the study's design and findings.

Facilitating access to dental care and improving oral health literacy are strategies that will improve oral health in non-capital city dwelling homeless individuals (COAG Health Council Oral Health Monitoring Group, 2015). I have argued that facilitating regular dental visiting will lead to improved oral health outcomes, that barriers, other than the cost of dental care (Ford, Cramb, & Farah, 2014), prevent adults experiencing homelessness from accessing traditional public and private dental services and that to facilitate access to and uptake of dental care it will be important to better understand the barriers that prevent access to and uptake of dental care.

The following chapter will highlight the importance of improving the oral health of adults experiencing homelessness. It will describe their oral health status and explain the effects that poor oral health has on general and mental health. It will also review the barriers that prevent homeless adults form accessing dental care and highlight the strategies that are successfully used by dental service providers to facilitate the uptake

of dental care. Lastly, the conceptual framework, that focuses on a patient's pathway through the healthcare system, which underpins this study will be explained.

2 Literature Review

2.1 Introduction

The previous chapter provided a synopsis of this study and an overview of homelessness and homelessness support services in Australia and Victoria. I argued that the oral health of adults experiencing homelessness could be improved by facilitating regular dental visiting for a dental check-up and by prompting oral health. To facilitate regular dental visiting and the promotion of oral health, a better understanding of the barriers and strategies that facilitate access to and uptake of dental care is required.

This chapter will provide a review of the oral health status of adults experiencing homelessness, explore the barriers and strategies used by dental service providers to facilitate access to dental care and present a conceptual framework for understanding access to healthcare services. It is presented in the following four sections.

Section one provides an overview of the oral health status of adults experiencing homelessness and describes the relationship between oral health, general health and mental health. It illustrates how oral health, mental health and general health are inextricably linked and how all three are affected by homelessness.

Section two contains a systematic literature review that answers three questions; how and where do homeless people seek dental care and advice? What barriers prevent homeless adults from accessing dental care? and what strategies exist to promote oral health to homeless people? The review considers only peer reviewed commercially published literature and studies set in developed nations which have similar dental services and infrastructure to Australia. It provides an overview of barriers that are experienced by adults experiencing homelessness worldwide and of the strategies used by dental service providers to overcome them.

Section three contains a review of Australian grey literature and grey data. This review focusses on information published on the internet in Australia and describes strategies that are used by dental service providers in Australia to encourage dental visiting by adults experiencing homelessness.

Section four explains the Levesque et al. (2013) patient-centred access to care framework that has been used to underpin this study.

2.2 Section 1: Background

2.2.1.1 Measuring oral health

Oral health status is commonly assessed using normative measures, such as the clinically detected presence or absence of tooth decay. The number of decayed, missing and filled teeth (DMFT) provides a snapshot of an individual's oral health at a point-in-time and reflects their previous exposure to tooth decay and dental treatment (Slade, Roberts-Thomson, & Ellershaw, 2007). A high number of decayed teeth indicates poor oral health and a lack of dental treatment whereas a high number of filled or missing teeth indicates previous experience of poor oral health and treatment by a dental practitioner.

2.2.1.2 Oral health and homelessness

Tooth decay results in the destruction of dental hard tissues including enamel and dentine. It is caused when bacteria within dental plaque metabolise fermentable carbohydrates and produce acid which causes minerals to be dissolved from the tooth's surface (Fejerskov, 2009, p. 4). The process is dynamic, and minerals are deposited back onto the tooth surface when there are no fermentable carbohydrates available for the bacteria to metabolise (Fejerskov, 2009, p. 5). If a tooth's surface is exposed to repeated acid attacks and the dynamic process favours dissolution of the tooth, a cavity or hole develops in the tooth (Fejerskov, 2009, p. 4). Thorough toothbrushing, in conjunction with the use of toothpastes or rinses containing agents that remineralise the tooth surface, such as fluoride, help prevent tooth decay (Fejerskov, 2009, p. 252). Thus, reducing the frequency of fermentable carbohydrates

consumption and toothbrushing with a fluoride toothpaste are important in the prevention of tooth decay.

Adults experiencing homelessness can find toothbrushing difficult. In Toronto, one in five homeless individuals had not brushed their teeth in over a week (Figueiredo, Hwang, & Quinonez, 2013) and in Porto, Portugal almost one in three (30%) individuals had not brushed in over a week (Pereira, Oliveira, & Lunet, 2014). In Adelaide, one in five adults experiencing homelessness did not own a toothbrush (Jones, Brennan, Parker, Steffens, & Jamieson, 2016). Conte et al. (2006) reported on the difficulties homeless individuals had in storing oral hygiene products and finding a place to brush their teeth. Another dental risk encountered by adults experiencing homeless is that the food provided in homeless-shelters is high in fermentable carbohydrates (Mago, MacEntee, Brondani, & Frankish, 2018).

Adults experiencing homelessness are more likely to have decayed teeth and less likely to have filled teeth than the general population (Daly, Newton, Batchelor, & Jones, 2010; Gibson et al., 2003). In Brisbane in 1984, homeless men living in a hostel were found to have an average of four decayed teeth of which, one required extraction (Jago, Sternberg, & Westerman, 1984). In Brisbane in 2014, adults attending a homelessness service in Brisbane were found to have a median number of six decayed teeth which was considerably more than the Australian population median number of 0.8 decayed teeth (Ford et al., 2014). Similar levels of untreated decay were reported in Los Angeles where homeless individuals attending support services had an average of 6.3 decayed teeth compared to national average of 0.7 decayed teeth. Although DMFT scores provide an indication of previous and current needs in relation to tooth decay, they do not provide any information about the health of the gums and soft tissues of the mouth or the urgency of required treatment. This information is assessed clinically and recorded as an individual's diagnosed need for dental treatment.

Numerous studies have found high levels of diagnosed dental-treatment-need in adults experiencing homelessness (Daly, Newton, Batchelor, et al., 2010; De Palma et

al., 2005; Figueiredo et al., 2013; Ford et al., 2014; Simons, Pearson, & Movasaghi, 2012). In Brisbane, nine out of ten (91%) of adult males attending a homelessness support service were diagnosed as needing restorative dental treatment (Ford et al., 2014). A high diagnosed need for emergency dental treatment also exists (Conte, Broder, Jenkins, Reed, & Janal, 2006; R. Figueiredo et al., 2013; Simons et al., 2012). In Toronto, Figueiredo et al (2013) found over one third (40%) of individuals experiencing homelessness needed emergency dental treatment. In London, nearly half (45%) of individuals attending a homeless-dedicated-dental service presented with pain or swelling (Simons et al., 2012) and in Newark, New Jersey over half (56%) of attendees at a homelessness services event were suffering dental pain (Conte et al., 2006).

Gum disease is a chronic inflammatory disease that results from a build-up of dental plaque at the tooth-gum margin. Its progression results in the destruction of the bony tissues that support the teeth in the jaw bones (El Kholy, Genco, & Vean Dyke, 2015). In London, 80% of homeless adults attending a dedicated homeless dental service were diagnosed as needing gum treatments (Daly, Newton, Batchelor, et al., 2010) and in Hong Kong almost all individuals (97%) were diagnosed with gum problems (Luo & McGrath, 2006). Because gum disease often does not produce painful symptoms, it can be difficult to self-diagnose. In Toronto, nearly three quarters (71%) of homeless shelter dwellers were diagnosed as needing gum treatment whereas less than one in ten (7%) perceived they had a gum problem (Figueiredo et al., 2013).

Smoking tobacco is associated with gum disease. Smokers are more than twice as likely as non-smokers to have gum disease and consuming more tobacco and consuming tobacco over a longer time period are associated with increased severity of gum disease (Calsina, Ramon, & Echeverria, 2002). High rates of tobacco smoking are reported amongst individuals experiencing homelessness (Daly, Newton, Batchelor, et al., 2010; Ford et al., 2014; Freeman et al., 2011; Pereira et al., 2014). Homeless individuals in Adelaide and Brisbane reported tobacco smoking rates greater than 85% which were considerable higher than the general Australian population rate of 16% (Australian Institute of Health and Welfare, 2018; Ford et al., 2014; Parker, Jamieson, Steffens, Cathro, & Logan, 2011). As adults experiencing homelessness tend not to visit

the dentist regularly for preventive treatment, the risk of suffering gum disease and the irreversible loss of bony support for the teeth is likely to be high amongst those who smoke.

2.2.1.3 Oral health related quality of life of adults experiencing homelessness

Adults experiencing homelessness have a poorer OHRQoL than the general population (Daly, Newton, Batchelor, et al., 2010; Ford et al., 2014; Luo & McGrath, 2008; Richards & Keauffling, 2009). OHRQoL is measured using the oral health impact profile (OHIP) questionnaire (Slade & Spencer, 1994). The OHIP questionnaire asks questions that relate to the functional limitation, physical pain, psychological discomfort, physical disability, psychological disability, social disability and handicap that a person feels as a consequence of their oral health (Slade & Spencer, 1994). Answers are recorded on a five-point scale to indicate how frequently/infrequently an impact is felt and an overall score is calculated meaning that qualitative data can be converted into quantitative data for statistical analysis and comparison between groups (Slade & Spencer, 1994). A higher OHIP score reflects a poorer OHRQoL (Slade & Spencer, 1994). The OHIP-14 questionnaire asks 14 questions related to a person's oral health and is commonly used to assess OHRQoL (Slade, 1997).

In Brisbane, the mean OHIP-14 score for residents at a homeless shelter was 28.6 compared to the mean for the Australian population of 7.5 (Ford et al., 2014). In Swansea, Wales, Richards and Keauffling (2009) recorded a mean OHIP-14 score of 21.8 (standard deviation 17.0) amongst homeless and vulnerable adults compared to the United Kingdom (UK) mean score of 5.1. In Brisbane, adults experiencing homelessness suffered the most severe oral health impacts in the physical pain, physical disability and functional limitation domains (Ford et al., 2014). This indicates that homeless adults had pain in their mouths, felt discomfort when they ate, had unsatisfactory diets, had to interrupt meals, had difficulty pronouncing words and had a worse sense of taste because of dental or denture problems than the general population (Slade & Spencer, 1994). Oral health impacts were more prevalent, more extensive and more severe across all domains when compared to the general

population (Ford et al., 2014). Interestingly, the least difference between the homeless adult and general population was seen in the psychological domain (Ford et al., 2014). Ford et al. (2014) suggested that this was because homeless adults are "more accepting of greater levels of oral pain and dysfunction, possibly due to having no other choice than to live with it" (p. 238).

The OHRQoL of adults experiencing homelessness improved following comprehensive dental care. In the US, women living in a shelter for victims of domestic violence who received comprehensive dental care reported an improved OHRQoL (Abel et al., 2013). This result supports the Hyde et al. (2006) finding that almost 80% of welfare recipients, 57% of whom were homeless, reported an improved OHRQoL following comprehensive dental treatment.

2.2.1.4 Oral health and general health

There are links between oral and general health and many systematic diseases share common risk factors with oral diseases (Dental Health Services Victoria, 2011). Gum disease impacts numerous systemic diseases including; diabetes (Sanz et al., 2018), cardiovascular disease (El Kholy et al., 2015), respiratory disease and kidney disease (Akar, Akar, Cerrro, Stenvinkel, & Lindholm, 2011). Individuals with gum disease have a greater risk of developing coronary heart disease and cerebrovascular disease than individuals without gum disease (Dietrich, Sharma, Walter, Weston, & Beck, 2013). The link between diabetes and gum disease is bi-directional (Duda-Sobczak, Zozulinska-Ziolkiewicz, & Wyganowska-Swiatkowska, 2018). Poorly controlled blood glucose levels, resulting from poor diabetic management, are associated with worse gum health and worse outcomes for gum treatment (Sanz et al., 2018). Likewise, blood glucose levels are more difficult to control, insulin resistance is increased, and diabetic complications are more likely in diabetics with severe gum disease (Sanz et al., 2018). Good diabetic management requires the careful regulation of blood glucose levels using dietary control and pharmacotherapy (Gunton, Wah Cheung, Davis, Zoungas, & Colagiuri, 2014).

Managing diabetes whilst experiencing homelessness is problematic (Hwang & Bugeja, 2000). Difficulties in diabetic management result from not being able to access healthy food and not being able to keep insulin refrigerated during storage (Wolfson, 2006). Additionally, getting a supply of insulin and coordinating its use with meals is sometimes impossible when experiencing homelessness (Hwang & Bugeja, 2000). In the USA, veterans with experience of homelessness have a greater risk of having poorly controlled blood glucose levels than veterans without experience of homelessness (Axon et al., 2016).

2.2.1.5 Homelessness and mental health

The Australian Survey of Mental Health and Wellbeing (ASMHW) categorises mental health disorders as; mood disorders, disorders related to anxiety or disorders related to the abuse and dependence upon alcohol and drugs (Slade et al., 2009). It found that mental health disorders were more prevalent amongst adults experiencing homelessness than the general population (Slade et al., 2009). Over half (53.6%) of individuals aged 16-85 years who had experienced homelessness reported having a mental health disorder in the previous 12 months compared to one in five (20%) of the general population (Slade et al., 2009). The prevalence of mental health disorders increases with the length of time a person had been homeless and over three quarters (79%) of adults who have experienced homelessness for more than a year report having a mental health disorder (Johnson & Chamberlain, 2011). The experience of being homeless can itself impact mental health, Johnson and Chamberlain (2011) found a similar proportion of people experiencing homelessness developed a mental health disorder after they became homeless (16%) as had a mental health disorder before they became homeless (15%).

2.2.1.6 Oral health and mental health disorders

Suffering from disorders related to the abuse and dependence upon alcohol and drugs directly affects oral health. A systematic review and meta-analysis of the association between substance abuse and oral health found people who abused drugs had more decayed teeth and poorer gum health than those who did not (Baghaie, Kisley, Forbes,

Sawyer, & Siskind, 2017). Abuse of the psychostimulant drug methamphetamine results in rampant dental caries, tooth loss, tooth wear and increased levels of plaque and calculus on the teeth (Ravenel et al., 2012). Petrol sniffing and marijuana use also have a detrimental effect on gum health (Jamieson et al., 2009). It is likely then, that some adults experiencing homelessness in non-capital city areas will suffer poor oral health because of their abuse of and dependence on alcohol and drugs. The pharmacological management of mental health disorders also impacts on oral health. Certain antidepressants, sedatives and anticholinergic drugs used to manage mental health disorders decrease salivary flow and cause mouth dryness (Cormac & Jenkins, 1999). Dry mouth increases the risk of developing oral diseases such as dental caries, oropharyngeal candidiasis (Vazquez & Sobel, 2011) and gum disease (Mizutani et al., 2015).

Just as mental health disorders and their management impact oral health, poor oral health negatively impacts mental health. In Scotland, having decayed and missing teeth, was found to be a predictor of depressive mood disorders amongst homeless individuals (Coles et al., 2011). It is suggested a bidirectional relationship between self-esteem and oral health care exists where "low self-esteem results in poor (oral) health, which in turn exacerbate low self-esteem" (Oldroyd, White, Stephens, Neil, & Nanayakkara, 2017, p. 1233). Thus, the psychological impact of poor oral health should not be underestimated and the positive impact of improvements in dental appearance and dental health on self-esteem should be recognised (Kerr, 2018).

2.2.2 Summary Section 1

In this section, evidence has been presented demonstrating that adults experiencing homelessness suffer from untreated oral disease, are likely to be suffering dental pain and have a need for emergency dental treatment. In addition, their OHRQoL is also poor. Oral health, general health and mental health are inextricably linked, and the poor oral health of homeless adults negatively impacts both general health and mental health. It is therefore critical that the oral health of adults who are experiencing homelessness is improved. As having regular dental check-ups leads to better oral

health outcomes, it is important to discover the strategies that successfully facilitate access to dental services for adults experiencing homelessness. Likewise, factors that prevent access to dental care need to be identified so that they can be overcome. The following section consists of a systematic literature review that identifies where homeless adults access dental care and advice, the barriers that prevent their access to dental care and the strategies that are used to facilitate their access to care.

2.3 Section 2: Homeless adults' access to dental services and strategies to improve their oral health: a systematic literature review

The following literature review has been published as: Goode, J., Hoang, H., & Crocombe, L. (2018). Homeless adults' access to dental services and strategies to improve their oral health: a systematic literature review. *Australian Journal of Primary Health, 24*(4), 287-298. doi:10.1071/PY17178

2.3.1 Introduction

Globally, the oral health of homeless adults is poor (Collins & Freeman, 2007; Conte et al., 2006; Daly, Newton, Batchelor, et al., 2010; De Palma et al., 2005; Figueiredo et al., 2013; Ford et al., 2014; Luo & McGrath, 2006; Pereira et al., 2014; Simons et al., 2012) and is reflected as observed need for restorative dental treatment (De Palma et al., 2005; R. Figueiredo et al., 2013; Ford et al., 2014; Luo & McGrath, 2006; Pereira et al., 2014), the presence of calculus or gingival bleeding on probing (Collins & Freeman, 2007; Daly, Newton, Batchelor, et al., 2010; De Palma et al., 2005; R. Figueiredo et al., 2013; Ford et al., 2014; Luo & McGrath, 2006). There is also a high need for emergency dental treatment by homeless adults (Conte et al., 2006; R. Figueiredo et al., 2013). In Adelaide, over two-thirds of homeless adults felt they needed dental treatment (Parker et al., 2011).

Having a need for dental treatment, does not always result in seeking care (Ford et al., 2014; Simons et al., 2012). Populations reliant on publicly funded dental programs are affected by system-level barriers to care. In the United States (USA), dentists were

discouraged from taking on Medicaid patients by poor remuneration rates, denial of claims and a high administrative burden (Nebeker et al., 2014). In Canada, a lack of dentists willing to accept publicly funded patients limited their access to care (Bedos et al., 2003). Cuts to USA Medicaid dental programs resulted in an increase in dental presentations to hospital emergency departments, suggesting that dental care could not be considered as isolated from other healthcare systems (Cohen, Manski, & Hooper, 1996).

A better understanding of how and where homeless adults access dental care, the factors that prevent access and the strategies that have been used to promote oral health to that population will assist in the development of dental programs to facilitate regular preventive dental visits and improved oral health. In 2003, two review articles were published about homelessness and oral health; one in the United Kingdom (UK) (British Dental Association, 2003) and one in the United States (USA) (King & Gibson, 2003). They highlighted the poor oral and general health of homeless people, the barriers they faced when accessing health care and suggested how dental access could be improved.

This review updates the literature describing programs to improve homeless adults' access to dental services and to promote oral health.

2.3.2 Methods

2.3.2.1 Review questions

1. How and where do homeless people seek dental care and advice?

2. What barriers prevent homeless adults from accessing dental care?

3. What strategies exist for the promotion of oral health to homeless people?

2.3.2.2 Selection criteria

The review included studies written in English, based in developed countries, published after 2003, and that reported primary research focussing on homeless adults. Studies of young adults and adolescents were included if participants made

independent oral health decisions. It excluded studies that focussed on homeless mothers making care decisions about their children's dental care and homeless young children.

2.3.2.3 Search strategy

The MEDLINE via OvidSP, PubMed, Cumulative Index to Nursing Allied Health Literature (CINAHL) and Scopus databases were searched using Boolean operators and the following keywords: homeless, roofless, houseless, rough sleeper, couch surfer, shelter, hostel, dental and oral health.

The search was conducted by a single reviewer (J. Goode). After removing duplicates, the titles of the remaining studies were screened, and irrelevant studies excluded. The abstracts of the remaining studies were reviewed for relevance by two reviewers (J. Goode, H. Hoang) and full text was reviewed. Reference lists of the selected studies were searched for additional references.

2.3.2.4 Assessment of methodological quality

The methodological quality of the selected studies was assessed and scored using the Mixed Methods Appraisal Tool (MMAT) (Pluye et al., 2011). Studies meeting all of the assessment criteria scored one; scores of less than one indicated that fewer criteria had been met (Pluye et al., 2011). Two reviewers (J. Goode, H. Hoang) independently assessed and rated the studies and any disagreements were resolved through discussion or with a third reviewer (L. Crocombe).

2.3.2.5 Data extraction

Data extracted from the reviewed articles included country, participant details, study design and a description of the findings that related to the three review questions. Extracted data were analysed and common themes were recorded and sorted to produce a narrative description of the theme.

2.3.3 Results

From a pool of 235 articles, 22 met the inclusion criteria (Figure 2). Quality analysis outcomes are reported in Tables 1-4. The characteristics and main findings of the studies are shown in Table 5. Eight studies were conducted in the UK, seven in the USA, two in Australia, two in Canada, two in Ireland and one in Sweden.

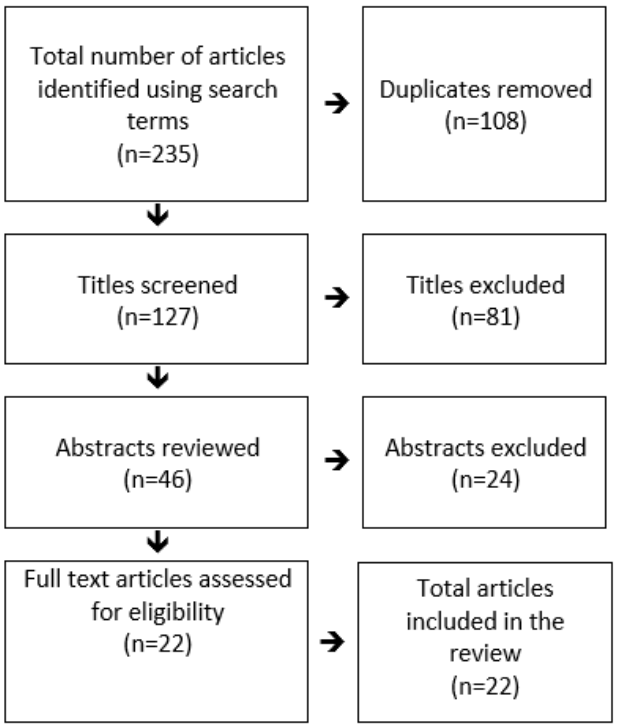

Figure 2: Search strategy for the literature review

2.3.3.1 Accessing dental care

The review found that homeless people access dental care from dental practitioners (Hill & Rimmington, 2011; Parker et al., 2011; Simons et al., 2012), students of dentistry (Abel et al., 2013; Lashley, 2008; Seirawan, Elizondo, Nathason, & Mulligan, 2010) and dental hygiene (Rowan, Mason, Robitaille, Labrecque, & Tocchi, 2013), doctors (Lashley, 2008; Van Hout & Hearne, 2014) and hospital emergency departments (EDs) (Figueiredo, Dempster, Quinonez, & Hwang, 2016; Robbins, Wenger, Lorvick, Shiboski, & Kral, 2010). Dental visits were commonly made by homeless people for dental problems (Coles, Watt, & Freeman, 2013; Hill &

Rimmington, 2011; Parker et al., 2011). Problems were often self-managed using prescription or illicit drugs, alcohol or self-treatment (Van Hout & Hearne, 2014). Alternatively, symptomatic relief was sought from doctors (Lashley, 2008; Van Hout & Hearne, 2014) or at an ED (Figueiredo et al., 2016; Robbins et al., 2010). In Toronto, homeless people were over twice as likely as people living on low incomes to attend an ED with a non-traumatic dental problem and almost half of those homeless people who did attend an ED for dental care made multiple visits (Figueiredo et al., 2016).

2.3.3.2 Factors affecting the uptake of dental care

The inability to pay for dental care was the most cited factor preventing uptake of dental services (Caton, Greenhalgh, & Goodacre, 2016; De Palma & Nordenram, 2005; Ford et al., 2014; Hill & Rimmington, 2011; Parker et al., 2011; Robbins et al., 2010; Simons et al., 2012; Van Hout & Hearne, 2014). Knowing that safety net dental insurance would cover the cost of care increased the likelihood of seeking care by homeless adults (Robbins et al., 2010). The process of registering for government assistance, which enabled government-funded dental care, could be seen as onerous by homeless people (Simons et al., 2012; Van Hout & Hearne, 2014).

In the USA, over one-third of homeless adults did not know where to find dental care (Conte et al., 2006). Dental services were poorly advertised (Hill & Rimmington, 2011; Rowan et al., 2013), but even when government-funded care was available and clinic location known, there was a poor uptake of care by homeless people (Ford et al., 2014).

Dental care can be a low priority for homeless people, especially during periods of drug and alcohol misuse (Caton et al., 2016; De Palma & Nordenram, 2005; Van Hout & Hearne, 2014). Homeless people were more likely to seek emergency rather than comprehensive dental care (Coles & Freeman, 2016).

Psychosocial factors also affected the uptake of dental services by homeless people (Caton et al., 2016). Higher levels of dental anxiety and dental phobia were found in

the homeless adult population than in the general population (Coles et al., 2011) and affected access to dental care (Collins & Freeman, 2007).

The attitudes of dental health service providers to homeless people affected the uptake of services by homeless adults. Homeless adults reported being treated with a lack of respect (De Palma & Nordenram, 2005) and having bad experiences at dental practices (Caton et al., 2016).

2.3.3.3 Strategies used to improve access to dental care and improve oral health

Several strategies have been developed to improve access to dental care for homeless adults, including the development of homeless-dedicated dental services (Hill & Rimmington, 2011; Rowan et al., 2013; Seirawan et al., 2010; Simons et al., 2012). A key feature of these services was that dental service staff worked in close collaboration with homeless support agencies. Dental team members visited community centres, shelters and hostels to build and maintain good working relationships with support organisations (Caton et al., 2016; Simons et al., 2012).

Another important feature of dental services for the homeless was that they were located in close proximity to the homeless population. This involved delivering outreach dental programs, including on-site dental screening examinations at homeless hostels, shelters and drop-in centres (Caton et al., 2016; Lashley, 2008; Simons et al., 2012). These programs gave the opportunity to identify treatment needs, provide oral hygiene advice and referral to a fixed-site clinic (Simons et al., 2012). On-site treatment was also provided using dental vans (Simons et al., 2012) and portable dental equipment (Abel et al., 2013; Simons et al., 2012). Fixed-site homeless dental clinics were co-located with other homeless health services to provide a 'one-stop-shop' for homeless health (Rowan et al., 2013; Seirawan et al., 2010; Simons et al., 2012).

Oral health care was also provided by universities (Abel et al., 2013; Lashley, 2008; Pritchett, Hine, Franks, & Fisher-Brown, 2014; Rowan et al., 2013; Seirawan et al.,

2010). Students of dentistry (Seirawan et al., 2010) and dental hygiene (Rowan et al., 2013) provided care at fixed-site clinics within homeless support agency sites and post-graduate dental students used portable dental equipment to provide care within a homeless women's shelter (Abel et al., 2013). Outreach screening examinations resulted in referral to university dental teaching clinics (Lashley, 2008). Outreach programs involving dental (Pritchett et al., 2014) and nursing students (Lashley, 2008) provided homeless adults with well-received oral health advice (Abel et al., 2013; Pritchett et al., 2014; Rowan et al., 2013).

In the USA, homeless people who were engaged with drug rehabilitation and social welfare programs could receive extensive dental treatment, whereas those not engaged with programs could only receive emergency dental care (Seirawan et al., 2010). Homeless drug users felt that drug rehabilitation centres made good sites for dental clinics (Van Hout & Hearne, 2014). However, delivering outreach dental services at hostels and shelters tended to exclude homeless people living in bed-and-breakfast accommodation and those aged over 40 years, and resulted in them having a poorer uptake of dental services compared to those living in shelters or using drop-in centres (Gray, 2007).

2.3.3.4 Increasing access by increasing knowledge of non-dental staff

Referrals to dental services were made by non-dental health professionals. Registered nurses who gave health checks referred clients to dental services. More referrals occurred from shelters employing nurses than from those shelters that did not (Gray, 2007). The 'Something to Smile About' program (STSA) trained support agency staff to give oral health education and help connect homeless people with dental services. This had the potential benefit of building a network of oral health advocates who worked with homeless people on a daily basis. However, support workers felt their homeless clients had more pressing needs, such as food and shelter, and that those needs have priority over dental care. The STSA program failed to affect the most at-risk homeless group: single young adult males (Coles et al., 2013). Support workers involved in the STSA program found contact details of dentists who treated homeless people, oral

health information leaflets and supplies of oral health products to be valuable resources (Coles et al., 2013). The STSA program highlighted the need for oral health messages to be delivered at an appropriate time and not at a time of crisis (Coles et al., 2013).

Homeless people can become overtaken by their 'homeless identity' (Coles & Freeman, 2016, p. 58), making them less able to maintain oral hygiene, organise and attend dental appointments (Coles & Freeman, 2016). During such periods, homeless people prioritised the short-term over the longer-term issues, making them more likely to seek emergency rather than preventive dental treatment (Coles & Freeman, 2016). To accommodate this, dental services needed to be flexible and respond to the immediate needs of the homeless person (Caton et al., 2016). One aspect of this flexible approach was the ability for homeless people to drop in for care without an appointment (Simons et al., 2012).

2.3.3.5 Challenges associated with delivering dental services to homeless people

Mobile dental services were expensive to set up and maintain, required extensive logistical planning and were prone to disruption from unexpected events, such as not being able to park the dental van due to roadworks (Simons et al., 2012). There were high rates of failure to attend dental appointments (Caton et al., 2016). Less than half of the homeless adults attending a mobile dental service in London completed their recommended treatment plan (Simons et al., 2012). Similar findings were reported for other dental services dedicated to homeless people (Hill & Rimmington, 2011; Seirawan et al., 2010). Dental staff found missed appointments and incomplete treatment plans to be the least rewarding aspect of working with homeless people (Hill & Rimmington, 2011). In the UK, missed appointments resulted in fines for some homeless individuals (Coles & Freeman, 2016) or being excluded from some dental practices (Caton et al., 2016).

Service providers were also affected financially when emergency treatment was provided to homeless people who were unable to pay for their treatment and

ineligible for free care (Simons et al., 2012). Support agency and dental support staff spent time and effort following up with clients, ensuring documentation was completed and encouraging attendance (Lashley, 2008; Simons et al., 2012). The University of Southern California homeless dental clinic only provided comprehensive treatment for those enrolled in a rehabilitation or social welfare program. This reduced the number of missed appointments and improved the efficiency of the clinic (Seirawan et al., 2010).

Table 1: Qualitative critical review form analysis of seven studies

Critical Appraisal Checklist QUALITATIVE	Coles et al. (2016)	Caton et al. (2016)	Van Hout and Hearne (2014)	Pritchett et al. (2014)	Coles et al. (2013)	Abel et al. (2012)	De Palma et al. (2005)
1. Are there clear qualitative research questions (objectives)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Do the collected data address the research question (objective)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Is the process for analysing the data relevant to address the research question (objective)?	Yes	Yes	Yes	No	Yes	Unclear	Yes
5. Is appropriate consideration given to how findings relate to the context (e.g. setting in which data were collected)?	Yes	No	Unclear	No	Yes	Unclear	Yes
6. Is appropriate consideration given to how findings relate to the researchers' influence (e.g. through their interactions with participants)?	Unclear	No	No	No	Yes	No	Yes
Overall quality score	0.75	0.5	0.5	0.25	1	0.25	1

Table 2: Quantitative critical review form analysis of three studies

Critical Appraisal Checklist QUANTITATIVE	Figueiredo et al. (2016)	Ford et al. (2014)	Parker et al. (2011)
1. Are there clear quantitative research questions (objectives)?	Yes	Yes	Yes
2. Do the collected data address the research question (objective)?	Yes	Yes	Yes
3. Is the sampling strategy relevant to address the quantitative research question?	Yes	Yes	Yes
4. Is the sample representative of the population under study?	Yes	Yes	Yes
5. Are the measurements appropriate (standard instrument)?	Yes	Yes	Yes
6. Is there an acceptable response rate?	Yes	No	Yes
Overall quality score	1	0.75	1

Table 3: Mixed-methods critical review form analysis of two studies

	Rowan et al. (2013)	Lashley (2008)
Critical Appraisal Checklist MIXED-METHODS design component		
1. Are there clear mixed-methods research questions (objectives)?	Yes	Yes
2. Do the collected data address the research question (objective)?	Yes	Yes
3. Is the mixed-methods research design relevant to address the qualitative and quantitative research questions (or objectives) or the qualitative and quantitative aspects of the mixed-methods question (or objective)?	Yes	Unclear
4. Is the integration of qualitative and quantitative data (or results*) relevant to address the research question (objective)?	Yes	Yes
5. Is appropriate consideration given to the limitations associated with this integration (e.g. the divergence of qualitative and quantitative data (or results*) in a triangulation design)?	Yes	No
Quality score for the mixed-methods component of the study	1	0.33
Critical Appraisal Checklist QUALITATIVE component of mixed-methods study		
1. Are there clear qualitative research questions (objectives)?	Yes	Yes
2. Do the collected data address the research question (objective)?	Yes	Yes

3. Are the sources of qualitative data (archives, documents, informants, observations) relevant to address the research question?	Yes	Yes
4. Is the process for analysing the data relevant to address the research question (objective)?	Yes	Unclear
5. Is appropriate consideration given to how findings relate to the context (e.g. setting in which data were collected)?	Yes	Unclear
6. Is appropriate consideration given to how findings relate to the researchers' influence (e.g. through their interactions with participants)?	Yes	Unclear
Quality score for the qualitative component of the study	1	0.25

Critical Appraisal Checklist QUANTITATIVE component of mixed-methods study

1. Are there clear qualitative research questions (objectives)?	Yes	Yes
2. Do the collected data allow address the research question (objective)?	Yes	Yes
3. Is the sampling strategy relevant to address the quantitative research question (quantitative aspect of the mixed-methods question)?	Yes	Yes
4. Is the sample representative of the population under study?	Yes	Yes
5. Are measurements appropriate (clear origin, or validity known, or standard instrument)?	Yes	No
6. Is there an acceptable response rate (60% or above)?	Yes	Unclear
Quality score for the qualitative component of the study	1	0.5
Overall quality score for the mixed-methods study	1	0.25

Table 4: Quantitative descriptive review form analysis of 10 studies

Critical Appraisal Checklist QUANTITATIVE DESCRIPTIVE	Abel et al. (2013)	Simons et al. (2012)	Conte et al. (2006)	Coles et al. (2011)	Hill and Rimmington (2011)	Robbins et al. (2010)	Seirawan et al. (2010)	Chi and Milgrom (2008)	Gray (2007)	Collins and Freeman. (2007)
1. Are there clear quantitative research questions (objectives)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2. Do the collected data address the research question (objective)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3. Is the sampling strategy relevant to address the quantitative research question?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Is the sample representative of the population under study?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

5. Are measurements appropriate (clear origin, or validity known, or standard instrument)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6. Is there an acceptable response rate (60% or above)?	Yes	Yes	Unclear	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Overall quality score	1	1	0.75	1	1	1	1	1	1	1

Table 5: Characteristics of selected studies of homeless adults' access to dental services and strategies to improve their oral health

Reference	Country	Participants	Design	Main findings
1. Caton et al. 2016	UK	Convenience sample of 20 homeless people attending a homeless dental service (17 males, 3 females). Nine members of staff involved in providing the service including management, dentists and dental nurses, and four staff members from the community centres providing services for the homeless.	A qualitative phenomenological design to develop a greater understanding of the experiences of both service users and providers.	Failure to attend dental services is high. The group had low self-esteem. When people are struggling with homelessness, dental care is simply not high on their priorities until they experience pain, at which point it becomes urgent. Services should address patient-needs, it is important to go into community settings, talking to people and getting people into the system. Services were developed around the principle of accommodating chaotic lives and adapting to the needs of the patients.
2. Coles and Freeman 2016	UK	Convenience sample of 34 homeless people recruited with the help of charity organisations.	A qualitative study using grounded theory methodology.	Few people attended for regular/routine dental care. Physical and practical problems made it difficult for homeless people to brush their teeth and attend dental appointments. Socioeconomic and psychosocial issues disrupt people's lives, a homeless identity is assumed, and oral health takes a low priority. At this time, toothache pain can bring oral health back into focus and prompt emergency care seeking. When moving on from

Reference	Country	Participants	Design	Main findings
				homelessness, people assumed their pre-homeless identity, can better organise in the long term and are more likely to seek non-emergency dental care. The experience of oral health when homelessness can be described as a process of deconstruction and reconstruction.
3. Pritchett et al. 2014	UK	Dental students providing oral health advice to 35 homeless people.	Qualitative evaluation of a student-led oral health education program for homeless people. Advice was delivered at dedicated homeless dental clinics after treatment had been provided.	Oral health advice given by students was useful and positively received. Following the session, patients were more aware of oral health and intended to make changes to their oral hygiene practices.
4. Coles et al. 2013	UK	In total, 14 support agency staff members were involved with the 'Something To Smile About' program.	Qualitative evaluation of an oral health promotion intervention using focus group interviews and content analysis.	Oral health messages are perceived to be important by support staff but, to be effective, need to be tailored to an individual and delivered at an appropriate time, when other basic needs have been met. The intervention failed to change the oral health behaviour of high-risk individuals (single young males). Pain is a driver when seeking dental care. As a homeless person, registration with a National Health Service (NHS) dentist can be difficult. Support staff knowledge of oral health increased. Toothpaste supplies, oral health information leaflets and a list of accessible dental services were considered valuable.

Reference	Country	Participants	Design	Main findings
5. Simons et al. 2012	UK	Review of 350 randomly selected dental records belonging to homeless adults using the Community Dental Service (CDS) in two London boroughs, Tower Hamlets and the City of Hackney over a 30-month period.	Quantitative descriptive study using descriptive statistics to describe the dental treatments provided. Also included is a narrative description of the dental services provided by the CDS.	Dental care is provided using a flexible, collaborative approach guided by input from multiple stakeholders. Care is provided at fixed sites including: at a multidisciplinary dedicated homeless health centre, at CDS clinics, which are not dedicated to caring only for the homeless and at a CDS out-of-hours emergency dental clinic. A dedicated community outreach team provide care and advice at multiple sites using portable dental equipment and a mobile dental van. The outreach team actively engages with support organisations to facilitate access to care for vulnerable people. Mobile dental vans visit homeless organisations and shelters on a regular basis. Appointments are made on the day the dental van visits. The outreach team provides information about the service, likely costs and how to get an appointment, while link workers encourage shelter users to attend their appointments. Mobile dental services are expensive to set up and maintain and require extensive logistical planning.

Reference	Country	Participants	Design	Main findings
				Over half of the mobile dental service users (54%) made a drop-in appointment with a dental problem. Of these, nearly half (45%) could not pay for their treatment and only attended once. In contrast, at the dedicated service located within a multidisciplinary health centre, 13% of patients attended as a drop-in with a dental problem. The rate of failing to return for a second appointment is associated with drug use, ethnicity and receipt of government benefits. Failure rates were higher (46.2%) for the mobile clinic than for the dedicated fixed clinic (11.7%).
6. Coles et al. 2011	UK	Convenience sample of 853 homeless people in Scotland aged 16–78 years. In total, 598 (70%) completed the survey.	Participants were recruited from health clinics, hostels, day centres, night shelters and soup kitchens, over a 9-month period. Participants had an oral exam and completed a questionnaire that included: demographic information, the Modified Dental Anxiety Scale (MDAS), Oral Health Impact Profile (OHIP-14) and the Centre for Epidemiological Studies Depression Scale (CES-D).	Overall, 20% of homeless people had dental phobia (MDAS score of 19 or more) and 24% felt embarrassed 'very often about the appearance of their teeth'.

Reference	Country	Participants	Design	Main findings
7. Hill and Rimmington 2011	UK	Convenience sample of 17 staff working in specialist community dental services in four cities in the UK (London, Cardiff, Glasgow and Birmingham), including nine dentists, seven dental assistants and one therapist, and 27 homeless adults: 22 receiving care at a dedicated homeless clinic and five not receiving care.	Participants completed a questionnaire that had both closed and open-ended questions. Descriptive statistics described service use and qualitative data were analysed using the framework method.	Pain was the most common reason to seek care and dental health was poor. Rates of registration with a dentist were poor suggesting poor access to care. Staff believed general dental practices to be unwelcoming and unable to cater to the needs of homeless people. Staff felt that homeless people had difficulties accessing mainstream dental services and were better served by dedicated homeless dental services. However, homeless people appeared to be more inclined to want treatment in general dental practices. It was suggested that a flexible model of delivery involving both dedicated and general dental practices would best serve the needs of the homeless. Only about half of all treatment plans were completed and cost, dental care being a low priority and anxiety about treatment were reported as barriers. Staff identified failed appointments and incomplete treatment as the least rewarding aspects of working with homeless people.

Reference	Country	Participants	Design	Main findings
				Staff were unaware of other homeless dental services in the area.
8. Collins and Freeman 2007	UK	Convenience sample of 317 single homeless adults recruited from 14 hostels in Belfast using snowballing techniques (84% male, 16% female).	Quantitative descriptive study to determine oral health needs. Participants answered survey questions relating to dental anxiety, demographics, mental health, general health, drug and alcohol use and their oral health-related quality of life. The Modified Dental Anxiety Scale (MDAS) determined anxiety. Clinical oral health was assessed by dental examination.	Over one in four participants had MDAS scores indicating dental phobia compared to 1 in 10 for the general population. There is an association between mental health problems and dental anxiety. Participants with dental anxiety had significantly fewer restored teeth.
9. Abel et al. 2013	USA	In total, 37 female residents residing at domestic violence shelters around Fort Lauderdale were surveyed before and after receiving dental care at the shelter.	Quantitative descriptive study using questionnaires to assess residents' Oral Health-Related Quality of Life (OHRQoL) and satisfaction with dental care provided at the shelter.	Participants were satisfied with on-site dental care and their OHRQoL improved. Collaborations between organisations working with domestic violence victims and educational institutions can be successful and improve the lives of domestic violence victims living in shelters.
10. Abel et al. 2012	USA	Participants included 50 women survivors of domestic violence living in a shelter near Fort Lauderdale and 10 Advanced Education in General Dentistry residents (AEGC).	Description of a collaboration between Nova South-eastern University's College of Dental Medicine (NSU-CDM) and three local organisations that provide dental services to survivors of domestic violence - assessing the oral healthcare needs of clients and the readiness	Dental care provided at the agency would be highly valued and of enormous benefit.

Reference	Country	Participants	Design	Main findings
		.	of NSU-CDM Advanced Education in General Dentistry (AEGD) residents to provide the needed care.	
11. Robbins et al. 2010	USA	Participants included 340 homeless adult active injection drug users in San Francisco, recruited from homeless resource centres.	Six months' prospective cohort study using face-to-face interviews to assess self-perceptions of mental, general and oral healthcare seeking behaviour, drug use and utilisation of drug treatment services.	Self-reported need for oral health care was common, but seeking care was less common, only 27% sought oral health care when they had a perceived need. Almost one-third of the sample (31%) reported needing oral health care at least six times in the previous 6 months. Of those seeking care, 8% visited an emergency department and 30% the homeless resource centre. Being eligible for safety net dental services or having insurance increased the likelihood of seeking dental care. High rates of needing care were associated with low rates of accessing care.
12. Seirawan et al. 2010	USA	The study included 1088 patients that attended a dedicated community dental clinic located within the Union Rescue Mission (URM) facility in Los Angeles. The clinic was used for teaching and was managed by and the University of Southern California (USC).	Analysis of patients' dental records provided a description of the dental services provided over 1 year. A description of the collaborative service was included.	The clinic is staffed by students and Faculty members and offers emergency and comprehensive dental treatment free-of-charge. To be eligible for comprehensive dental treatment, clients need to be enrolled in a rehabilitation program with a support organisation. This improves compliance and the likelihood of a course of care being completed. An analysis of the services provided in a 12-month period showed that 62% of patients received

Reference	Country	Participants	Design	Main findings
				emergency care and 38% received comprehensive treatment. The failure-to-attend rate for patients having comprehensive treatment was 10%.
13. Chi and Milgrom 2008	USA	Convenience sample of 45 homeless youth and young adults attending a health clinic.	Quantitative descriptive design using questionnaires.	It was found that 40% of respondents suffered some level of fear about dental appointments.
14. Lashley 2008	USA	Convenience sample of homeless men who were enrolled in a rehabilitation program, and nursing and dental students in Baltimore. In total, 279 men received oral health education and 203 had an oral health examination.	Mixed-methods design describing the oral health component of an addiction recovery program for homeless men. Service user demographics and the uptake of dental services were described using descriptive statistics. Client perceptions of the service were recorded using questionnaires, nursing student perceptions were recorded using reflective journals and dentistry student perceptions were recorded using surveys and email correspondence.	Dental students and dental volunteers made outreach visits to screen clients and arrange referral for those with a need for care. Nursing students delivered both general and oral health advice and encouraged attendance at scheduled dental appointments. Treatment was provided at the university dental clinics. Assistance with application forms, appointment scheduling and transport was provided by shelter staff.
15. Conte et al. 2006	USA	Convenience sample of 46 homeless people recruited at a homeless services event.	Quantitative descriptive design using face-to-face structured interviews followed by a dental screening check-up.	In response to the question 'If you needed to seek care where would you go?', just over one-third (35.6%) of participants didn't know where to seek care. One-third of participants did not smile because of their teeth.

Reference	Country	Participants	Design	Main findings
16. Ford et al. 2014	Australia	Convenience sample of 58 homeless adults recruited from a homeless accommodation and support service in Brisbane.	Cross-sectional study using a survey asked closed questions, which was completed by participants with assistance from support workers. In total, 34 of the participants had a dental examination.	Participants were more likely to be eligible for public dental care and avoid the dentist because of cost, and were less likely to have visited a dentist or had a dental check-up in the previous 12 months than the general population.
17. Parker et al. 2011	Australia	Convenience sample of 248 homeless people recruited from support agencies in Adelaide.	Quantitative cross-sectional study. Survey asked closed questions and results were compared to age-matched results from the general metropolitan population of Adelaide.	Homeless people were twice as likely to avoid the dentist because of cost, more likely to visit a government-funded dental clinic and more likely to visit the dentist with a dental problem compared with the general population.
18. Figueiredo et al. 2016	Canada	Random sample of 1165 homeless people previously recruited from shelters and meal programs. Control group of age- and sex-matched people living on low income.	Personal health insurance numbers were used to track hospital emergency department (ED) visits for non-traumatic dental problems over a 4-year period. Homeless persons' ED use was compared with the ED use by sex and age-matched low-income earners.	Homeless people are 2.27-fold more likely to use an ED for a non-traumatic dental problem compared with a matched low-income population. Almost three-quarters of visits (72%) were for toothaches, abscesses or dental decay and nearly half (46%) of people attending with a non-traumatic dental condition attended multiple times.
19. Rowan et al. 2013	Canada	Street youth aged 12–21 years. Quantitative component included 72 people (30% male and 70% female).	Mixed-methods study to evaluate an interdisciplinary teaching medical and dental hygiene clinic for street youth.	The clinic was used by homeless youth as intended. Dental care and oral health education was provided by hygiene students under supervision. Delivering an

Reference	Country	Participants	Design	Main findings
		Qualitative component included nine male and four female and six practitioners, one physician clinical supervisor, one dental hygiene clinical supervisor, two public health nurses, a nurse practitioner and a chiropodist.		inter-professional practice proved difficult. Care providers had concerns about the continuity of care and a lack of continual client flow. Improvements were suggested regarding better advertising of the clinic, the services provided and how to access services. Many clients believed they needed to register with the clinic, which proved to be a barrier to access. Practitioners were interviewed and service users had three focus group interviews. Electronic medical records were analysed to give descriptive statistics on: demographic information, number of visits per person, number and type of chronic problems, medications prescribed and vaccination status.
20. Van Hout and Hearne 2014	Ireland	Purposive sample of 15 homeless drug users undergoing drug rehabilitation.	Qualitative study utilising focus group interviews and a thematic analysis of transcripts.	Dental attendance is affected by the need for a medical card, cost of treatment, fear, not liking medical card dentists and continued drug use and dependency. Enablers of dental visiting are knowing your dentist and having a dentist onsite in healthcare settings such as rehabilitation centres. Oral health is neglected when using drugs but improves when in a recovery phase.

Reference	Country	Participants	Design	Main findings
				Self-management of dental problems included attempted self-extractions, attempting to escape the pain using over-the-counter painkillers, putting toothpaste on the decay, using illicit drugs and drinking alcohol. Some participants did not access a dentist and instead visited a doctor. Poor oral health leads to a loss of self-confidence.
21. Gray 2007	Ireland	In total, 237 dental records of patients using the homeless dental service were reviewed (163 men, 74 women).	Review of the age, accommodation, source of referral and substance use of homeless people using two dedicated dental clinics.	Hostels were a referral source. Hostels employing trained nurses incorporated oral health in the initial assessment and referred more clients. Referral could be encouraged by delivering outreach screening and health promotion services. Certain groups within the homeless population were underrepresented as patients. Services needs to target these underrepresented groups.
22. De Palma and Nordenram 2005	Sweden	Eight homeless adults who had used a dedicated homeless dental service.	Qualitative study using a phenomenological-hermeneutical method.	Themes described included the neglect of oral health and drug use, making oral health an insignificant concern unless there was an aesthetic effect. During periods of drug use, barriers preventing care are the cost of care, shame, bad memories of past dental experiences and fear.

Reference	Country	Participants	Design	Main findings
				The social cost of poor oral health was described as a loss of self-confidence and self-esteem, resulting in a reduction of the ability to function socially. Improving oral health, being treated with dignity and being respected by service providers leads to a recovery of oral health and of self-confidence. Dental service providers need to deliver emergency care at times of crisis and rehabilitative, preventive care when homeless people are in a positive and constructive phase.

2.3.4 Discussion

This review found several barriers prevented homeless people from accessing dental care; cost, fear of the dentist or dental treatment, not knowing where to find dental care, feeling embarrassed about their teeth, dental care being a low priority, previous unpleasant experiences at the dentist and having to be registered to receive government benefits. Cost was the most commonly reported barrier to receiving dental care and when it was removed as a barrier, the likelihood of seeking care improved. Previous bad experiences at the dentist included the perception of feeling unwelcome. Dental services provided by students were well-received by the homeless population. However, there is evidence that dental student attitudes' towards treating homeless people worsen as they progress through their dental course (Major, McQuistan, & Qian, 2016) and that despite working with underserved populations as part of their university training, dentists were unlikely to treat homeless people as part of their everyday practice (McQuistan, Kuthy, Qian, Riniker-Pins, & Heller, 2010).

Dental service providers should not operate in isolation but work collaboratively with other homeless service providers. This enables them to connect with the homeless population through an established network. The process of developing and maintaining collaborations and outreach programs was time-consuming, and constant effort was required to keep the services running effectively and efficiently.

In addition to being within the reach of homeless people, services need to be flexible, provide the opportunity to drop-in for an appointment and respond to the immediate dental needs of a homeless person. Drop-in appointments offer maximum flexibility, but may result in people having to wait, on the day, for an appointment, which, in itself, has been identified as a barrier to dental care (Daly, Newton, & Batchelor, 2010; Freeman et al., 2011; Jaafar, Jalalluddin, Razak, & Esa, 1992).

Homeless people were more likely to attend non-emergency dental appointments when they were moving on from homelessness, such as when they were enrolled in a rehabilitation program. It is therefore important to maintain a connection with the homeless by visiting shelters and centres regularly to provide oral health advice,

information about available dental services, screening examinations and oral health products.

This review was limited by the methodological quality of the studies included. The studies often had small convenience samples that increased the risk of selection bias. The transient nature of the homeless population made long-term follow up difficult. Studies were located in different countries, which meant that generalisations could not always be drawn regarding barriers and services. However, this review gave a valuable insight into how homeless people access dental services, the barriers they face, and the strategies used by service providers.

2.3.5 Conclusion

The uptake of dental services by homeless adults was affected by cost, fear of the dentist, the perceived attitude of dental service providers and dental care being a low priority. Improving access to dental services for the homeless population requires collaboration with other support service providers, dental care being provided near the homeless populations and flexibility by dental service providers.

2.3.6 Post script

The published systematic literature review was written to conform with the word limits and formatting requirements of the Australian Journal of Primary Health. Further details are included here to explain more fully the study's inclusion criteria, how the literature search was conducted, the reason that studies were excluded from the review and the process of data synthesis.

The inclusion criteria for studies in the systematic literature review were guided by the study's aims and the PICO framework. The PICO framework (Richardson, Wilson, Nishikawa, & Hayward, 1995) is commonly used to develop research questions. In the PICO framework, the (P) stand for population, the (I) for intervention, the (C) for comparison group and the (O) for the outcomes. The PICO framework was used to guide this review.

The population (P) included in this review were adults experiencing homelessness. Studies were included in the review if they reported information relating to adults who had made independent decisions about their oral health. Studies that involved dental services for homeless youth which included some adolescents but mainly reported on adults over the age of 18 years were included. For example, Rowan et al. (2013) reported the sample of youth attending an innovative dental hygiene clinic recruited in their study had an age range of 15-22 with a mean age of 19 years.

The interventions (I) that the review sought examine were programs that were used to promote oral health to homeless adults. The promotion of oral health included both preventive activities, such as providing oral hygiene advice and strategies that improved access to dental services which in turn lead to dental care. No comparison (C) group was included as none existed. Outcomes (O) of the programs had to record a description of participants' perceptions of the program or as quantitative data that demonstrated how the program was used.

Studies had to be written in English to enable the researchers to understand them. To be relevant to the Australian context, studies had to be based in developed countries. Studies published since the publication of the British Dental Association report and King and Gibson (2003) study on homelessness and oral health were included as they were likely to have incorporated strategies developed in response to those publications.

As reported in the published paper, the literature was searched using keywords and Boolean operators. The results for the MEDLINE via OVIDSP data base search are shown in Table 6.

Table 6: Search results for MEDLINE via OVIDSP data base

#	Searches	Results
1	homeless.af.	9444
2	roofless.af.	11
3	roughsleeper.af.	0
4	houseless.af.	4
5	hostel.af.	574
6	shelter.af.	4481
7	couchsurfer.af.	0
8	(homeless or roofless or roughsleeper or houseless or hostel or shelter or couchsurfer).af.	13593
9	oral health.af.	34893
10	dental.af.	567622
11	(oral health or dental).af.	573607
12	((homeless or roofless or roughsleeper or houseless or hostel or shelter or couchsurfer) and (oral health or dental)).af.	214
13	limit to english language	205
14	Published after 2004	113

The search results for each data base were uploaded into a single excel spreadsheet and duplicates were removed. The titles of the remaining studies in the excel file were then screened for relevance. Irrelevant studies were excluded, and the abstracts of the remaining studies were screened independently by two researchers. The results of the search are shown in a PRISMA flow diagram (Moher, Liberati, Tetzlaff, & Altman, 2009) Figure 3.

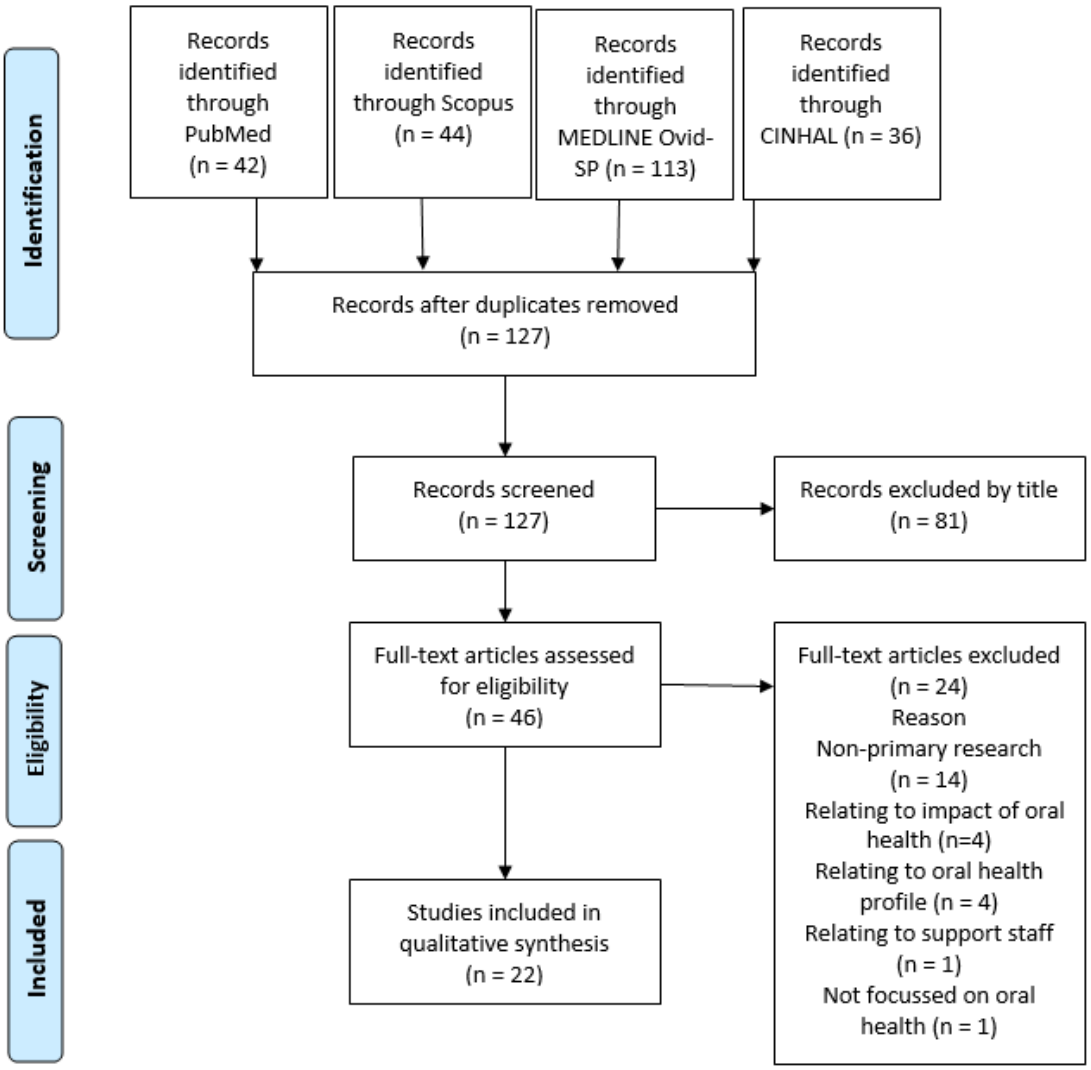

Figure 3: PRISMA flow diagram (Moher et al., 2009) for the systematic literature review search

As discussed in the published paper, two researchers met to discuss which studies should be included in the review and a third reviewer was consulted to resolve any disagreements. Included studies were read in full by two researchers, their quality was assessed using the MMAT tool and the results were recorded in Table 1-4. Data relating to where the study was located, who participated in the study, the type of sample recruited, the study design and the main findings were extracted, summarised and are recorded in Table 5.

Data were analysed both deductively and inductively. Analysis was undertaken by two researchers collaboratively. Information that answered one of the three research questions were extracted from the studies and grouped according to the question it answered. Data relating to places used by adults experiencing homelessness to seek dental care and advice and data relating to barriers to accessing dental care were listed and reported as a narrative description.

Data relating to strategies that existed to promote oral health were more extensive than those relating to where care and advice was sought and the barriers to dental care that existed. Data relating to strategies that existed to promote oral health underwent an additional inductive analysis. The data were grouped into themes, each theme was analysed and synthesised to produce a narrative description of common themes. This process resulted in the final narrative description of the common themes. This inductive analysis process resulted in the generation of the theme relating to the challenges associated with delivering dental services to homeless people. Since the publication of this systematic literature review, Stormon et al. (2018) have published an evaluation of a system integrated oral health intervention, undertaken in Brisbane, that aimed to improve access to dental care for homeless adults. The intervention used volunteer dental practitioners and dentistry students to conduct dental screening examinations for adults experiencing homelessness at community support organisation sites (Stormon, Pradhan, McAuliffe, & Ford, 2018). Following the screening, homeless adults needing further care were referred to a fixed-site dental clinic and were provided with care free-of-charge within a week (Stormon, Pradhan, et al., 2018). This strategy, of providing a “facilitated access pathway” to dental care, was successful with 85% of participants who had been screened attending their scheduled dental appointment (Stormon, Pradhan, et al., 2018, p. 49). The study reported that participants sought care and advice from non-dental professionals including doctors and hospital emergency departments. It also identified barriers to dental care including, fear, a lack of suitable facilities, a lack of transport and cost, with cost being the most commonly cited barrier (Stormon, Pradhan, et al., 2018).

Although the Stormon et al. (2018) study revealed barriers to dental care and a strategy that improved access to dental care for adults experiencing homelessness in Australia, it was capital-city based. There a lack of information about the barriers that prevent homeless adults from accessing dental care and the strategies that are used to improve their access to and uptake of dental care in non-capital city areas of Australia. To broaden the range of literature reviewed and increase the likelihood of discovering new information about strategies used to improve access to and uptake of dental care by individuals experiencing homelessness, a review of the grey literature was undertaken. The grey literature review is reported in the following section of this chapter.

2.4 Section 3: Strategies to improve access to and uptake of dental care by people experiencing homelessness in Australia: a grey literature review

The following grey literature review has been accepted for publication as: Goode, J., Hoang, H., & Crocombe, L. (2019). Strategies to improve access to and uptake of dental care by people experiencing homelessness in Australia: a grey literature review. *Australian Health Review.* doi:10.1071/AH18187. It was published online on 2 July 2019.

2.4.1 Introduction

In Australia, the oral health of people experiencing homelessness is poor and negatively affects their overall quality of life (Ford et al., 2014). Better oral health is associated with regular dental attendances for check-ups (Crocombe, Brennan, Broadbent, Thomson, & Poulton, 2012). Potentially then, improving access to dental care will reduce the oral disease burden of Australians experiencing homelessness. Peer-reviewed literature describing strategies used to improve access to and uptake of dental care among the homeless in Australia is limited (Goode, Hoang, & Crocombe, 2018). One recent study, based in Melbourne, evaluated an oral health program targeting people eligible to receive priority dental care at publicly funded dental clinics (Oldroyd, White, Stephens, Neil, & Nanayakkara, 2017). People experiencing or at risk

of homelessness were included in the program, which used “assertive outreach”, “in-reach” and “cross-team collaborations” (p. 1223) to encourage health promotion and deliver accessible dental care (Oldroyd et al., 2017). Another study, based in Brisbane, evaluated a program targeting homeless youth (Stormon, Pateman, Smith, Callander, & Ford, 2018). That program involved volunteer dental practitioners using portable dental equipment to provide dental care onsite at a youth services organisation. Clients were referred on for more advanced treatments (Stormon, Pateman, et al., 2018). To enhance the evidence available in the peer-reviewed literature, this study focused on the grey literature, which added the perspectives of government, business and charitable organisations.

Grey literature is described as “that which is produced on all levels of government, academics, business and industry in print and electronic formats, but which is not controlled by commercial publishers” (Farace, 1997). Grey literature includes, “grey data” (p. 220) sourced from websites, blogs and tweets (Banks, 2010), as well as “grey information” (p. 2) that is sourced from personal emails and notes (Adams et al., 2016). This study used Internet search engines and the Informit database to search the grey literature to reveal strategies used in Australia to improve access to and uptake of dental care by people experiencing homelessness. Internet searches retrieve large amounts of information (Godin, Stapleton, Kirkpatrick, Hanning, & Leatherdale, 2015). To manage this, novel search strategies, including limiting the time spent searching each site (Enticott, Buck, & Shawyer, 2018) and limiting the number of websites searched using a specific search engine (Godin et al., 2015), have been developed. Adams et al. (2017) adapted the taxonomy of grey literature of Kepes et al. (2012) to reflect the “shades of grey” (p. 435) within the grey literature, and recommended the source, outlet and retrievability and credibility of the grey literature be considered when assessing its quality (Adams, Smart, & Huff, 2017).

This aim of this study was to use the grey literature to describe and contextualise (Adams et al., 2016) strategies that are used to encourage dental visiting among people experiencing homelessness in Australia.

2.4.2 Methods

2.4.2.1 Locating relevant studies and information

The Informit database and the Internet search engines Google and Bing were searched using the keywords “homeless and oral and dental services”. Two searches were undertaken using the Google search engine, one restricted to sites that ended in “org.au” and one unrestricted. Each search was restricted to Australia and the dates 14 June 2008–14 June 2018 using the search engines’ region and date functions. The details of the first 100 websites listed by each search engine were recorded as a series of screenshots and entered into a Microsoft (Bellevue, WA, USA) Excel spreadsheet. This enabled the most important sites to be reviewed, kept the number of websites reviewed manageable (Godin et al., 2015) and created a permanent record of the websites included. One reviewer (J. Goode) conducted the searches, recorded them and populated the spreadsheet.

2.4.2.2 Selection and evaluation of studies and information

To be eligible for inclusion, the website had to describe a program or strategy that focused on improving access to or uptake of dental care by people experiencing homelessness. Websites were searched using the words “homeless” and/ or “dental” to locate relevant information. Links to other websites were followed, and the linked websites also reviewed for relevance. Two reviewers (J. Goode and H. Hoang) independently reviewed the listed websites and reached consensus about those to be included. Included websites were evaluated using the criteria of Adams et al. (2017) (Table 7).

2.4.2.3 Analysis and synthesis of data

Two reviewers (J. Goode and H. Hoang) independently analysed the website text and/or videos and met to agree on a description of the programs (Table 8) and the strategies commonly used. Common strategies were reported as a narrative description. The number of websites in the initial search referencing a program was also recorded. For example, the collaboration between Ballarat Community Dental Services and Ballarat Community Health (BCH) to improve the oral health of homeless

youth was reported in four websites: the BCH annual report 2017 (Ballarat Community Health, 2017), the Dental Health Services Victoria (DHSV) Public Oral Health awards 2016 (Dental Health Services Victoria, 2016c), the DHSV word of mouth newsletter (Dental Health services Victoria, 2017) and as a DHSV media release (Dental Health Services Victoria, 2016b).

Table 7: Evaluation of the grey information used to describe the organisation/program following the criteria of Adams et al. (2017)

All grey information used to describe the organisations or programs was classified as Tier 2 according to Adams et al. (2017), meaning it was generated from sources such as charity webpages, news stories and organizational reports, was moderately retrievable, could become irretrievable, and came from moderately credible sources such as health organizations, Universities, Governments and charities. ADHF, Australian Dental Health Foundation; DHSV, Dental Health Services Victoria; NMML Northern Melbourne Medicare Local; NSW, New South Wales; OHPPP, Oral Health Program for Priority Populations; PAC, Priority Access Card; RDNS, Royal District Nursing Service; SA, South Australia; UQ, The University of Queensland; UWA, University of Western Australia; Vic., Victoria; WA, Western Australia; WHOHT, Westmead Hospital Oral Health Team.

Organisation and program	Outlet control	Source expertise	No. websites describing or linking to the program found by the search (and references)
Homeless Connect events and The University of Sydney and WHOHT, NSW	Known	Known	4 (Sydney University Dental Association, 2015; The University of Sydney, 2015, 2018; Western Sydney Local Health District, 2017)
Ballarat Community Health Services and Ballarat Community Dental Services, Vic.	Known	Known	4 (Ballarat Community Health, 2017; Dental Health Services Victoria, 2016b, 2016c, 2017)
ADHF	Known	Known	2 (Australian Dental Association NSW Branch, 2018; Australian Dental Health Foundation, 2018)
Common Ground and the University of Adelaide, SA	Known	Known	5 (Bension Siebert, 2017; The University of Adelaide, 2012, 2018a, 2018b; University of Adelaide, 2018)
NMML and DHSV PAC, Vic.	Known	Known	4 (Dental Health Services Victoria, 2015a, 2015b, 2016a; State Government of Victoria, 2015)
Brotherhood of St Laurence, Vic.	Known	Known	1 (Brotherhood of St Laurence, 2018)
The Exodus Foundation, NSW	Known	Known	1 (The Exodus Foundation, 2018)
Kimberley Dental Team (Southern), WA	Known	Known	1 (Kimberey Dental Team, 2018)

RDNS and Merri Health, Vic.	Known	Known	4 (Dental Health Services Victoria, 2015a, 2016a; Merri Health, 2016, 2018)
South Eastern Sydney Local Health District, NSW	Known	Known	1 (South Eastern Sydney Local Health District, 2018)
South Australian Dental Service Homelessness and Oral Health Project, SA	Known	Known	2 (SA Dental Service, 2013, 2014)
St Patrick's Centre, Freemantle, WA	Known	Known	2 (Australian Dental Association WA Branch, 2018; Garbett, 2017)
St Vincent's Homeless Health Service, NSW	Known	Known	1 (St Vincent's Hospital Sydney, 2018)
Tzu Chi Foundation and UWA, WA	Known	Known	1 (The University of Western Australia, 2017)
UQ and Ozcare, Qld	Known	Known	1 (The University of Queensland, 2014)
Brisbane Youth Services and UQ, Qld	Known	Known	3 (Brisbane Youth Service, 2018; Edmistone, 2017; The University of Queensland, 2016a)
Ozanam House and DHSV, Vic.	Known	Known	1 (Vincent Care Victoria, 2018)
Carevan Foundation, Vic. and NSW	Known	Known	1 (Carevan Foundation, 2018)
Star Health OHPPP, Vic.	Known	Known	1 (Star Health)

Table 8: Name and description of the organisations and programs identified

ADHF, Australian Dental Health Foundation; DHSV, Dental Health Services Victoria; NSW, New South Wales; OHPPP, Oral Health Program for Priority Populations; PAC, Priority Access Card; RDNS, Royal District Nursing Service; SA, South Australia; UQ, The University of Queensland; UWA, University of Western Australia; Vic., Victoria; WA, Western Australia; WHOHT, Westmead Hospital Oral Health Team

Organisation or program	Description of the strategy or program
Homeless Connect events and The University of Sydney and (WHOHT), NSW	The events were a collaboration between multiple support organisations that showcased homeless support services. Volunteer dental practitioners and oral health students from the University of Sydney attended the annual Sydney Homeless Connect event. Oral hygiene advice was given by students and basic dental treatment was provided by volunteer dentists in a mobile dental van. Oral health therapists from WHOHT attended the Western Sydney Homeless Connect event and provided dental check-ups and oral health advice
Ballarat Community Health Services and Ballarat Community Dental Services, Vic.	Youth homelessness dental program targeted 10–25 year olds. A collaboration between a publicly funded community dental clinic, a local community health service and other homeless support services. Three times a year a portable dental clinic was set-up on-site at the community health centre to provide dental care and oral health education. Homeless clients were referred to the fixed-site community dental clinic for further treatment
ADHF	'Adopt a patient' and 'dental rescue days': practitioners volunteered to provide pro bono treatment in their own practices either for a day, a half day (dental rescue days) or in an ongoing capacity (adopt a patient). Support organisations identified people in need and the ADHF linked them to volunteer dental practitioners
Common Ground Adelaide and volunteer dental practitioners and the University of Adelaide, SA	Dental clinic located in an apartment complex for homeless people. The clinic was staffed by volunteer dental practitioners and students from the University of Adelaide, who provided care as part of an outreach teaching program
Northern Melbourne Medicare Local and DHSV (PAC), Vic.	The PAC was distributed to people experiencing homelessness by support agencies. The PAC facilitated immediate access to publicly funded dental services without the need to prove housing status. Treatment was provided free of charge
Brotherhood of St Laurence, Vic.	Faith-based charity linked clients to volunteer dentists and denture makers. Financial help was also offered to fund dental treatment
The Exodus Foundation, NSW	Faith-based charity had a dental clinic staffed by a volunteer dentist. Treatment was provided free of charge

Kimberley Dental Team (Southern), WA	Volunteer dental practitioners visited homeless shelters and community centres in southern WA
RDNS and Merri Health, Vic.	The RDNS youth homelessness program worked closely with the Merri Health Community Dental Clinic. District nurses referred clients to the dental clinic and supported clients by providing transport and attending dental appointments with them. Treatment was provided free of charge
South Eastern Sydney Local Health District, NSW	A dental clinic was located at the Mission Australia Centre in Surry Hills (Sydney, NSW). Treatment was provided free of charge by a specialist dental team
South Australian Dental Service Homelessness and Oral Health Project, SA	The service linked homeless people to local dental services
St Patrick's Centre, Freemantle, WA	An onsite dental clinic at a community support centre staffed by volunteer dental practitioners. The Australian Dental Association (WA branch) assisted with the recruitment of volunteers. Treatment was provided free of charge
St Vincent's Homeless Health Service, NSW	A multidisciplinary homeless health outreach team had an oral health component. The team visited community centres and coordinated dental care
Tzu Chi Foundation and the UWA, WA	Volunteer dental practitioners and UWA staff and students, used the Oral Health Centre of WA to provide care at a weekend Dental Fair. Support organisations recruited patients. Treatment was provided free of charge
UQ and Ozcare, Qld	Partnership between UQ and Ozcare. The Ozcare support organisation referred clients to the UQ dental and oral health teaching clinics. Treatment was provided free of charge
Brisbane Youth Services and UQ, Qld	Dental Rescue Week. Four times a year a pop-up dental clinic, staffed by volunteers, attended a local centre for homeless youth. Simple dental treatments were provided; referral was required for more complex care. The program was organised by UQ. Treatment was provided free of charge and no Medicare card was required
Ozanam House and DHSV, Vic.	Onsite dental clinic at the Ozanam Community Centre, Melbourne. The clinic was staffed by dental practitioners employed by DHSV. The dental clinic was co-located with other health services. Treatment was provided free of charge
Carevan Foundation, Vic. and NSW	Albury–Wodonga-based charity provided oral health packs for rough sleepers. Carevan organised care for dental emergencies at local public and private dental practices

Star Health OHPPP, Vic.	Assertive outreach included oral screening and oral health education in rooming houses, homeless agencies and parks. In-reach included transport to clinical sessions and times dedicated to treating priority populations (including homeless adults). A collaboration between support services and health teams. Treatment was provided free of charge

2.4.3 Results

From the initial 300 websites viewed, 38 contained information on one of 19 programs (Figure 4). Six programs were located in Victoria, four were located in New South Wales, three were located in Western Australia, two were located in Queensland, two were located in South Australia and two were located in more than one state; three programs targeted homeless youth (Table 8). No results were found in the Informit database. Common strategies are reported below.

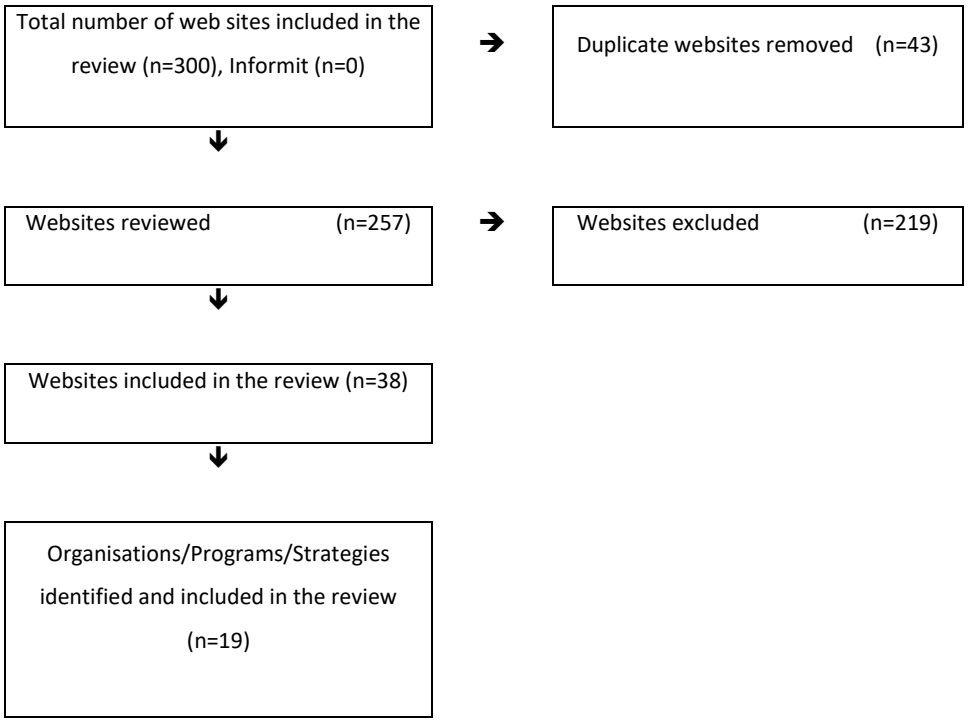

Figure 4: Search strategy

2.4.3.1 Providing free dental care

The programs reviewed provided dental care at no cost to the homeless individual. Care was provided by student dental practitioners, private dental practitioners and publicly funded community dental service employees. Dental practitioners provided care pro bono in their practices. Support agencies and charities identified people needing care and linked them with practitioners willing to provide care at no cost (Australian Dental Association NSW Branch, 2018; Brotherhood of St Laurence, 2018; Carevan Foundation, 2018). Dental practitioners also volunteered to provide dental

care in dental clinics located at community centres and support agency sites (Kimberey Dental Team, 2018; St Partick's Community Support Centre, 2018; The Exodus Foundation, 2018; The University of Queensland, 2016a). Volunteers were recruited through dental professional organisations (Australian Dental Association NSW Branch, 2018; Australian Dental Association WA Branch, 2018) and directly by charities (Brotherhood of St Laurence, 2018; St Partick's Community Support Centre, 2018; The Exodus Foundation, 2018). The Australian Dental Health Foundation charity was dedicated to linking people identified by support organisations as needing dental care with volunteer dental practitioners (Australian Dental Health Foundation, 2018).

2.4.3.2 Providing in-reach care

Strategies to provide care within the reach of homeless individuals included providing dental care onsite in fixed clinics located at community centres (South Eastern Sydney Local Health District, 2018; St Partick's Community Support Centre, 2018; The Exodus Foundation, 2018; University of Adelaide, 2018; Vincent Care Victoria, 2018). Clinics were managed and staffed by employees of publicly funded dental services (South Eastern Sydney Local Health District, 2018; Vincent Care Victoria, 2018), volunteers (St Partick's Community Support Centre, 2018; The Exodus Foundation, 2018) and by combinations of volunteers, university teaching staff and student dental practitioners (University of Adelaide, 2018). The regular block booking of sessions at publicly funded community dental clinics (White, Oldroyd, & Nanayakkara, 2013) and providing transport to appointments were also ways of putting dental services within-reach of homeless individuals (Merri Health, 2018; White et al., 2013).

2.4.3.3 Outreach strategies

Outreach clinics used portable dental equipment to provide basic dental care at support organisation sites that then facilitated referral to fixed-site clinics for additional care (Ballarat Community Health, 2017; Kimberey Dental Team, 2018; The University of Queensland, 2016a). Outreach care was also provided at special events. Homeless Connect events in Sydney involved various homeless support agencies coming together to showcase their services.

(http://www.sydneyhomelessconnect.com/events/ accessed: 21 August 2018) (Western Sydney Local Health District, 2017). Volunteer dental practitioners, and the University of Sydney staff and students, provided dental advice and basic treatments in a mobile dental van at one event (The University of Sydney, 2018), and publicly funded clinic employees did dental check-ups and provided dental advice at another (Western Sydney Local Health District, 2017).

Other events focused only on providing dental care. In Queensland, during Dental Rescue Week, the University of Queensland and volunteer dental practitioners used portable dental equipment to provide care at the Brisbane Youth Services site (The University of Queensland, 2016a). A collaboration between homeless support organisations, the University of Western Australia (UWA) and the Tzu Chi Foundation saw UWA staff, students and volunteer dental practitioners provide care during a weekend Dental Fair held at the UWA dental teaching facilities (The University of Western Australia, 2017). In Victoria, outreach care was provided by publicly funded dental clinic staff using portable dental equipment at a youth services site (Ballarat Community Health, 2017).

Assertive dental outreach teams visited places where homeless people tend to gather, such as hostels and parks, and provided dental screenings, gave oral health advice and facilitated further appointments at fixed-site clinics (White et al., 2013). In Sydney, a multidisciplinary outreach team that aimed to help homeless people access health services also included oral health services (St Vincent's Hospital Sydney, 2018).

2.4.3.4 Collaboration with support organisations

All the dental services included in this review had a collaborative working relationship with a network of homeless support organisations. In South Australia, around 50 homelessness support organisations and the South Australian Dental Service established a program that enabled homeless people to bypass publicly funded dental clinic waiting lists and streamlined access to free dental care (SA Health, 2016). Partnerships between support organisations and university dental schools saw student

dental practitioners providing care as part of their training (The University of Queensland, 2016b; University of Adelaide, 2018).

It was important that clear pathways to care existed to enable support workers to organise timely dental appointments for their clients (SA Health, 2016). Block booking of appointment sessions at community dental clinics at known times enabled homeless clients to opportunistically drop in for an appointment (White et al., 2013). Dental clinics established at community centres were co-located with other health and support services to provide holistic health care (Common Ground, 2018; South Eastern Sydney Local Health District, 2018; St Partick's Community Support Centre, 2018; The Exodus Foundation, 2018; Vincent Care Victoria, 2018).

In Melbourne, the Priority Access Card (PAC) enabled holders to bypass waiting lists and receive free dental care at publicly funded community dental clinics (Dental Health Services Victoria, 2015b; State Government of Victoria, 2015). Cards were distributed by support organisations; staff either gave them directly to homeless clients or clients collected them from organisation waiting areas (Dental Health Services Victoria, 2015b; State Government of Victoria, 2015). Nurses from the Royal District Nursing Service working with homeless youth linked clients to local community dental clinics and accompanied them to their appointments (Merri Health, 2018), suggesting that a relationship with a support worker was an important factor in the uptake of dental care.

2.4.4 Discussion

This study found that several key strategies were associated with programs that facilitated access to dental care by people experiencing homelessness in Australia, including providing care at no cost, reaching out to people to provide care in a familiar environment and working collaboratively with other health and support organisations to provide well-defined pathways to care.

In Australia, cost is a major barrier to the uptake of dental care by people experiencing homelessness (Ford et al., 2014; Parker et al., 2011; Stormon, Pateman, et al., 2018).

Dental care was provided free of charge under the programs included in this study and is provided free of charge to eligible homeless adults in Victorian publicly funded community dental clinics (Dental Health Services Victoria, 2018b). The provision of free care is also enabled by dental practitioners volunteering their services, which reduces the cost of providing dental services (Stormon, Pateman, et al., 2018). The use of volunteers to run dental programs for the homeless is well established and has proven sustainable over the long term (Doughty, Stagnell, Shah, Vasey, & Gillard, 2018). However, simply providing care at no cost does not guarantee increased dental attendances, and additional strategies are required (Ford et al., 2014).

The strategy of reaching out and providing care outside of traditional fixed-site dental clinics is important in overcoming the barriers to dental care. Caton et al. (2016) highlighted the need for initial contact with a dental service to occur in a "non-threatening environment" (p. 68). Special homeless-dedicated events create such an environment and facilitate access to dental treatment (Conte et al., 2006; Della Torre, 2009; Doughty et al., 2018); they also provide an opportunity to give dental assessments, dental hygiene advice and information about accessing local dental services (Simons et al., 2012). However, it is unclear whether undertaking outreach dental assessments with referral on for further care facilitates further dental attendances. In the UK, one homeless-dedicated dental service found it was unsuccessful (Simons et al., 2012), whereas another dental service's program was designed around outreach visits to community centres with subsequent referral on to the fixed-clinic site (Caton et al., 2016). Although dedicated outreach dental services are more costly to provide than services in fixed-site clinics (Simons et al., 2012), outreach events run by service providers and staffed by volunteers can be cost-effective (Stormon, Pateman, et al., 2018).

Collaborations between support service organisations and dental service providers are critical for program success (Simons et al., 2012) and are reported internationally (Abel et al., 2013; Caton et al., 2016; Coles et al., 2013; Lashley, 2008; Pritchett et al., 2014; Rowan et al., 2013; Seirawan et al., 2010; Simons et al., 2012). Programs that co-locate fixed-site dental clinics with other homeless-dedicated health or homeless support

service providers facilitate dental visiting and put care in-reach of homeless individuals (Caton et al., 2016; Rowan et al., 2013). Internationally, collaborations between universities and homeless support service providers see student dental practitioners provide dental care for homeless individuals that is well received (Lashley, 2008; Pritchett et al., 2014; Rowan et al., 2013; Seirawan et al., 2010). Establishing and maintaining good working relationships between dental service providers and homeless support service providers requires time and effort (Caton et al., 2016; Simons et al., 2012).

This study was limited by the search strategy, which relied on search engine algorithms to locate the websites, and by the quality of information provided on the websites. It is likely that not all existing programs were located by the search and that only successful programs were reported on the websites. Most websites did not contain evidence-based material, which increased the risk of bias. However, the Internet is used as a source of health information by homeless people (Barman-Adhikari & Rice, 2011) and it is feasible that the websites included in this study could have been used as an information resource. In addition, this study described rather than evaluated programs and strategies, which decreased the risk of bias (J. Adams et al., 2016). Thus, this study provides a pragmatic insight into the programs and strategies used in Australia to improve access to and the uptake of dental services by people experiencing homelessness.

2.4.5 Conclusion

To improve access to and uptake of dental care by people experiencing homelessness, dental service providers must work collaboratively with support organisations, well-defined care pathways must be established, and care must be provided free of charge. Volunteers, students, private dental practitioners and publicly funded dental services provide care in community-based clinics, teaching clinics, in-reach clinics and through outreach programs. The importance of support provided through personal relationships should not be underestimated as a facilitator in the uptake of care.

2.4.6 Post script

The strict word limits required for publication resulted in some of the finer details of this study not being published. A further explanation of the search and an expanded discussion of the results are provided here.

The search using the Google and Bing search engines resulted in 300 websites being identified. Of these sites, 219 were excluded from the review. The reasons for exclusion are recorded in a PRISMA flow diagram (Moher et al., 2009), Figure 5.

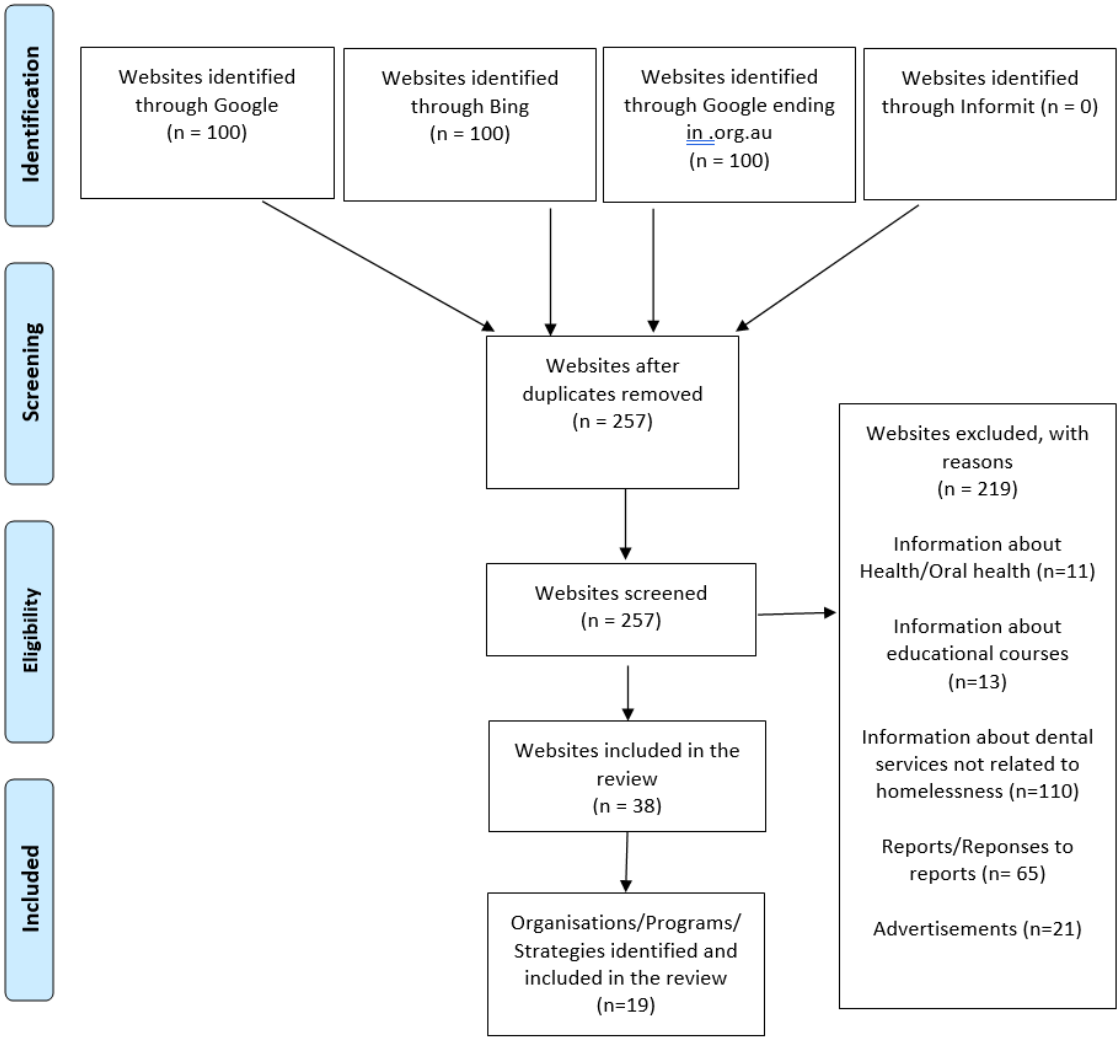

Figure 5: PRISMA flow diagram (Moher et al., 2009) for the grey literature search

The websites included in the review reported events and programs that were designed to encourage dental visiting among people experiencing homelessness in Australia. It is assumed that from the organisers point of view, the events and programs were successful as homeless individuals attended or used them. However, none of the websites included in the review contained evidence-based material. Consequently, the results of the review are likely to be subject to publication bias as only outcomes considered newsworthy would be published on the internet (Cochrane, 2020). Additionally, the results are likely to be subject to reporting bias as only programs and events resulting in a positive outcome were likely to be published on the internet (Cochrane, 2020).

Arguably, strong recommendations should not be made based on non-evidence-based material that is susceptible to bias. However, at the time this review was published, only a few Australian based studies had been published that investigated strategies to improve access to and uptake of dental care by homeless individuals (Oldroyd et al., 2017; Stormon et al., 2019). Consequently, evidence-based information about strategies that could be successfully used to improve access to and uptake of dental care for homeless individuals was limited. Although the information considered in this grey literature review was not-evidence-based and was subject to biases, it reflected strategies that were actively being used to improve access to and the uptake of dental care by homeless individuals. It is argued then, that at the time of publication, the grey literature review provided the best evidence of the strategies that could be used to improve access to and uptake of dental care for homeless individuals and that without it, knowledge of those strategies would have remained limited.

In summary, this grey literature review has identified that, in Australia, most strategies designed to improve access to, and uptake of dental care were utilised in capital cities. Successful strategies relied on collaborations with homelessness support services. One commonly used strategy was that of using outreach services to take dental care outside of the traditional fixed-site dental clinic setting. This represents a change from the traditional model of dental service delivery as it shifts the focus away from the needs of the dental service provider and instead focusses on the needs of the patient,

who in this case, is the person experiencing homelessness. This concept of shifting the focus towards the patient and away from the service provider aligns well with the Levesque et al. (2013) patient-centred access to primary healthcare conceptual framework. Because of this strong alignment, the Levesque et al. (2013) conceptual framework was used to guide this study and is discussed in detail in the following section.

2.5 Section 4: Conceptual framework

This study is underpinned by the Levesque et al. (2013) patient-centred access to primary care framework. The framework is valuable in understanding access to health care for vulnerable groups (Kurpas et al., 2018) and underpins Australia's National Oral Health Plan 2015-2024 (COAG Health Council Oral Health Monitoring Group, 2015).

Levesque et al. (2013) defined access as "the opportunity to reach and obtain appropriate health care services in situations of perceived need" (Levesque, Harris, & Russell, 2013, p. 4). Using this definition, access does not only reflect the act getting to a service provider and having treatment performed, it also reflects a service user's judgement about the appropriateness of the care they receive. Factors impacting access to health care can be broadly dividing into those relating to the organisation of health services and those relating to the individuals who wish to use the service. Factors relating to the organisation of health services include the location of service and the ease of use of the services, for example, a service may be easier to access if it has extended opening hours (Penchansky & Thomas, 1981). Personal factors include the ability to travel to the health service, the affordability of the service and the personal and interpersonal relationships between service providers and service users (Penchansky & Thomas, 1981). Figure 6. shows how Levesque et al. (2013) summarised an individual's access to care and pathway through health care (Levesque et al., 2013, p. 4. Figure 1).

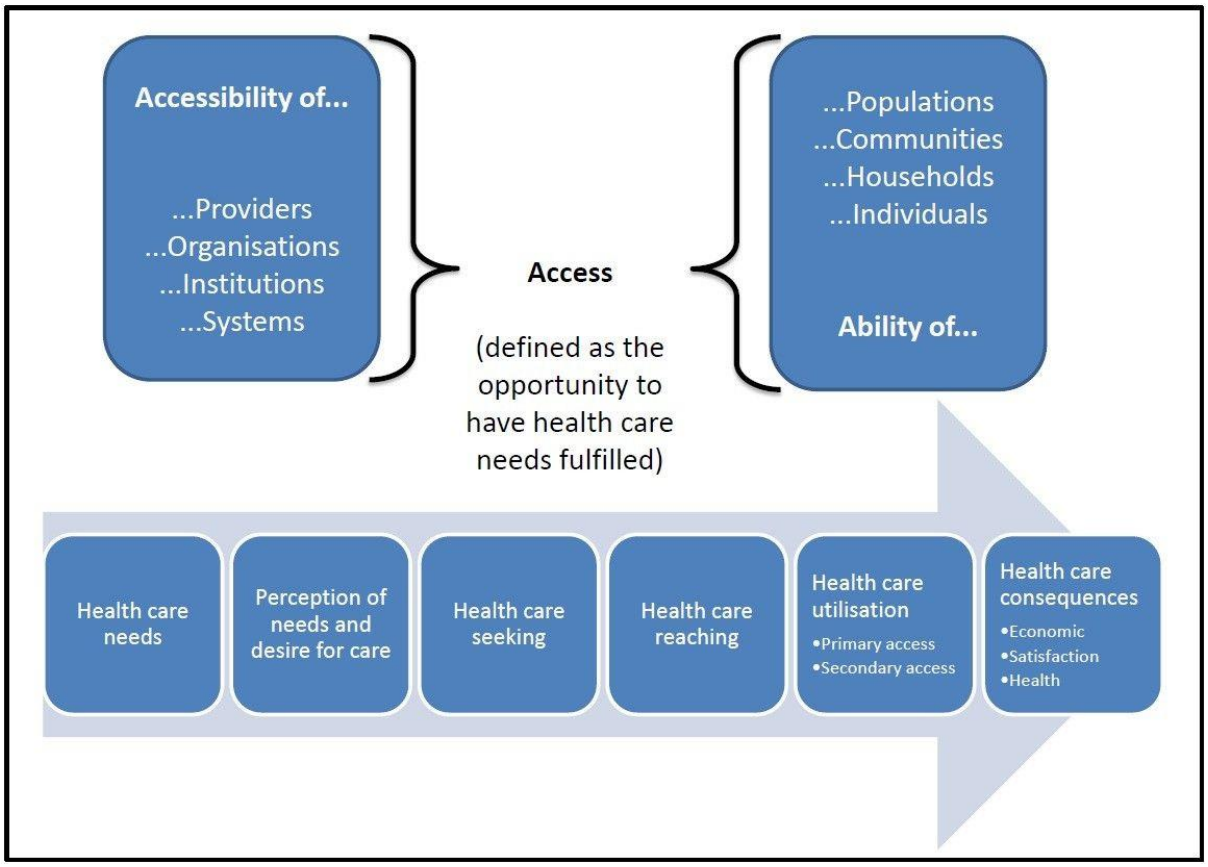

Figure 6: Summary of an individual's access to and pathway through primary health care (Levesque et al., 2013, p. 4. Figure 1).

Levesque at al. (2013) conceptualised a framework that considers personal and health service organisational factors across five domains. Personal factors related to accessing a health service include an individual's ability to perceive a need for care, desire care, travel to get care, pay for care and engage with a health service (Levesque et al., 2013). Health service organisational and structural factors include; the approachability of a health service, the cultural acceptability of the service, the location and ease of use of the service, the affordability of health care and the appropriateness of the services provided (Levesque et al., 2013). The consequences of accessing and receiving health care are also considered, not only in terms of health outcomes but also in terms of personal economic impact and how satisfied a person was with their health care (Levesque et al., 2013). Figure 7. provides a summary of the Levesque at al. (2013) framework of access to primary health care (Levesque et al., 2013, p. 5. Figure 2).

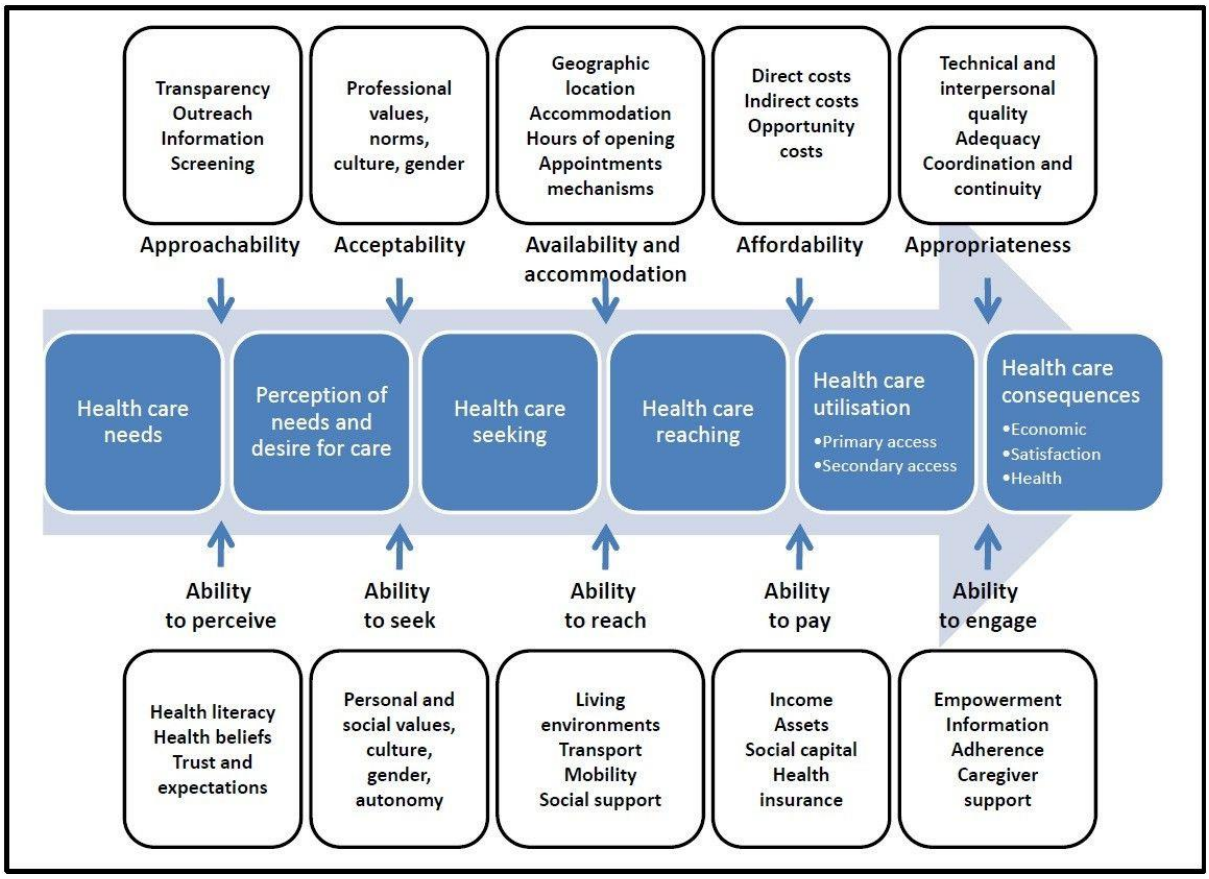

Figure 7: Summary of the Levesque et al. (2013) framework of patient centred access to primary healthcare (Levesque et al., 2013, p. 5. Figure 2).

2.6 Chapter 2 Summary

The information in this chapter was presented in four sections.

The first section added further context to the study by providing information about oral health, OHRQoL and the links between oral health, general health and mental health.

The second section included a peer-reviewed systematic literature review of the white literature that highlighted where homeless adults seek dental care and advice and the barriers they experience when they seek dental care. It also highlighted the strategies that dental service providers use to enable access to dental care for homeless adults. This review revealed that information about barriers to dental care and strategies that facilitate access to dental care in Australia is limited.

The third section included a peer-reviewed literature review of Australian grey literature that described the strategies used by dental service providers to facilitate access to and the uptake of dental care by people experiencing homelessness. This review provided a different perspective from that of the white literature review. It revealed that most dental service providers utilising strategies designed to improve access to and uptake of dental care by people experiencing homelessness are capital city based.

The fourth section described the Levesque et al. (2013) conceptual framework. The framework is a useful tool for understanding how barriers to care affect patient pathways through health care systems (Levesque et al., 2013) .

To improve the oral health of adults experiencing homelessness who live in a non-capital city area of Victoria, it is necessary develop strategies to improve their access to and uptake of dental care and improve their oral health literacy by promoting oral health (COAG Health Council Oral Health Monitoring Group, 2015). There is a paucity of information regarding strategies that could be used to improve access to and uptake of dental care by homeless adults in non-capital city areas of Australia. To develop such strategies, a better understand the barriers to dental care experienced by homeless adults is required. The following chapter will detail the design of this study which aims to design a dental program to improve access to and uptake, of dental care and promote oral health to adults experiencing homelessness in a non-capital city area of Victoria.

3 Research Methodology

3.1 Introduction

The information presented in the previous chapter identified that adults experiencing homelessness have poor oral health. The barriers that prevent adults experiencing homelessness from accessing dental care were reviewed and the strategies that are employed to facilitate their access to dental care were highlighted. A lack of knowledge of the specific barriers faced by adults experiencing homelessness who live outside of Australian capital cities was identified. Programs facilitating access to dental care for homeless adults were mostly located in Australian capital cities. A paucity of evidence regarding how access to dental care and oral health literacy could be improved for adults experiencing homelessness who live in non-capital city areas was identified.

In this chapter the aim and objectives of this research will be presented, and the research design selected to achieve the aim and objectives will be explained. The explanation of the research design will begin with a description of the ontological and epistemological beliefs that underpin it. The influence these beliefs have on the research design will be discussed. Following that, the methodological approach selected to achieve the research aim and objectives will be justified. An explanation of how the selected research design will achieve the aim and objectives of the study will be provided. The location selected for the research will be justified and the methods used described. The chapter concludes with a discussion about the ethical issues that surround the research.

3.2 Research aim

The aim of this research was to design a program to be used by dental service providers in a non-capital city area of Victoria that would facilitate visiting for dental check-ups and preventive dental care by adults experiencing homelessness and enable the promotion of oral health. It had the following objectives:

1. Explore the care pathways and experiences of homeless adults seeking dental care in a non-capital city area of Victoria.

2. Explore the factors influencing access to dental care by homeless adults living in a non-capital city area of Victoria and discover where opportunities exist to promote oral health.

3. Design and explore the feasibility of a dental program that can be used in a non-capital city area of Victoria to promote preventive dental visiting and improve oral health amongst adults experiencing homelessness.

3.3 The philosophical beliefs underpinning this research

Research studies are designed specifically to answer a research question or find a solution to a problem and each design is underpinned by a set of basic philosophical beliefs. The philosophical beliefs underpinning the research design guide both the process and rhetoric of the research (Creswell, 2013, p. 21). For every research design, the philosophical beliefs underpinning it, and the way in which data is collected, interpreted and presented should be made clear to allow others to see how the researcher understands the world (Denzin & Lincoln, 2018, p. 18). Traditionally, three branches of philosophy, ontology, epistemology and methodology were seen to underpin each research design (Denzin & Lincoln, 2018, p. 16). The first philosophical consideration, ontology, has been described as “the study of what exists, and how things that exist are understood and categorized” (O'Leary, 2010, p. 5). A researcher’s ontological beliefs explain how they view the nature of reality, primarily whether the researcher believes there is a single reality or that multiple realities can exist (Creswell, 2015, p. 16).

It is the researcher’s ontological belief that multiple realities exist and that they are generated within human consciousness. Realities are constructed in response to a person’s experience of tangible objects, such as other people, and intangible things such as dreams and imaginings and change as a result of the person’s interaction with the world. Thus, a person’s experience of the world and the meanings they associate

with it, their reality, is unique to them and is subjective. Experiences and meanings are contained within consciousness as memories and as a person's memory of an experience changes over time, so does reality. For example, what was at the time a happy encounter with a friend can be remembered as a negative experience by a person suffering from depression. Thus, reality is subjective and can change over time. These beliefs and the beliefs underlying this research align with a relativistic ontology.

The second philosophical consideration, epistemology, explains how we gain "legitimate knowledge of the world" (O'Leary, 2010, p. 5). Epistemological beliefs guide what evidence can be collected and used to create knowledge (Creswell, 2015, p. 122). They explain what "counts as knowledge" within a study (Creswell, 2013, p. 21). The researcher's belief is that objects, both real and imagined, are experienced and given meaning through human consciousness and that memories of experiences can be recorded through conversations and used to generate data that can be analysed to produce knowledge. Thus, face-to-face interviews and group discussions can be used to record data. The interaction between the researcher and the research participant or group results in knowledge that is co-constructed. These epistemological beliefs, and those underlying this research, align with constructionism (Crotty, 1998).

The third philosophical consideration, methodology is described as "the strategy, plan of action, process or design lying behind the choice and use of particular methods" (Crotty, 1998, p. 3). The methodology employed in this study is qualitatively driven and will be explained in detail throughout the rest of this chapter.

3.4 Research paradigms

Paradigms are described as a "basic set of beliefs that guide action" (Guba, 1990, p. 17). Five major paradigms have been described; "positivism, postpositivism, critical theory, constructivism and participatory" (Lincoln, Lynham, & Guba, 2018, p. 97). Within the positivist paradigm, there is a belief that a single reality and a single truth exist and can be understood (Lincoln et al., 2018, pp. 110-114). The truth can be discovered objectively using scientific methods and cause-and-effect is used to verify hypotheses and determine laws of nature (Lincoln et al., 2018, pp. 110-114). Within

the post-positive paradigm, a single reality is believed to exist, but the truth can only ever be approximated (Creswell, 2013, p. 36). Cause-and-effect are determined by scientific methods, results are interpreted using statistics and are validated by peer review (Lincoln et al., 2018, pp. 110-114). The post-positive paradigm is described as having reductionist, logical and empirical qualities (Creswell, 2013, p. 24). In contrast, within the critical theory paradigm, research aims to create social change, reality is seen as a struggle for power between the privileged and the oppressed and is found through the study of social structures (Lincoln et al., 2018, pp. 110-114). Whereas, within the constructivist paradigm, multiple subjective realities, constructed through personal social experiences, are believed to exist (Creswell, 2013, p. 36). Here, data are collected using naturalistic methods such as discussions and research findings are co-created by the researcher and the research participants (Lincoln et al., 2018, pp. 110-114). Within the participatory paradigm, multiple realities are seen to exist in the interaction between a person and their surroundings and research is seen as a collaboration between researchers and participants (Lincoln et al., 2018, pp. 110-114).

3.5 Methodological approaches to research

Traditionally two distinct methodological approaches to research have been described; qualitative and quantitative (O'Leary, 2010, p. 105). Qualitative approaches to research recognise the existence of multiple realties, collect subjective data in natural settings, use inductive as well as deductive logic, and acknowledge the impact of the research on both the researcher and research participants (O'Leary, 2010, p. 113). Qualitative approaches also recognise that social and political power relationships are used to address social issues and can lead to transformative action (Creswell, 2013, p. 26). Liamputtong states that qualitative research is a “legitimate and appropriate tool for studying people’s subjective experiences and understanding the meanings and interpretations individuals have within the context of their lives” (Liamputtong, 2013, p. 23). Qualitative methodological approaches align with the constructivist, critical theory and participatory paradigms (Lincoln et al., 2018, p. 110). In contrast, quantitative approaches to research are objective, use deductive logic, test hypotheses and employ scientific methods to generate data that are statistically analysed (O'Leary,

2010, p. 106). Quantitative approaches align with the positive and post-positive paradigms (Lincoln et al., 2018, p. 110). Because different philosophical beliefs underlie the qualitative and quantitative approach to research, different criteria are used to assess the quality of qualitative and quantitative research. Rigour, demonstrated by the credibility, transferability, dependability and confirmability of a research study (Lincoln & Guba, 1985, 1989), is used to measure quality in qualitative research whereas reliability and validity are used to assess the quality of quantitative research (Liamputtong, 2013, p. 24).

3.6 Qualitative methodological approaches

Many qualitative methodological approaches to research have been described and new ones are constantly being developed (Creswell, 2013, p. 7). Creswell (2013) described five main approaches; narrative research, phenomenological research, grounded theory research, ethnographic research and case study research. Narrative research can take the form of either a biographic study, an auto-ethnographic study, a life history study or an oral history study (Creswell, 2013, p. 74). In narrative research, data is collected from documents or via interview and is analysed thematically and sometimes chronologically to produce a narrative that reflects a life-story (Creswell, 2013, pp. 104-105). The phenomenological research approach seeks to understand the essence of the experience of a phenomenon (Creswell, 2013, p. 104). It can be descriptive, in the case of transcendental phenomenology, or interpretive, as in the case of hermeneutic phenomenology (Laverty, 2003). Data is collected via face-to-face interview and, in the case of hermeneutic phenomenology, from documents as well (Creswell, 2013, p. 105). Transcendental phenomenological studies result in a description of “the essence of the experience” (Creswell, 2013, p. 105). In contrast, grounded theory collects data from individual interviews and uses a specific coding process, involving open coding, axial coding and selective coding, to analyse and produce a theory from the data (Creswell, 2013, p. 105). Whereas, ethnography seeks to explore and explain how a cultural group understands and make sense of the world through the eyes of members of the cultural group (O'Leary, 2010, p. 115). Ethnographers spend time immersed in the cultural group in order to develop a “rich

understanding" of the group (O'Leary, 2010, p. 115). The last approach, the case study, collects data from multiple sources to investigate a single situation, which can be a person, group of people or occurrence, to produce a detailed description of that situation (case) (Creswell, 2013, pp. 104-105).

However, strictly adhering to only one of the traditional five approaches can be restrictive and may not provide the best way of answering the research question. Qualitative researchers often adopt a flexible approach to research design and are open to "multiple perspectives" and "borrowing" from other paradigms (Lincoln et al., 2018, p. 113). Arguably, this could be described a pragmatic approach. However, pragmatism in health research is associated with a mix of both qualitative and quantitative methods (Polgar & Thomas, 2013). This research will explore and describe the experiences and perceptions of participants rather than attempt to quantify them.

In summary, this study will not strictly follow one of the main qualitative approaches to research but will instead use multiple qualitative methods to achieve its aim and objectives. It is founded on a relativist ontology, a constructionist epistemology and broadly aligns with the constructivist paradigm. The objective of exploring the care pathways and experiences of homeless adults seeking or receiving dental care will be achieved by recruiting participants with a lived experience of that phenomenon and by using a phenomenological approach. Qualitative description will be used to explore homelessness and housing support workers' perceptions of the factors that influence homeless adults' access to dental care and discover where opportunities to promote oral health exist. Using a qualitative multimethod design and incorporating the perspectives of both homeless adults and homelessness and housing support workers will give a better understanding of the care pathways and the factors influencing them than could be achieved using only one of the perspectives (Hesse-Biber, Rodriguez, & Frost, 2015, p. 16).

3.7 Rigour

Rigour is described as "the quality of qualitative inquiry" and "a way of evaluating qualitative research" (Liamputtong, 2013, p. 24). Rigour, and how it can be assessed

and demonstrated, is much debated (Morse, 2018, pp. 799-803). In this research, a study's credibility will reflect its trustworthiness and will be demonstrated by clearly indicating how the research design and participants were chosen for the study (Liamputtong, 2013, p. 25). The transferability of a study will reflect its generalisability to other situations or groups and will be demonstrated by providing a thorough description of the setting and methods utilised in the study (Liamputtong, 2013, p. 26). The strict adherence to the methods described in the research design will ensure that the philosophical assumptions underpinning the design persist throughout the study and will demonstrate the dependability of the research (Liamputtong, 2013, p. 26). Clear explanations of how data collected are linked to the study findings will illustrate the confirmability of the research (Liamputtong, 2013, pp. 26-27). The strategies used to demonstrate the credibility, transferability, dependability and confirmability of this research are; providing a detailed description of the methodology on which the research design is based; providing a justification for the research design and selection of participants; providing a detailed explanation of the methods used to collect and analyse data; peer review of the analysis undertaken; member checking of the preliminary research results; triangulation of the findings with other similar studies (Liamputtong, 2013, pp. 32-35).

3.8 The phenomenological approach

In this current study, a phenomenological approach was utilized to achieve the objective of exploring the care pathways and experiences of homeless adults who seek dental care in a non-capital city area of Victoria. Phenomenology looks to; find the "meaning of people's experience towards a phenomenon" (Creswell, 2013, p. 123) and explore "phenomena as they present themselves in individuals' direct awareness and experience" (O'Leary, 2010, p. 120). A phenomenological approach was selected to "provide an in-depth understanding of how a group of people experience a phenomenon" (Creswell, 2013, p. 82). In this case, the phenomenon of seeking or seeking and receiving dental care. Gaining a deep understanding of this experience and the meanings associated with it will facilitate the design of an ideal pathway to dental care. A phenomenological approach was used by De Palma and Nordenram (2005) to

explore the perceptions of homeless adults towards oral health and dental treatment (De Palma & Nordenram, 2005).

Phenomenology was developed as both a philosophy and methodology by Edmund Husserl (1859-1938) (Laverty, 2003). It is founded on the understanding that one's awareness of an experience is a product of the conscious mind and that knowledge can be generated from a person's consciousness of their experiences (Polkinghorne, 1989). Many approaches to phenomenology have been developed from Husserl's original work and these are broadly classified as "transcendental/descriptive; interpretive/hermeneutic/existential; or social" (McWilliam, 2010, p. 230). Both interpretive/hermeneutic and transcendental/descriptive methods are used in health research and provide insight into how healthcare is experienced by clients and practitioners (McWilliam, 2010). However, the methodology underpinning each approach is different.

One of the fundamental differences between transcendental/descriptive and hermeneutic/interpretive phenomenology is the concept of the phenomenological reduction (Laverty, 2003). The phenomenological reduction requires the researcher to reflect on and acknowledge any preconceptions or foreknowledge they have about the phenomenon and then suspend or 'bracket' those beliefs to allow the phenomenon to be viewed in an unbiased way (Laverty, 2003).

A transcendental phenomenological approach was chosen for this study to provide a description of the phenomenon of experiencing the dental care pathway as an adult who is experiencing homelessness rather than an interpretation of the pathway. The method chosen was Moustakas's modification of van Kaam's method. Creswell (2013) described this method as using "systematic steps in the data analysis procedure" and having clear "guidelines" for structuring the written report (Creswell, 2013, p. 80). Health research using phenomenological methods has been criticised for failing to link the method employed with the philosophy of the phenomenological approach that underpins it (McWilliam, 2010, p. 234). The following section will explain the link

between the philosophy of transcendental phenomenology and Moustakas's modification of van Kaam's method of phenomenological research.

3.8.1 The philosophical basis of transcendental phenomenology

The philosophy of transcendental phenomenology is complex and uses an unfamiliar vocabulary to describe the concepts on which it is based (Sokolowski, 2000). The words and concepts that underpin the philosophy of phenomenology are explained below in basic terms.

3.8.2 The natural attitude

During day to day living humans adopt what Husserl described as the "natural standpoint" (Husserl, 2012, p. 51). The natural standpoint is also referred to as the "natural attitude" (p. 42) and shall be referred to as such from now on in this thesis (Sokolowski, 2000). Within the natural attitude, things are observed and given meaning, thoughts and situations are interpreted, and explanations and reasons are found to make sense of the world (Sokolowski, 2000, p. 42). The entity that observes, interprets, explains, gives meaning and makes sense of the world is the human self, or ego (Sokolowski, 2000, p. 44). The self, or ego, of every individual correlates with the world and has a unique relationship with it. Thus, two people observing the same view of a river valley from a viewing platform will interpret and understand the view differently. It may provoke happy childhood memories for one person and the fear of being lost and alone for the other.

3.8.3 The phenomenological attitude

To study human experiences using transcendental phenomenology, a researcher must abandon the natural attitude and consciously adopt the phenomenological, or transcendental attitude (Sokolowski, 2000, p. 48). The phenomenological attitude is central to the transcendental phenomenological approach (Laverty, 2003). It is the state in which one's beliefs and ideas about a phenomenon are suspended (Sokolowski, 2000, p. 49). Husserl used the Greek word "epoche" to describe this state (Moustakas, 1994, p. 26). The transition from the natural attitude to the phenomenological attitude is achieved through the methodological process of the

phenomenological reduction (Sokolowski, 2000, p. 49) which is also described as the "process of epoche" (Moustakas, 1994, p. 22). During this process, "preconceptions, beliefs and knowledge of the phenomenon" are "set aside" or bracketed (Moustakas, 1994, p. 22). Bracketing involves reflecting on the phenomenon in question, identifying any ideas and personal beliefs held about it, listing those ideas and beliefs and then placing parentheses or brackets around them. This process enables researchers to become "detached observers" (Sokolowski, 2000, p. 48) and describe the phenomenon without personal bias or influence (Giorgi, 1997).

Having undertaken the phenomenological reduction and adopted the phenomenological attitude, thoughts and feelings brought into consciousness are exactly as they were intended in the natural attitude and reflect the relationship between the self, or ego, and the world. In the phenomenological attitude, each intended thought, or idea, that comes into consciousness, represents a view, or horizon, of the self's, or ego's relationship with the world.

In practice, it is difficult to achieve the phenomenological attitude and the state of epoche, and techniques that achieve bracketing are poorly described (Chan, Fung, & W., 2013). However, a researcher's awareness of their own preconceptions and beliefs about a phenomenon and their commitment to set them aside during data collection and analysis helps prevent those beliefs from influencing the research and enhances the validity of the study (Chan et al., 2013).

3.8.4 Intentionality

In phenomenology, intentionality relates to the "conscious relationship we have to an object" (Sokolowski, 2000, p. 8). Our consciousness of an object, real or imaginary, correlates our consciousness (self, or ego) with that object (the world) (Sokolowski, 2000, p. 9). When we are conscious, we are always conscious of something, and that 'consciousness of something' connects humans with the natural world (Giorgi, 2005). This objective-subjective approach represented a change from that of Descartes who believed that human awareness was internal (Sokolowski, 2000, p. 9).

3.8.5 Neoma and neosis

The neoma and neosis are associated with intentionality, always occur together (p. 69) and relate to meaning (Moustakas, 1994, p. 70). The neoma is described as “any object of intentionality, any objective correlate but considered from the phenomenological attitude” (Sokolowski, 2000, p. 60). It can be considered as “that which is experienced” (Ihde, 1977, p. 43). The neosis on the other hand, refers to the intentional act of “perceiving, feeling, thinking remembering or judging” (Moustakas, 1994, p. 69) and can be considered as “the way in which the what is experienced, the experiencing or act of experiencing” (Ihde, 1977, p. 43). Moustakas states that together the neoma and neosis “bring into being the consciousness of something” (Moustakas, 1994, p. 69).

When we view an intended object in the natural world, we see a unidirectional view of the object, the object is never viewed as a whole (Giorgi, 2005). For example, when viewing a storybook in the natural world, we can only view the book from one aspect, the front or back, open or closed. Each unidirectional view of the book we experience in the natural world represents a neomatic phase which is compounded and synthesised to produce the ideal form of the whole object in consciousness. Thus, when we become conscious of an object, it always appears as a whole, in its ideal form (Moustakas, 1994, p. 70).

The ideal form is a collection of all our previous experiences of the object and contains the meanings which are associated with the object. For example, when remembering a favourite childhood storybook, we may experience feelings of happiness and security that the memory of the book brings with it. The book in our remembering is the whole book, it is complete; we can remember its type face, its illustrations and even the feel of the pages as we turned them. This ideal form of the object (book) and the feelings that remembering it bring reflect the meanings that are hidden within the ideal object (book) and form an essential part of the experience of remembering the book. In this example, the neoma is the book as it is intended whilst we assume the phenomenological attitude and the act of remembering the book is the neosis. If we were to judge the content of the book, the neoma would remain the same but the

neosis would become the act of our judging rather than remembering. Thus, thoughts, perceptions, judgements and rememberings of an object or experience contain the meaning and essences of that phenomenon can be discovered through phenomenological analysis (Husserl, 2012, p. 1).

3.9 Research design

3.9.1 Overview of the research design

This section introduces the research design by way of a brief overview. The research followed a two-phase design.

Phase 1 employed a qualitative multimethod research design to fulfil objectives 1 and 2 of the research. A transcendental phenomenological method, involving adults with experience of homelessness, aimed to provide a deep understanding of the care pathways experienced by homeless adults and fulfil objective 1. The second method, a qualitative descriptive study involving homelessness and housing support workers, aimed to provide a broad understanding of the factors influencing access to dental care by adults experiencing homelessness and fulfil objective 2 of the research.

Factors identified in the transcendental phenomenological and qualitative descriptive studies that affected access to dental care locally were categorised using a patient-centred access to primary health care framework (Levesque et al., 2013). This categorisation was used to inform Phase 2 of the study.

Phase 2 of the study fulfilled objective 3 of the research. It resulted in the design of a dental program that could be used in a non-capital city area of Victoria to promote preventive dental visiting and improve oral health amongst adults experiencing homelessness. The dental program was presented to a group of local stakeholders at a small group workshop. Stakeholders were consulted about the feasibility of the program and provided feedback on its design. Stakeholders were asked what would

need to be done to get the dental program up and running. The nominal group technique (NGT) was used to gain the consensus of the stakeholders.

A diagrammatic summary of the research design is shown in Figure 8. and a detailed description of the research design and methods undertaken is presented throughout the rest of this chapter.

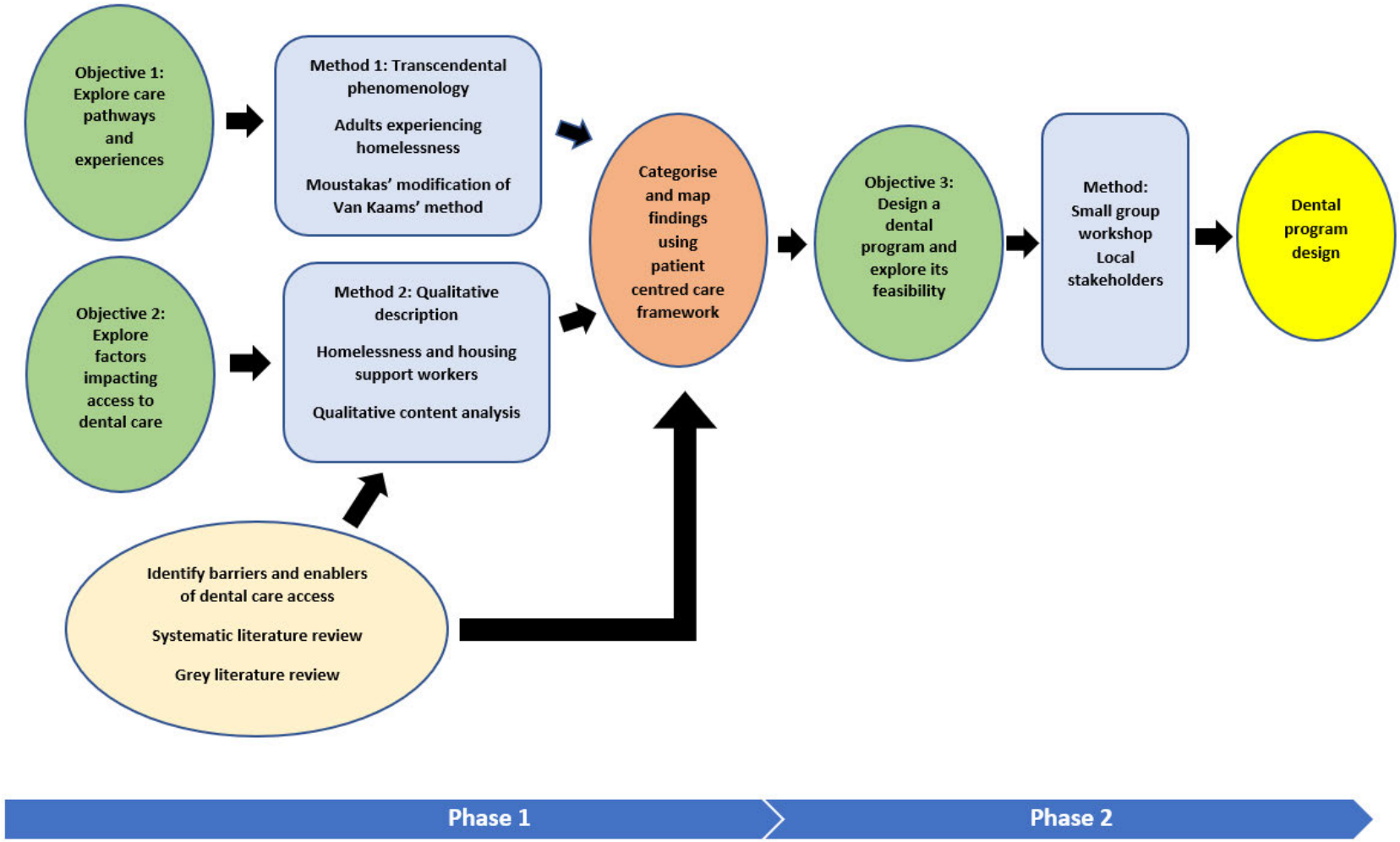

Figure 8: Summary of the multimethod research design

3.9.2 The location of the research study

The research study aimed to design a program to be used by dental service providers in a non-capital city area of Victoria that would facilitate visiting for dental check-ups and preventive dental care by adults experiencing homelessness and enable the promotion of oral health. The Australian Statistical Geography Standard (ASGS) was used to define the non-capital city area. The ASGS is a framework used to report Australian statistical data (Australian Bureau of Statistics, 2016b). It divides Australia into 358,122 mesh blocks which are grouped together to form statistical areas (SAs) (Australian Bureau of Statistics, 2016b). There are four types of SA, SA level 1, SA level 2, SA level 3 and SA level 4 and each reflects a larger geographic population (Australian Bureau of Statistics, 2016b). There are 351 SA level 3 areas in Australia (consisting of a cluster of SA level 2 areas). SA level 3 areas are designed to represent a regional centre with a population of between 30,000 and 130,000 people (Australian Bureau of Statistics, 2016b).

The location of the research study was a SA3 regional Victorian centre that, in 2018, had a population of approximately 99,000 people (Australian Bureau of Statistics, 2019). On census night in 2016, the regional centre had, based on SA3 level data, a population of 87,346 (Australian Bureau of Statistics, 2016a) and of these, 271 individuals identified as being homeless (Australian Bureau of Statistics, 2018. Table 5.3). In the regional centre, during 2017-2018, 2,480 individuals received support from a SHS (Australian Institute of Health and Welfare, 2019f). At that time, approximately 23% of clients registered with a Victorian SHS were under the age of 18 years meaning that an estimated 1,761 adults received support from a SHS in the regional city (Australian Institute of Health and Welfare, 2019a). Because each of these adults was homeless, or at risk of homelessness, they were entitled to priority access to the local public-dental service and were the focus of this research study (Dental Health Services Victoria, 2018b).

The regional centre was chosen because it had a population large enough to ensure the anonymity of participants. Additionally, the large population increased the likelihood of being able to recruit adults experiencing homelessness into the study. The regional centre was well served by private dental practices and had a 31-chair public-dental clinic meaning that a lack of dental practitioners working in the area was not a barrier to care.

3.9.3 Recruitment of Homelessness-Support Organisations

An e-mail requesting support for the study (Appendix 1) was sent to four agencies that provided support to adults experiencing homelessness in the local area. The agencies included an organisation that focussed on helping women and children experiencing family violence and homelessness, a faith-based charity that supported people in crisis, the local community-health service and the main homelessness and housing organisation that serviced the area. All agencies responded to the email and the homelessness and housing support organisation expressed interest in supporting the study. The researcher met with the research manager of the organisation and provided an explanation of the study. After reviewing the study protocol and ethics application, the research manager provided a letter of support for the study which was included in the final ethics application (Appendix 2).

Once ethical approval for the study had been granted, the research manager organised a meeting between the manager of support services, the manager of general housing, the project and administration officer for housing, himself and the researcher. At the meeting the researcher provided an overview of the study and the group discussed how it could be facilitated. There was agreement at the meeting that staff members would be interested in participating in the study and that it was an important topic. The managers agreed to letting the researcher contact staff members about the study, put up flyers to advertise the study on agency premises and to undertake focus group and participant interviews on agency

premises. To maximise the chances of recruiting participants whilst minimising the impact on the organisation, a six-month time frame was set for recruitment and data collection.

3.9.4 Study Inclusion and Exclusion Criteria

The inclusion criteria for the study were that a person had to be 18 years of age or over and was able to provide consent to participate. Persons under the age 18 were excluded from the study as they could not give consent to participate. Persons also needed to be able to speak and understand English. Non-English speakers were excluded as the researcher could only speak and understand English. To facilitate a focus group in more than one language, all participants and the facilitator need to be fluent in all the languages spoken or a trained translator needs to be employed (Liamputtong, 2013, p. 80). A trained translator would also be required to assist with a face-to-face interview with a non-English speaker. Due to the financial limitations of this study, it was not possible to employ a translator.

3.9.5 Phase 1: A qualitative multimethod design

The objectives of Phase 1 of the study were to explore the care pathways and experiences of homeless adults as they seek dental care in a non-capital city area of Victoria, explore the factors influencing homeless adults' access to dental care and discover where opportunities to promote oral health exist. A multimethod rather than single method research design was selected to achieve these objectives because it allowed for a different perspective to be gained of the phenomena being explored (Hesse-Biber et al., 2015, p. 16). The multi analytic multimethod design consisted of two qualitative studies, undertaken at the same time, that produced independent data sets which were analysed separately and whose results supplemented each other (Hesse-Biber et al., 2015, p. 15). The design had a primary (QUAL) method and a secondary (qual) method (Hesse-Biber et al., 2015, p. 15).

A transcendental phenomenological method was selected as the primary (QUAL) method to give an in-depth description of the care pathways and experiences of homeless adults who seek dental care in a non-capital city area of Victoria (Hesse-Biber et al., 2015, p. 11). Qualitative description was selected as the secondary (qual) method to provide a broad understanding of the factors influencing access to dental care by homeless adults living in a non-capital city area of Victoria and discover where opportunities exist to promote oral health. Multimethod designs produce a richer understanding than either method would in isolation (Hesse-Biber et al., 2015, p. 15). The two studies ran concurrently as they were both exploratory in nature and neither was dependent upon the results of the other. Selecting a multimethod design enables the research findings to be triangulated which enhances their credibility (Liamputtong, 2013, p. 30).

3.9.6 Method: Transcendental phenomenology

A transcendental phenomenological approach was utilized to achieve the objective of exploring the care pathways and experiences of adults experiencing homelessness seeking dental care in a non-capital city area of Victoria. Interviews were to be conducted by the researcher who had previous training and experience in undertaking conversational interviews.

3.9.7 Sample size

In qualitative research, the number of participants required to produce a sample is dependent upon both the context and epistemological understandings that underpin the study (Boddy, 2016; Sim, Saunders, Waterfield, & Kingstone, 2018). Sample sizes have been described as “seldom-written-about-but-much-questioned” (Boddy, 2016, p. 426) and have been the focus of recent debate (Sim et al., 2018). Determining sample sizes a priori does not sit well within research underpinned by non-positivist methodologies (Boddy, 2016; Sim et al., 2018) that seek to explore the depth an issue (O'Reilly & Parker, 2012). However, a priori estimates of sample

sizes are a necessary part of qualitative research that are required by ethics committees and funding bodies (Sim et al., 2018).

Sim et al. (2018) reported that four methods are currently used to determine sample sizes in qualitative research; 'rules of thumb' which consider sample sizes used in similar studies; 'conceptual models' which look to the specific aims of the study, 'numerical guidelines' that use the analysis of previous study results to determine the sample size at which data saturation occurred and 'statistical formulae' which use statistical analysis to determine a priori the size of a sample required (Sim et al., 2018). This study will use the rule of thumb method which suggests that a sample size of between three and ten people is required for a descriptive phenomenological study (Creswell, 2015, p. 77). Other phenomenological studies in homelessness and oral health have used a sample size of eight people (De Palma & Nordenram, 2005). In qualitative research it is the richness of data recorded, rather than the size of the sample, that is important (Fusch & Ness, 2015).

In qualitative research, data is collected until it is saturated. Data saturation occurs when "no new information is obtained" from analysed data (Morse, 1995, p. 147) Consequently, data saturation is dependent on the quality of data collected, the sampling method used and the size of the sample (Liamputtong, 2013, p. 19). Data saturation "cannot be accurately predicted in advance" and participants are recruited into a study until data becomes saturated. To enable this, data collection and data analysis occur concurrently (Kerr, Nixon, & Wild, 2010, p. 272).

3.9.8 Recruitment for the transcendental phenomenological study

The aim of recruitment in the transcendental phenomenological study was to interview participants who had experienced homelessness whilst living outside of Melbourne, could recall their experiences of wanting to receive or receiving dental care whilst homeless and were prepared to share their experiences with the research team (Moustakas, 1994, p. 107). The SHS was an ideal site to recruit adults

experiencing homelessness because it was part of the Opening Doors framework and was not a specialist service meaning there were no restriction on who could access homelessness and housing support from the service.

Recruiting adults experiencing homelessness into dental research studies is difficult (Coles et al., 2013; De Palma & Nordenram, 2005). Because of this, a convenience sample was selected for the transcendental phenomenological study. A convenience sample uses participants who are within easy reach and are ready and able to take part in the study (Liamputtong, 2013, p. 15). Although convenience samples have been criticised for being a cheap and lazy alternative to other sampling methods (Tracy, 2012, p. 135), they are useful when participants are hard to reach and recruiting a random or representative sample would be impossible (Parker et al., 2011). Convenience samples are commonly used in studies investigating homelessness and oral health (Caton et al., 2016; Chi & Milgrom, 2008; Coles et al., 2011; Coles & Freeman, 2016; Collins & Freeman, 2007; Conte et al., 2006; Hill & Rimmington, 2011; Lashley, 2008) and have been used in recent Australian studies (Ford et al., 2014; Parker et al., 2011).

The study was advertised via a printed flyer (Appendix 3) which was put up in the reception area of the SHS and client interview rooms. Because it was anticipated recruitment of participants into the transcendental phenomenological study would be difficult, SHS staff were also encouraged, in an e-mail sent by SHS management, to give the details of the study to their clients. A snowballing technique was also employed in which participants were asked if they knew anyone else who may be interested in the study and if they did, they were asked to provide the details of the study and the contact details of the researcher to that person. Snowball sampling was selected because it is useful when recruiting participants from hard-to-reach groups (Tracy, 2012, p. 136). Using participants to recruit participants, and asking potential participants to contact the researcher, also reduced the risk of people being coerced into taking part in the study.

Four months into the study, no participants had been recruited into the transcendental phenomenological study. Staff were again encouraged by SHS management to give the details of the study to their clients and a smaller version of the flyer was printed. It was thought that the smaller version would be more convenient and more likely to be taken away than the A4 size version.

3.9.9 Data collection in transcendental phenomenology

In a transcendental phenomenological study, data is generated by the sharing of recollections during conversational, face-to-face interviews (Moustakas, 1994, p. 103). The researcher herself was to conduct the face-to-face interviews. Researchers undertake data collection in the state of epoche (Moustakas, 1994, p. 116). Thus, before the interview starts, the interviewer reflects on the phenomenon being investigated and brackets any preconceived ideas they have about it. Interviews are in-depth and require engagement in conversation rather than the simple asking of questions and recording of responses (Minichiello, Aroni, & Hayes, 2008, p. 84).

Asking participants to recollect their experiences of wanting to receive or receiving dental care dental care whilst experiencing homelessness and living in a non-capital city area of Victoria brings into consciousness those experiences. The recollected experiences come into consciousness in an ideal form, they contain the sum of the neomatic phases and also have a neotic value. Thus, the recounted experience of the phenomenon will contain an objective description of what happened in during the experience, associated with the neoma, and a subjective description related to the neosis. The subjective description may, for example, contain judgements about how well or poorly the participant was spoken to or perceptions about what they felt was about to happen. Thus, transcripts of audio-recorded conversational face-to-face interviews contain data that can be analysed to reveal the essences and meanings of the experience of the phenomenon of wanting to receive or receiving dental care dental care whilst experiencing homelessness and living in a non-capital

city area of Victoria (Moustakas, 1994, p. 120).The meeting rooms at the SHS were selected as the site for interviews because they were familiar to clients who used the service and because they could be easily accessed by staff working in the organisation if a participant became distressed. Meeting rooms afforded a level of safety for the researcher as they were fitted with duress alarms. It was a requirement of The University of Tasmania Human Research Ethics Committee (HREC) that interviews took place in rooms fitted with duress alarms where support staff were able to intervene if required. The Research Manager at the SHS offered to be onsite during client interviews to provide support if participants became upset or distressed.

3.9.10 Data analysis in transcendental phenomenology

Moustakas's modification of Van Kaam's method is used to analyse interview data in transcendental phenomenological studies (Moustakas, 1994, p. 120). Data analysis was to be undertaken by the researcher herself. The analysis results in a description of the essences and meanings that a group associates with the phenomenon under study (Moustakas, 1994, p. 144). Data analysis is undertaken in a state of epoche and begins with the researcher transcribing the audio-recorded interviews. The first step of Moustakas's modified method of Van Kaam's analysis is "listing and preliminary grouping" of the data (Moustakas, 1994, p. 120). Within the transcripts, statements relevant to the phenomenon are highlighted and listed in a process of "horizonalization" (Moustakas, 1994, p. 120). Each statement is an "horizon of the experience" (p. 120) and each horizon is given equal value in the analysis (Moustakas, 1994).

The second step of the analysis is the "reduction and elimination" of data (Moustakas, 1994, p. 120). In this step each horizon is reviewed to determine if it contains an invariant constituent of the experience. An invariant constituent has two properties'; it reflects something that was necessary for the experience to

occur and; it can be abstracted, labelled and explained (Moustakas, 1994, p. 120). Relevant statements that are not invariant constituents, or overlap and repeat other statements, are eliminated from the analysis. Statements that are unclear are redefined.

The third step of the analysis is to cluster and thematically sort the remaining invariant constituents to reflect the "core themes of the experience" (Moustakas, 1994, p. 121).

The fourth step of the analysis is to check the validity of the themes generated, and the invariant constituents that constitute them, against the participants' transcripts to ensure they reflect the experience of the phenomenon. Themes and invariant constituents that do not reflect a participant's experience of the phenomenon are removed and validated themes are labelled and described (Moustakas, 1994, p. 121).

The fifth step of the analysis is to write an individual textural description of each participant's experience of the phenomenon using the validated invariant constituents and themes identified in their transcript (Moustakas, 1994, p. 121). The resulting description of what happened during the experience includes excerpts from the participant's transcript and is related to the neoma.

The sixth step of the analysis results in an individual structural description of each participant's experience (Moustakas, 1994, p. 121). The individual structural description explains the "underlying dynamics of the experience" (p. 135) by "presenting a picture of the conditions that precipitate" (p. 35) and are associated with it (Moustakas, 1994). The individual structural description is developed using the process of imaginative variation.

The seventh step in the analysis is to write a "textural-structural description of the meanings and essences of the experience" (p. 121) for each participant (Moustakas, 1994). The textural-structural descriptions detail each participant's experience of

the phenomenon and explain how the themes and invariant constituents relate to the meanings and essences described.

The final step in the analysis is to develop of a composite description of the experience for the group. This is a synthesises of the group's individual textural-structural descriptions and describes the meanings and essences that the group associate with the phenomenon being explored (Moustakas, 1994, p. 120).

This transcendental phenomenological method is perfectly suited to fulfil the objective of exploring the care pathways and experiences of homeless adults who seek dental care in a non-capital city area of Victoria. Data is collected during conversational interviews that are focused on the experience of seeking or seeking and receiving dental care. Meanings associated with the experience are inductively generated from the collected data during the analysis. Moustakas's modification of Van Kaam's method of data analysis provides a transparent link between the data and the research findings which enhances the study's confirmability. The findings generated provide an in-depth explanation of the phenomenon experienced and the meanings and essences associated with it. Thus, the transcendental phenomenological method selected will result in an in-depth explanation of the experiences, meanings and essences a group of homeless adults' associate with the phenomenon of seeking or seeking and receiving dental care in a non-capita city area of Victoria which will fulfil the requirements of the primary method in the qualitative multimethod research design.

3.9.11 Method: Qualitative description

Qualitative description is a research method that aims to describe the "facts of the case in everyday language" (Sandelowski, 2000, p. 336). In qualitative descriptive studies purposive samples are recruited and data is collected via focus groups and individual interviews. Data are analysed using qualitative content analysis and a description rather than interpretation of collected data is presented (Sandelowski, 2000). A qualitative descriptive study utilising staff working at the local

homelessness and housing support organisation was selected to explore the factors influencing access to dental care by homeless adults living in non-capital city areas of Victoria and discover where opportunities exist to promote oral health. Focus groups were selected as the method of data collection.

Focus groups "provide insights into how people in the groups perceive a situation" (Krueger & Casey, 2015, p. 80). They consist of people sharing a common characteristic who participate in a discussion about a certain topic to provide qualitative data which is analysed to give a better understanding of that topic (Krueger & Casey, 2015, p. 6). In this study, the common characteristic was that of supporting adults experiencing homelessness whilst living outside Melbourne. Focus groups have been used previously to explore homeless people's dental behaviours and experiences (Rowan et al., 2013; Van Hout & Hearne, 2014) and to develop successful health promotion activities (Krueger & Casey, 2015, p. 11). The benefits of a group discussion are that it can trigger forgotten memories and facilitate a flow of ideas from group members (Tracy, 2012, p. 167) resulting in insights that could not be gained by individual face-to-face interviewing (Liamputtong, 2013, p. 75).

The views of support staff provide valuable insight into how local dental services are utilised (Caton et al., 2016; Simons et al., 2012). Support staff influence the care pathways taken by people experiencing homelessness (Caton et al., 2016; Coles & Freeman, 2016; Simons et al., 2012) and collaborations between support organisations and dental service providers are essential in improving access to dental care (Simons et al., 2012). Working alliances between dental team members, homelessness support organisation staff and homeless individuals influence the success of oral health initiatives targeting homeless individuals (Beaton, Anderson, Humphris, Rodriguez, & Freeman, 2018). All staff were invited to take part in the study which enabled the views of staff working in both the housing and homelessness support programs to be explored.

3.9.12 The number and size of focus groups

A purposive sample of staff working in the housing and homelessness support organisation was chosen to fulfil the aim of recruiting participants with experience of giving support to adults who were experiencing homelessness and living in a non-capital city area of Victoria. Participants were recruited from the SHS that was supporting the research study.

The study was advertised using fliers located in communal staff and client intake areas and staff also received an invitation via an e-mail sent by the project and administration officer for housing. The email provided a brief explanation of the project and an electronic copy of the flyer and the dates and times of the focus group meetings. Focus groups of five to eight people are considered ideal as small groups may fail to stimulate much discussion or become dominated by one or two members and large groups can be difficult to manage (Krueger & Casey, 2015). Despite focus groups of 5-8 people being ideal, focus groups can be successfully run with as few as three participants (Tracy, 2012, p. 167). When multiple small focus groups are used, data from the focus groups are analysed as a single unit of datum (Dunn, Shattuck, Baird, Mau, & Bakker, 2011).

Five focus groups were scheduled to be held in the homelessness organisation's meeting rooms. Focus groups were organised on different days and at different times to maximise the opportunities for staff to participate (Dunn et al., 2011). The point of data saturation was used to determine the number of focus groups held. Data are saturated when recording new data does not add any new concepts or themes to the results (O'Reilly & Parker, 2012).

Focus groups can be restrictive if they are held at a specific time that may be unsuitable for some potential participants. To include everyone who wished to participate in the study and maximise the amount of data collected, staff who were unable to attend a focus group but wished to participate in the study were given the option of attending a semi-structured interview.

3.9.13 Data collection in the focus groups

The focus groups were facilitated by the researcher herself. The focus groups were designed to stimulate discussion within the group about the factors influencing their clients' access to dental care and how improving oral health could be promoted (Ayala & Elder, 2011). A topic guide (Appendix 4) was used to keep the discussion focussed and to ensure that each focus group was asked the same questions. The topic guide was developed using the results of a systematic literature investigating homeless adults' access to dental services (Goode et al., 2018) and a grey literature review investigating strategies used to improve homeless adults' access to dental services in Australia (Goode, Hoang, & Crocombe, 2019). Questions were open ended, focus group members were encouraged to elaborate on their responses and the moderator ensured that every member of the group had an opportunity to voice their opinion (Krueger & Casey, 2015).

Each focus group was audio recorded using a Sony IC digital recorder. Recording the focus group discussions enabled the researcher to listen to the focus group discussion at a later time when she could focus her attention on the questions and responses (O'Leary, 2010, p. 203). The digital audio recordings were uploaded to NVivo 11 qualitative data analysis software (QSR International Pty Ltd) on a University of Tasmania password protected computer and the original Sony IC recorder recording was deleted. The recordings were transcribed verbatim into a word document by the researcher and the document was uploaded into the NVivo 11 program (QSR International Pty Ltd). Data from the audio recordings, transcripts and researcher's journal were included in the analysis. A summary of the findings was sent to participants who had requested a copy in their demographic information form (DIF) (Appendix 5) and were asked if they had any thoughts or comments about the findings.

3.9.14 Data analysis of focus group data

A qualitative content analysis (QCA) method was chosen as the analysis method for the focus group data. QCA has been defined as "the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes and patterns" (Hsieh & Shannon, 2005, p. 1278). The focus group meetings were held on different dates and each transcript was analysed as soon as practicable after the meeting. The QCA began with familiarisation of the data set as a whole (Hsieh & Shannon, 2005). The audio-recordings were listened to several times after the meeting and then transcribed verbatim by the researcher. Being present at the focus groups, listening to the audio recordings and subsequently transcribing them enabled the researcher to become familiar with the data set as a whole. Audio recordings and transcripts of the focus groups were uploaded to NVivo 11 (QSR International Pty Ltd) by the researcher and the file was shared with the other research team members.

Two members of the research team, the researcher and one of her supervisors undertook the analysis. Because the topic guide was structured around questions specifically relating to known barriers and enablers of dental care, and strategies for promoting oral health, a combined deductive and inductive approach to the data analysis was used which is characteristic of qualitative approaches to research (O'Leary, 2010). Three initial codes (themes), barriers to care, enablers of care and promoting oral health were set up in the NVivo11 file (QSR International Pty Ltd) to reflect the structure of the topic guide. Each transcript was subsequently analysed line by line and passages of text containing key concepts or ideas were identified and sorted into the three initial themes. Data were then grouped into sub themes and data which could not be categorised as one of the three initial themes or a sub themes of one of the three initial themes were given a new code and a new theme was generated. The identification, interpretation and sorting of data into pre-determined themes reflected a process of deductive analysis whereas, the generation of new themes reflected an inductive process. The two researchers

undertaking the analysis independently and separately coded the data and met regularly to discuss their coding. The concept of data saturation was used to determine when enough data had been collected. Data saturation occurred when no new subthemes were created, and every existing subtheme contained data (passages of text) generated during two or more focus groups.

Following the identification and sorting of the data from the transcripts, each node contained a "meaningful cluster" (p.1279) of information (Hsieh & Shannon, 2005). The data within each node was then analysed and synthesised to produce a qualitative description of the common themes it contained. Using direct quotes from the transcripts in the written descriptions to illustrate the common themes grounds the themes in the text of the transcripts and links the findings back to the data (Hsieh & Shannon, 2005). Clearly linking research findings to the data is a strategy used to demonstrate the confirmability of the findings and the rigour of the study (Liamputtong, 2013, p. 26).

A summary of the initial findings was sent via e-mail to participants who had requested them in their DIF (Appendix 5). Participants were invited to feedback their thoughts and comments about the preliminary findings as a member checking exercise. Asking participants to check the preliminary results of a study and confirm they are accurate helps demonstrate the rigorousness of a study (Liamputtong, 2013, p. 32).

The collection of co-created data in response to open-ended questions, the use of the QCA analysis method and the presentation of the research findings as a qualitative description that included participants' own words was consistent with the constructionist epistemology that underpinned this study.

3.9.15 Phase 2: Designing a dental program and exploring its feasibility

Phase 2 of the study was designed to fulfil the third research study objective: to design and explore the feasibility of a dental program that could be used in a non-

capital city area of Victoria to promote preventive dental visiting and improve oral health amongst adults experiencing homelessness. This objective was achieved using a two-step process, the first step involved the design of the dental program and the second the program's evaluation to determine its feasibility. The following section will explain the methods underpinning the first part of the process, the design of the dental program. This will be followed by an explanation of the method underpinning the second part of the process, the evaluation of the feasibility of the dental program. The procedures undertaken will then be described.

3.9.16 The design of the dental program

The dental program was designed using the Levesque at al. (2013) conceptual framework for patient-centred access to health care as a scaffold.

3.9.17 Evaluating the feasibility of the dental program

The feasibility of the dental program was evaluated by local stakeholders and study participants at a small group workshop using the Nominal Group Technique (NGT). The NGT is used to gain the formal consensus of a group, in this case local stakeholders whose support would be required if the dental program was to become established were selected as the nominal group (Black, 2008). The NGT uses "the aggregation of individual members' views" (p. 134) to guide decision making rather than "group arriving at a communal view" (p. 134) as occurs when decisions are made by a committee (Black, 2008). The NGT is used to set priorities for health promotion (Brown & Redman, 1995) and in community-based health interventions (Totikidis, 2010). It involves using a small group of stakeholders to describe and discuss various aspects of the issue in question, rank the aspects in order of importance and identify those that are most important to the group (US Department of Health and Human Services, 2018). Group sizes of 8-12 members are recommended as they provide reliable results without becoming difficult to manage (Black, 2008, p. 134).

The method of conducting a NGT has been described as both a four and five step process (Dunham, 1998; Totikidis, 2010). Black suggests there are three essential steps in the NGT; firstly for the group to identify the relevant issues, secondly for the group to describe each issue in an "explicit statement" (p. 133) and finally for the group to vote and identify the most important issue (Black, 2008). The NGT method described by Totikidis (2010) was selected to assess the feasibility of the dental program and discover what would need to be done to get the program started within a six-month timeframe. Totikidis's (2010) method includes, the generation of ideas, the recording the ideas generated, the discussion and clarification of the ideas generated, the voting on the ideas to rank their importance and the summing of the votes. The NGT gives all group members an equal opportunity to present their ideas which reduces the influence of status within the group and decreases the likelihood of the individuals conforming to the ideas of group (Dunham, 1998). It also generates more ideas than other group discussions and encourages problem solving (Dunham, 1998). Summing the scores and recording the number of stakeholders who voted for each idea converts qualitative data into quantitative data and enables the relative importance of each idea to be made transparent (Black, 2008; Totikidis, 2010). A descriptive summary accompanies the ranking to explain the findings (Totikidis, 2010).

3.9.18 Recruitment for the small group workshop

To recruit local stakeholders whose support would be required if the dental program was to become established, invitations to the small group workshop were sent to previous participants of the study, program managers of local support agencies who work with adults experiencing homelessness, organisations providing local mental health services, organisations providing local drug and alcohol services, the manager and senior dentist at the local community dental clinic, a local private dental practice owner and a representative from La Trobe University's Department of Dentistry and Oral Health. All participants involved in Phase 1 of the study who indicated they would like to take part in the small group workshop, were sent a

personal invitation (Appendix 6) using the preferred contact details recorded on their DIF (Appendix 5 and Appendix 7). Invitations to stakeholders (Appendix 8) were sent by post. Participant information sheets (PIS) for the workshop (Appendix 9) were included with the invitations to provide information about the aim of the study and to give details about the small group workshop. A reminder e-mail was sent to previous participants and stakeholders who had indicated they would attend, the day before the workshop.

3.10 Procedures

3.10.1 Procedure: Transcendental phenomenological interviews

As described in section 3.9.8, the study was advertised using flyers left in the SHS waiting area and interview rooms and SHS staff were encouraged to mention the study to their clients. It was intended that potential participants would contact the researcher by phone or e-mail and a verbal explanation of the study would be given. If the client was interested in participating in the study, a convenient time to meet them at the SHS was to be organised so that the PIS (Appendix 15) could be personally given to them.

The PIS (Appendix 15) contained information about the study and it was intended that the PIS was to be read by, or read to, potential participants. Potential participants were then to be encouraged to ask questions about the study and discuss their participation with friends or relatives before giving their consent to participate. The opportunity to discuss the study was intended to reduce the potential for participants to be coerced into the study.

Interviews were to be scheduled at a convenient time for the client and were to take place in an interview room in the SHS. The DIFs (Appendix 7) and CFs (Appendix 11) and were to be completed immediately prior to the interview beginning. Before the CFs (Appendix 11) were signed potential participants were to be asked if they had any further questions about the study. They were then to be asked to explain in

their own words what would happen during in the study. This teach-back technique was to be used to check that the potential participant understood the implications of their participation in the study (Kripalani, Bengtzen, Henderson, & Jacobson, 2008). If a potential participant was believed to be incapable of providing consent at that time, the interview was to be postponed. The participant was to be contacted one week later and another interview time was to be organised.

Once the CF (Appendix 11) had been signed in duplicate and a DIF (Appendix 7) had been completed, participants were to be reminded that they were able to stop the interview at any time without giving a reason. In addition, they were to be reminded that they could withdraw from the study at any time but that if they withdrew from the study more than four weeks after their interview, the information they had given in the interview could not be removed from the study. A copy of the signed CF (Appendix 11) and a PIS (Appendix 15) were to be kept by the participant. The other original signed CF (Appendix 11) and a the completed DIF (Appendix 7) were to be sent by registered post to, Dr Ha Hoang, for secure storage at the University of Tasmania, Centre for Rural Health, Newnham Campus in Launceston.

On completion of the interview, participants were to be thanked for their participation in the study and given a $20 Coles voucher to compensate them for their time and any expenses they had incurred as a result of taking part in the study. After each interview the researcher was to phone one of her supervisors to debrief and share her thoughts about the interview which was to enable her safety to be monitored.

3.10.2 Procedure: Focus groups

Focus groups were facilitated by the researcher who had experience in facilitating focus group meetings. Potential participants contacted the researcher by phone or by e-mail to express their interest in the qualitative descriptive study. Those expressing an interest in the study were thanked for their interest and the date and

time of the focus group meeting they wished to attend was confirmed. Potential participants were e-mailed a PIS (Appendix 10) and consent form (CF) (Appendix 11) to review and invited to call or email the researcher with any questions about the study.

Focus groups were held in a meeting room at the SHS. Before each focus group began the student researcher introduced herself and thanked each participant for their interest in the study. Each participant was provided with two printed copies of the PIS (Appendix 10) and CF (Appendix 11), and a single copy of the DIF (Appendix 5). A verbal explanation of the purpose of the study, details of the data that would be collected and how data would be stored was provided. Participants were asked to read through the PIS (Appendix 10), CF (Appendix 11) and DIF (Appendix 5). Questions about the study were invited and once they had been answered, participants completed the PIS (Appendix 10), DIF (Appendix 5) and CF (Appendix 11). CFs (Appendix 11) were signed in duplicate and countersigned by the researcher. Participants were given a copy of the completed PIS (Appendix 10) and signed CF (Appendix 11) to keep. The researcher kept the DIF (Appendix 5) and a copy of the PIS (Appendix 10) and signed CF (Appendix 11). Participants were reminded that their individual data could not be removed from the focus group data and that they were free to leave the focus group at any time without giving a reason. At each focus group, staff knew each other and appeared relaxed which facilitated open discussion (Krueger & Casey, 2015).

At the conclusion of each focus group, participants were thanked and given a $20 Coles supermarket voucher to compensate them for any expenses incurred from participating in the study. The hard copies of the PIS (Appendix 10), DIF (Appendix 5) and CF (Appendix 11) were scanned and saved on a password protected computer as an NVivo 11 file (QSR International Pty Ltd). The original copies of the documents were sent by registered post to a supervisor, Dr Ha Hoang, for secure storage at the University of Tasmania, Centre for Rural Health, Newnham Campus in

Launceston. The researcher recorded her immediate reflections on the focus group meeting in her research journal.

3.10.3 Designing the dental program

The dental program was designed by the student researcher in consultation with her supervisors using the results of the two literature reviews and Phase 1 of the study. The results of the systematic and grey literature reviews were used to highlight strategies that improved access to and uptake of dental care by adults experiencing homelessness. The findings of Phase 1 of the study were used to identify the barriers to dental care that were perceived to exist locally and the strategies that could be used locally to improve homeless adults' access to and uptake of dental care.

The perceived local barriers identified in Phase 1 of the study were listed and categorised using the Levesque et al. (2013) patient-centred access to primary health care framework. This was achieved by firstly developing a concept map. The map included the ten categories that reflected the "five dimensions of accessibility" (p. 7) of health services and the "five corresponding abilities of persons" to "interact" (p. 5) with a service and access care (Levesque et al., 2013). The identified local barriers were mapped to the Levesque et al. (2013) categories and the results were summarised and tabulated (Table 10). Strategies that could be employed to overcome the local barriers, identified in the findings of Phase 1 of this research study and highlighted in the two literature reviews, were then added to the table (Table 10).

The categorisation and mapping of the identified barriers, and identification and inputting of the strategies was undertaken by the student researcher. The process of categorising and tabulating the local barriers using the Levesque et al. (2013) framework enabled strategies to be specifically targeted at the barriers identified. The table (Table 10) was used as a scaffold to underpin the design the dental program.

3.10.4 Procedure: Small group workshop

The small group workshop was held in a meeting room at the local library and run by the student researcher and one of the supervisors. It was scheduled to run for 90 minutes and was organised during the middle of the day to allow people to attend during their lunch breaks; catering was provided to encourage attendance. Stakeholders were welcomed to the small group workshop and thanked for their interest in the study. A pack was given to each stakeholders that contained; an agenda for the workshop (Appendix 12), a copy of the workshop PIS (Appendix 9), two CFs (Appendix 11), a small group workshop DIF (Appendix 13), a diagrammatic summary of the dental program (Appendix 14), five stickers numbered 1-5 and two sheets of plain paper for note writing. As for the focus groups, the purpose of the study, details of the data that would be collected, how it would be stored and how to withdraw from the study was explained. Stakeholders were given an opportunity to ask questions before being invited to complete and sign two CFs (Appendix 11). As for the focus groups, CFs (Appendix 11) were countersigned by a research team member, signed CFs (Appendix 11) and a copy of the PIS (Appendix 9) were retained by each stakeholder and the research team retained and securely stored a copy of the DIF (Appendix 13), PIS (Appendix 9) and signed CF (Appendix 11).

The student researcher ran the workshop and the supervisor took notes to record the workshop. Following the recruitment of the stakeholders into the study, at the workshop, the researcher gave a PowerPoint presentation that summarised the findings of the qualitative descriptive study and described the dental program. The stakeholders then discussed the dental program design and notes about the discussion were recorded. Once the discussion had concluded, participants were asked:

"Is this program feasible and what would need to be done to get this dental program up and running in the next 6 months?"

Stakeholders were asked to write their response to this question on a piece of plain paper without further discussion (Dunham, 1998). This encouraged participants to generate their own thoughts and ideas about how the program could be operationalised (Delbecq & Van de Ven, 1971). The time allocated for this activity was five minutes. After this, each stakeholder was invited to read out the thoughts and ideas they had written. Stakeholders' thoughts and ideas were listed on a large sheet of paper by a researcher. This process gave all stakeholders an equal opportunity to present their thoughts and ideas and prevented any one person from dominating the discussion (Sample, 1984).

Each thought and idea listed was explained to the group by the stakeholder who suggested it to ensure that it was clearly understood. The paper listing the thoughts and ideas was stuck to the wall of the meeting room so that it could be seen by everyone. Stakeholders were then asked to vote, using their numbered stickers, for the five ideas they felt were most important (Dunham, 1998). The votes were tallied and summed to rank the ideas in order of importance and the result of the ranking was announced (Totikidis, 2010). The ranked ideas represented the stakeholders' consensus about what five things would be most important to roll out the dental program. The ranking was discussed by the group and comments were recorded.

The data collected from the small group workshop included notes taken recording the stakeholders' discussions, the ideas listed by the stakeholders, notes taken recording the verbal descriptions stakeholders gave about their ideas, the ideas listed and the outcome of the ranking process (Totikidis, 2010). The stakeholder ideas that were written on the plain paper were scanned and uploaded to a password protected computer for analysis. CFs (Appendix 11), DIFs (Appendix 13) and any documents written by the stakeholders that were identifiable were sent for storage at the Centre for Rural Health in Launceston. Photographs of the paper used in the voting and ranking process were uploaded to an NVivo 11 file (QSR International Pty Ltd).

Data analysis began immediately after the workshop when the two researchers discussed the outcomes in a debriefing session. Both researchers felt that the stakeholders thought the program was feasible and would like to see it rolled out. The next day, the discussions generated in the workshop were summarised from memory. The summary was confirmed using the notes made during the workshop by the second researcher. The handwritten notes made by the stakeholders during workshop were listed and entered into the NVivo 11 software (QSR International Pty Ltd). The stakeholder notes did not contain enough detail to undergo analysis and instead were used to confirm that the notes taken by the researchers were accurate. The votes for the ideas generated during the workshop were tallied and summed to give a score out of a maximum of 40 for each idea (Totikidis, 2010).

A report summarising the PowerPoint presentation, the dental program design, the outcomes of the small group workshop and the ranking of ideas by importance was written. The report was sent to workshop participants and the managers of housing and support services at the SHS. Feedback on the program design was invited as part of the member checking process.

3.11 Ethical issues

Ethical approval (H0017059) for this research was sought through the University of Tasmania's HREC (Appendix 16). The study was considered high risk because it involved a vulnerable group within the population. An essential factor in ethical research is that participants give their informed consent to participate, this means that they are fully informed about the purpose of the research, what they will be required to do, what the risks of the research are to them, what will happen to the information they provide, how their confidentiality will be maintained, where the information they give will be stored and that they can withdraw from the research at any time (Liamputtong, 2013, pp. 39-43). Information about the study's purpose and its risks were provided in a PIS (Appendix 9, Appendix 10 and Appendix 15) which was read by or to participants. In addition, a verbal explanation of the study

was given, and participants were encouraged to ask questions about the research prior to the CF (Appendix 11) being signed. Taking time to explain and discuss a research study one-on-one is the most effective way of ensuring that informed consent is obtained (Tamariz, Palacio, Robert, & Marcus, 2013). It is also important that participants are not physically, psychologically or emotionally harmed as a result of participating in research (O'Leary, 2010, p. 41). Although the risk of harm as a result of this research was considered minimal, it was possible that recalling a bad experience could trigger an emotional reaction. This risk was alleviated by providing information about the questions that would be asked in the PISs (Appendix 9, Appendix 10 and Appendix 15). Interviews and focus groups were held onsite at the SHS and a staff member was available to provide assistance if a participant became distressed.

The decision to participate in research must be made voluntarily and "should be based on sufficient information and adequate understanding of both the proposed research and the implications of participation in it" (The National Health and Medical Research Council, 2007 (Updated 2018), p. 16). There were concerns that adults experiencing homelessness may participate in the study because they thought they would get free dental treatment as part of the study. To alleviate this risk, the PIS (Appendix 15) clearly explained that their participation would not result in dental treatment. Concerns that participants experiencing homelessness could feel coerced into participating in the study were mitigated by using SHS staff in the recruitment process and by employing a snowballing recruitment method. Using SHS staff in the recruitment process meant that only clients who they judged to be currently emotionally well enough to participate would be invited to participate and that clients could feel supported through the process. Likewise, by using a snowballing recruitment technique, participants would provide their peers with the researcher's contact details and only people interested in participating would contact the researcher.

The HREC's concerns about researcher welfare related to her physical safety during the face-to-face interviews with adults experiencing homelessness. To mitigate this risk, all face-to-face interviews were held on-site in an interview room at the SHS. Interview rooms had to be fitted with a duress alarm and a member of the SHS staff had to be on-site and available to provide support if required. To ensure the researcher's psychological and emotional safety, researcher arranged a meeting with her supervisors after every interview, focus group meeting and the small group workshop to debrief and discuss any concerns she had.

To ensure the identity of all participants remained confidential, the HREC required that the location of the study was not published (Appendix 17).

3.12 Chapter 3 Summary

In this chapter, the aim and objectives of this research have been described and the philosophical beliefs that underpin it have been explained. The research is aligned with a relativist ontological outlook and is founded on the belief that multiple realities exist and that they are generated through human consciousness. The belief that experiences are given meaning through consciousness and that those meanings can be discovered through conversations and discussion reflects the constructionist epistemological outlook that this research adopts. The aim of this research is to design a program to be used by dental service providers in a non-capital city area of Victoria that will facilitate visiting for dental check-ups and preventive dental care by adults experiencing homelessness and enable the promotion of oral health. A qualitative approach was selected to achieve this aim. However, the research did not follow one of the traditional qualitative methodologies and instead used a two-phase multimethod research design. Phase 1 of the study used a primary (QUAL) transcendental phenomenological method and secondary (qual) qualitative descriptive method to explore the pathways to dental care taken by adults experiencing homelessness and the factors that affected their access to care. Phase 2 of the research focussed on designing the dental program and assessing its

feasibility. A justification for the research design was given, the methods selected for data collection and data analysis were explained, the procedures undertaken in the three studies were described and the ethical issues surrounding this research were discussed. In the following chapter, the findings of this research will be reported.

4 Findings

4.1 Introduction

In the previous chapter the aim and objectives of this research were set out and the philosophical underpinnings the research were explained. The methodology and methods selected to achieve the research aim and objectives were justified, and the procedures undertaken were described. In this chapter, the research findings are presented in two sections.

The first section reports the findings of Phase 1 of this research which included the transcendental phenomenological study, the qualitative descriptive study and the categorisation and tabulation of the identified barriers to care and the strategies that could be used to overcome them. The findings of the transcendental phenomenological study are presented first. The findings of the qualitative descriptive study are then presented as a written description of the factors that effected access to dental care and of the strategies that could be used to promote oral health to adults experiencing homelessness. Factors are explained in terms of being either a barrier or enabler of access to dental care. The factors that affected access to dental care locally and the strategies that could be employed to overcome them are categorised according to the Levesque et al. (2013) framework and presented in Table 12.

The second part reports the findings of Phase 2 of the research which included the design of the dental program and an assessment of the program's feasibility at a small group meeting of local stakeholders. The findings are presented in two sections. The first section is a report on the dental program design which explains and justifies the design elements selected for the program. The second section is a report on the outcome of the small group workshop at which the feasibility of the dental program was assessed. The outcome of the small group workshop is

presented as a written summary of the stakeholder discussions and as a description of the outcome of the NGT ranking process.

4.2 Section 1: Phase 1 study findings

4.2.1 Findings of the transcendental phenomenological study

It was not possible to recruit any participants into the transcendental phenomenological study within the agreed six-month time frame and the phenomenological study was abandoned. The six-month timeframe was agreed upon because it limited the intrusion that the research had on the day to day running of the organisation. It also reflected the time pressures of my PhD candidacy. Every effort was made by the project manager of the SHS to encourage staff to highlight the research study to the clients of the SHS. These efforts included sending e-mail remainders to all staff members and distributing a smaller version of the flyer that it could be given to clients to take away. Staff members who participated in the study personally advised their clients about it if they felt it was appropriate to do so. Despite these efforts we were unable to recruit any participants and it was felt that it was unlikely that, even by extending the recruitment period, three participants could be recruited within a reasonable timeframe (three participants represented the minimum sample size required for the phenomenological study).

4.2.2 Findings of the qualitative descriptive study

In summary, a total of 10 staff members working in the housing and homelessness support organisation participated in three of the five scheduled focus groups. Three staff members attended the first focus group, two had indicated that they would attend, and one dropped in. No staff members attended the second focus group, and none indicated they would attend. Because staff had dropped in at the first focus group, the researcher went to the meeting room but left 15 minutes after the scheduled start time. Three staff members attended the third focus group, again,

two had indicated their intention to attend and a third dropped in. Four staff members participated in the fourth focus group, one had indicated they would attend and three dropped in. For the fifth scheduled focus group, two staff members indicated they would attend, but no staff members attended.

The focus groups lasted between 37 and 49 minutes. There was general agreement amongst the members of the focus groups when discussing the points raised and group members cited their own personal experiences as examples. The role of each participant and the time they had spent working in the homelessness-support sector are shown in table 9.

Table 9: Participants role and length of time working in the homeless-support sector

Focus Group	Participants role	Length of time spent supporting people experiencing homelessness
1	Outreach case manager.	6.5 years
1	Tenancy manager.	2.5 years
1	Tenancy manager.	9.0 years
2	Team leader housing.	7.5 years
2	Outreach case manager.	3.0 years
2	Initial Assessment and Planning team.	2.0 years
3	Outreach case manager.	7.0 years
3	Tenancy manager.	10 years
3	Supported Residential Services.	20 years
3	Supported Residential Services.	0.5 years

4.2.2.1 Qualitative description of the focus group findings

The findings of the qualitative descriptive study are presented in three sections. The first section identifies the barriers to dental care that were perceived by

participating staff members to exist for their clients, the second identifies perceived enablers of care and the third contains suggestions about how oral health could be promoted locally.

4.2.2.1.1 Barriers to care

4.2.2.1.1.1 Multiple needs

Participants perceived the need for dental care to be one of the many competing needs of adults experiencing homelessness. Fulfilling basic needs, such as finding food and somewhere safe to sleep at night took priority over dental care and could become an all-consuming task.

> *It becomes another thing in a long list of issues that they are dealing with. If they are dealing with not having a house, …. having to try and find a house. If they have got mental health, drug and alcohol issues. If they are having to apply for however many jobs to get their new start (allowance) and now they have got a toothache, how does that fit? It is just another thing to deal with. FG1*

4.2.2.1.1.2 The cost of care

All participants felt that dental care was expensive. Participants personally found dental care to be expensive and believed that their clients would too. Participants perceived the cost of dental care to be a major barrier to access.

> *I mean it is hard enough for working people to afford the dentist, let alone if you are on benefits. FG3*

Participants believed that the cost of care was not limited to the cost of dental treatment but included the cost of getting to and from appointments, owning and having credit on a mobile phone in order to make appointments and being able to

pay for medications and dental hygiene products. Because of the high costs involved in receiving private dental care, participants felt clients were mostly reliant upon the public-dental system.

> *You would have to show that you had the capacity to repay that and a person presenting homeless with no fixed address, there is no private dentist that is going to do that, I'd like to say yes, but no, they are not going to look at them. FG3*

4.2.2.1.1.3 The organisation of dental services

Participants believed that the organisation of the public-dental clinic, necessary for its efficient running with limited resources, did not fit well with the lifestyles of clients experiencing homelessness and several issues were highlighted by participants. One main problem was the need to attend scheduled dental appointments which proved difficult for clients who had chaotic lifestyles.

> *Making an appointment, it's just too hard for some people because they live day by day because they don't know where they are going to sleep tonight. So, they are not worried about what is happening next week, it is what is happening today that matters. FG1*

Another related issue was that the failure to attend scheduled dental appointments resulted in people being denied further care and being put back onto the clinic's general dental care waiting list. The waiting list was seen as a barrier to accessing care and the perceived inability to access care due to the waiting lists resulted in self-management of dental problems including home-extractions.

> *I've known tenants who have told us that "Oh no, I just got a mate to come around and pull it out, because I couldn't wait, couldn't*

wait the six months to see the dentist so just got the pliers out."
FG2

A further barrier was perceived to be the need to call the clinic at 8.15am to access an on the day emergency appointment. Calling at 8.15am was problematic for people without a mobile phone as support services were not open at that time to assist with making calls.

The rules are so strict around only calling at 8.15am. So being awake at that time, having a mobile phone with credit, getting the transport to get there. FG3

The centralisation of the public-dental service at one large central clinic, rather than multiple smaller clinics, meant that it was necessary for some clients to travel to get care. The use of public transport to get to the clinic could prove problematic and if specialist public-dental services were required clients needed to travel to Melbourne, 150 kilometres away.

If they have got no money you know that they can't really take a bus they can't take a taxi. FG1

Accessing public-dental clinics in Victoria required a valid Health Care card or Pensioner Concession card (Dental Health Services Victoria, 2018b). Participants believed that although clients mostly received Government benefits through Centrelink and were eligible for Health Care Cards, they did not always possess a valid card and that could result in them being excluded from accessing services.

Not so much that people don't have a Centrelink income at all but people that have lost their Health Care card. Or it's been mailed somewhere but they don't have a physical copy of it because they would need to produce that at the appointment. FG1

There was also a perceived lack of information about accessible dental services which made it difficult for participants to give advice about how care could be accessed.

> *Even as a service provider we aren't provided with any information in regard to the dental services available in the local area. So, we don't have brochures or pamphlets we can provide to people. If we are finding out information, it is a matter of jumping on Google and trying to get contact numbers for them. FG2*

It was felt that being unfamiliar with the dental system and not knowing where the publicly funded dental clinic was situated could prevent access to care.

> *They say, "where do I go, which door do I go to? Do I take the lift? Can I go up the stairs? Where am I going to come out?" That sort of anxiety about where it actually is, getting there. FG1*

Participants suggested that there were successive generations in families who did not see visiting the dentist as a usual occurrence which negatively impacted their oral health. A lack of exposure to dentistry as a child, at school dental vans, was believed to be the reason for this.

> *I think it is a hereditary thing too, like it's "mum has never worried about getting her teeth done so why should I worry? Why should I worry about my children?" FG2*

4.2.2.1.1.4 The Fear of Being Judged

When oral health had deteriorated to the point that extensive dental treatment was required, it was felt by participants that visiting a dental clinic would result in clients being judged by the clinic staff. The judgement was not only on the state of their oral health, but also their personal appearance, parenting style and lifestyle choices.

If you think about the absolute rough sleepers who are living on the streets, they are judged every day why would they go into a professional's office and be judged even more? To be told "you should clean your teeth." FG2

Staff participating in the study believed their clients felt concern that seeking care for children with bad teeth could result in being judged a neglectful parent and potentially result in child protection services being contacted.

If they were to take the children there, there might be a fear of "they might think that I have been neglecting the children if I take them and they have all got problem teeth." FG2

Participants also felt that for clients who were recovering drug addicts, dental disease resulting from previous drug addiction was seen as a constant and embarrassing reminder of their past life as an addict.

That is one of the obvious signs of drug abuse, is their teeth start to rot. Especially if they are clean now, there is the real embarrassment about, well, that is my past life, but I can still see it every day. They will judge me, they will think that I am still using. FG2

Participants felt that clients who were victims of domestic violence could find it hard to explain their dental injuries, especially if their abusive partner was with them at the appointment.

Domestic violence might have been the issue (barrier) … how do they explain that when they go to the dentist? If they have got a partner still at home, you know, that is going to be quite angry if they say, "Oh yes, my husband knocked it out, but it's all good, it's all fine, he didn't mean it". FG2

There was a belief that mental illness, leading to unusual behaviour, was sometimes mistaken for clients being affected by drugs or alcohol which resulted in them being removed from waiting areas at health services.

> *Quite often we do have clients that are refused service from various places or removed from places and it's mental health, it is how they present not because they are affected by anything and it sort of shatters their confidence in returning to that place again FG2.*

4.2.2.1.1.5 Anxiety

Anxiety about needing and receiving dental treatment was perceived to be a reason not to seek care. Participants believed that most care seeking by clients was problem based and would require invasive dental treatment (extraction or restoration).

> *I think clients might have some anxiety because they have the pain and they know there is something there and they are going to have to have a needle or a tooth out or something, so they just put it off because they don't want to deal with that. FG1.*

Participants suggested that the positioning of the dental chair during in an appointment and having to open your mouth on command put people in a vulnerable position which could trigger anxiety in clients who had suffered domestic abuse.

> *If you had a traumatic history say of sexual assault and that kind of thing, that can really amp up the anxieties that some people have. FG3*

4.2.2.1.2 Managing Appointments

The ability to wash and launder clothes was taken for granted by participants. However, participants believed that such activities had to be planned by their clients. A shower was available at the organisation site which allowed clients to wash before their appointment. However, if the shower was in use, clients could be delayed and arrive late or miss their dental appointment.

It was felt likely that clients were more likely to need immediate emergency dental treatment rather than preventive care. This was viewed as being costlier and more likely to result in post-operative discomfort and raised concern about how clients could recover after their treatment.

> *Knowing if they have to go to the dentist and have to get a filling or have a tooth out, they are going back to the streets. How do you deal with the aftercare of that and the pain after that? FG1*

4.2.2.2 Enablers of Care

The enablers of dental care discussed in the focus groups are discussed below.

4.2.2.2.1.1 Outreach Services

No formal drop-in centres or hostels existed locally. Crisis and transitional housing were provided through motels and private property rentals meaning there was no one place where clients congregated. To best target outreach services, participants suggested they be located at community meal events, support organisation sites, the city centre or in the areas of the city that had high levels of crisis and transitional housing.

> *Then it is not just "Oh we are going to the dental van", "Oh, we are going to have lunch", "Oh the dental van is there". You know, breaking the ice a bit and it's two birds with one stone. It is convenient for them and it is where they go anyway. FG1*

The prospect of being able to drop-in for a chat, be given advice, dental hygiene products and have a free dental check-up in a familiar place was seen as beneficial. It also provided an opportunity for peers to support each other through the process.

> And even that being accountable to each other. If they see someone they have been chatting with yesterday come out and go, "oh that was really good, you should go and try that "or "that didn't hurt, that was awesome go in there and check it out". Like sort of encouraging each other that way as well. FG1

Participants felt that exposing student dental practitioners to outreach services would be beneficial to their education.

> *There are heaps of opportunities to partner up with people that run community lunches or the weekly meals and stuff just to have a van there where the people giving out the food can say, you know, "these people are here if you want to have a chat to them" even if they don't have an appointment, just to meet a face and have a conversation. FG1*

To be successful, outreach services needed to attend sites on a regular basis and having a dental van, where simple treatments could be performed, was considered ideal. Building a trusting relationship and communicating in a non-judgemental way were also considered critical to the success of an outreach service.

> *It literally won't work if they haven't got that right personality. To meet the homeless person's needs and to break down the barrier, the communication to make them feel comfortable. And I always think, you only have a small window of time where you can gain that, if you lose it, it is all over. FG3*

4.2.2.2.1.2 Priority Access Cards

A Priority Access Card (PAC) is available to adults experiencing homelessness in Melbourne and allows the holder to access free general dental care at participating public-dental clinics without going on a waiting list. Participants felt that PACs should be distributed by staff who were aware of the client's needs, would streamline the referral process to the public-dental clinic and allow clients to access care without having to explain their housing status. Some concerns were raised that the card may cause people who were on the waiting list to have to wait longer. It was suggested that a voucher that could be redeemed at private dental practices could also be used.

> *They have just a card, no questions asked, they go in, get treated like a customer and go out. And for anyone, I think, that takes away the shame, the embarrassment and all that sort of stuff and they don't have to keep repeating "I'm homeless, I'm this, I'm that." I think that is a great idea. FG1*

4.2.2.3 Promoting Oral Health

Participants believed that dental questions should be included in the organisation's initial assessment questionnaire. However, discussions about oral health should wait until the immediate needs of the client had been met and a relationship had been established between the client and the support worker.

> *Once everything else is settled. Like once we have got them housed and their crisis needs met. That would be when we could start to chat to them about what else they need, what else is going to make them more comfortable and get them healthy again. FG2*

Information about accessing dental services could be given by support staff and displayed in the organisation's reception area. However, the referral process

needed to be simple and reliable and advice on a client's specific treatment requirements would need to be given by dental practitioners.

> *The actual proper dental advice would have to come from someone that was qualified, but we could at least point them in the right direction to get that information. FG1*

Services co-located with other health services in a central hub were also seen as beneficial as they provided a user-friendly service. Clients could become familiar with the services available in the hub and there could be a health "snowball effect" where clients addressed other health problems when they felt care was accessible. As well as the awareness that poor oral health could lead to other health problems, the importance of having healthy teeth and being able to smile was highlighted.

> *I just think it is so important, teeth, and not just for looks, it is the overall wellbeing of everybody. FG3*

4.2.3 Categorising the Phase 1 Findings using the Levesque al (2013) patient-centred access to primary care framework

The factors influencing access to care identified in Phase 1 of this research are reported in Table 12.

Table 90: Findings of Phase 1 categorised using the Levesque et al. (2013) framework and strategically mapped into the program design

Barriers: Patient factors	Strategy incorporated into dental program design	Barriers: Service provider factors	Strategy incorporated into dental program design
Ability to perceive		**Approachability**	
Disengagement with dental services Poor oral health literacy	Outreach services to: Build trust and engagement and improve understanding of oral health/oral hygiene	Lack of information about services	Outreach services and information/posters to be put-up at the SHS, homelessness support services, mental health support services and drug and alcohol support services
Ability to seek		**Acceptability**	
Multiple competing needs Drug and alcohol issues Mental health issues Fear of judgement Dental anxiety Not knowing about priority access services	Outreach services to build trust, provide information about available dental services and provide oral health advice and treatment. Availability of drop-in appointments Dental services to link with SHS, homelessness support services, mental health support services and drug and alcohol support services	Judgement on oral health Judgement on personal appearance Judgement on parenting skills Judgement on lifestyle choices Poor understanding of mental illness	Welcoming dental environment Education of dental team about homelessness
Ability to reach		**Availability and Accommodation**	
Not knowing where to go No phone Cost of travel to the clinic	Outreach dental services (mobile dental vans) Availability of drop-in appointments Multiple health-hubs	Difficult to attend pre-booked appointments Centralised services Calling early for an emergency appointment	Drop-in clinics Outreach clinics in appropriate places Dedicated PAC clinics Network of private dentists to treat PAC clients
Ability to pay		**Affordability**	
Cost of treatment Cost of travel to the clinic Cost of using a mobile phone Cost of medications Cost of dental hygiene products Having a valid Health Care Card	Priority Access Card Provide free dental hygiene products Information about priority patient services	Cost of treatment Cost of medications Cost of dental care provided outside of the dental system Cost of missed appointments	Information about priority patient services Decentralising services Network of private practitioners
Ability to engage		**Appropriateness**	
Anxiety about dental treatment Multiple competing needs Recovery after treatment Difficulty in attending pre-booked appointments	Outreach services to build trust, provide information about available dental services and provide oral health advice and treatment. Education of dental team about homelessness/victims of domestic violence	Failure to attend pre-booked appointments results in denial of care Need to call early for emergency appointment Waiting lists	Drop-in appointments Flexibility with missed dental appointments Emergency appointments for PAC holders Education of dental team about homelessness

4.3 Section 2: Phase 2 study findings

4.3.1 The dental program design

The dental program design is presented as a written report which explains and justifies the design elements recommended for the dental program. It should be emphasised that none of the design elements included in the design of the dental program were being undertaken locally at the time of the study.

The dental program has two stages; the first stage incorporates strategies that can be implemented quickly and relatively easily (Figure 10.) and the second is aimed at the longer term and focusses on increasing access by putting dental care within-reach of adults experiencing homelessness (Figure 11.).

4.3.1.1 Dental program: Stage 1 (0-12 months)

4.3.1.1.1 Introduction of local a Priority Access Card

In Victoria adults who are experiencing or are at risk of homelessness have priority access to free dental care at community dental clinics which means they do not have to go on the waiting list and do not have to pay for dental care (Dental Health Services Victoria, 2018b). In parts of Melbourne, Priority Access Cards (PACs) are distributed by homelessness support organisations to their clients (Dental Health Services Victoria, 2015c). The PAC provides 'proof' that the holder is entitled to priority access dental care, replaces the need for a support worker to write a formal letter to a dental service and means that people don't have to explain their housing status to reception staff (State Government of Victoria, 2015). Figure 9. shows an example of the PAC that is used in Melbourne (Dental Health Services Victoria, 2018a).

It is recommended that PACs which could be used locally should be introduced. One concern raised about the PAC was that non-homeless individuals may use them. To overcome this, PACs will be distributed by the SHS staff, mental health service

providers and drug and alcohol service providers directly to their clients who are experiencing or at risk of homelessness.

Figure 9: An example of a PAC used in Melbourne (Dental Health Services Victoria, 2018a)

4.3.1.1.2 Asking oral health questions

It is recommended that questions about oral health be asked by SHS staff at the initial interview. Asking oral health questions at an initial interview would help identify clients in need of dental care. At times of crisis adults experiencing homelessness commonly only seek pain relief and are generally not interested in oral health promotion and dental check-up (Coles & Freeman, 2016). Questions asked should relate to concerns about, bleeding gums, pain in the teeth or mouth,

swelling, ulcers, lumps in the mouth, difficulties swallowing, bad breath, loose teeth and sensitive teeth (Groundswell, 2017). Adults in a more stable housing situation or who are accessing mental health and drug and alcohol services are more likely to be interested in improving their smile and questions should also relate to this (De Palma & Nordenram, 2005; Van Hout & Hearne, 2014).

4.3.1.1.3 Outreach oral health information sessions- building trust

It is recommended that the local public- dental clinic starts to run regular outreach oral health information sessions. Trusting relationships need to be built before dental treatment can be provided (Oldroyd et al., 2017). Outreach sessions held on a regular basis in a familiar and non-threatening environment help build trust (Caton et al., 2016). They provide an opportunity to give away free dental products, provide information about available services and allow personal connections to be made with dental clinic staff. Basic screening examinations and preventive treatments, such as fluoride applications, could also be performed. Sites suggested for outreach sessions in the focus groups were, community meal events and places close to where clients are housed.

The main concern with outreach programs at community events is that people who are ineligible for priority access may be disappointed that they have to go on a waiting list before they can have a check-up at the community dental clinic. Locating outreach sessions at the SHS site or having dedicated priority access card events would overcome this concern.

Ideally the dental clinic staff members attending outreach sessions would also provide the dental care. A non-judgemental attitude and taking time to explain what is happening is critical for dental staff treating people experiencing homelessness (Caton et al., 2016; Oldroyd et al., 2017). To get a better understanding the experience of homelessness, dental team members should attend training sessions run by the Council to Homeless Persons.

4.3.1.1.4 Appointments block-booked for dedicated PAC drop-in sessions at the local community dental clinic

It is recommended that the public-dental clinic block-books appointment sessions for PAC holders. Block-booked appointment sessions (e.g. an afternoon a week) where PAC holders can opportunistically drop-in and be seen by a dental practitioner are an effective strategy to increase access to care (Oldroyd et al., 2017). Adults experiencing homelessness can find it difficult to attend pre-booked dental appointments and drop-in sessions remove the need to be the clinic at a specific time (Oldroyd et al., 2017). Pre-booked appointments should also be available and for these, a degree of understanding by dental service providers will be required as exclusion from the service, due to missed appointments, compounds oral health problems and increases the likelihood of self-treatment (Van Hout & Hearne, 2014), self-medicating (Seirawan et al., 2010; Van Hout & Hearne, 2014) and seeking care from non-dental health care providers (Figueiredo et al., 2016).

4.3.1.1.5 Clear signposting of services

It is important to provide a clear pathway to dental services. Clear pathways can be signposted by advertising the priority access services that are available, the opening hours and contact details of the clinic and by giving clear directions about where the clinic is located. Posters and brochures containing information about accessing dental services should be available at the SHS site and at other support service provider sites. Clear signposting of services will enable support organization staff to give advice about accessing dental care.

4.3.1.1.6 Free oral hygiene products

A supply of free oral hygiene products such as toothbrushes and toothpaste should be available at the SHS in the reception area and in the newly introduced rough sleeper outreach van. Free oral hygiene products will help to overcome cost as a barrier to dental care and encourage prevention.

4.3.1.1.7 Priority Patient Coordinator

It is recommended that a staff member at the local public-dental clinic takes responsibility for managing the dental program and organising the outreach health information sessions. Organising outreach services and facilitating the smooth running of homeless-dedicated dental programs takes time and effort on behalf of dental service providers (Simons et al., 2012). A community dental clinic staff member will coordinate the dental program. The Priority Patient Coordinator will liaise with the SHS and other support organisations to ensure that PACs, printed information and dental hygiene products are available and will organise outreach visits.

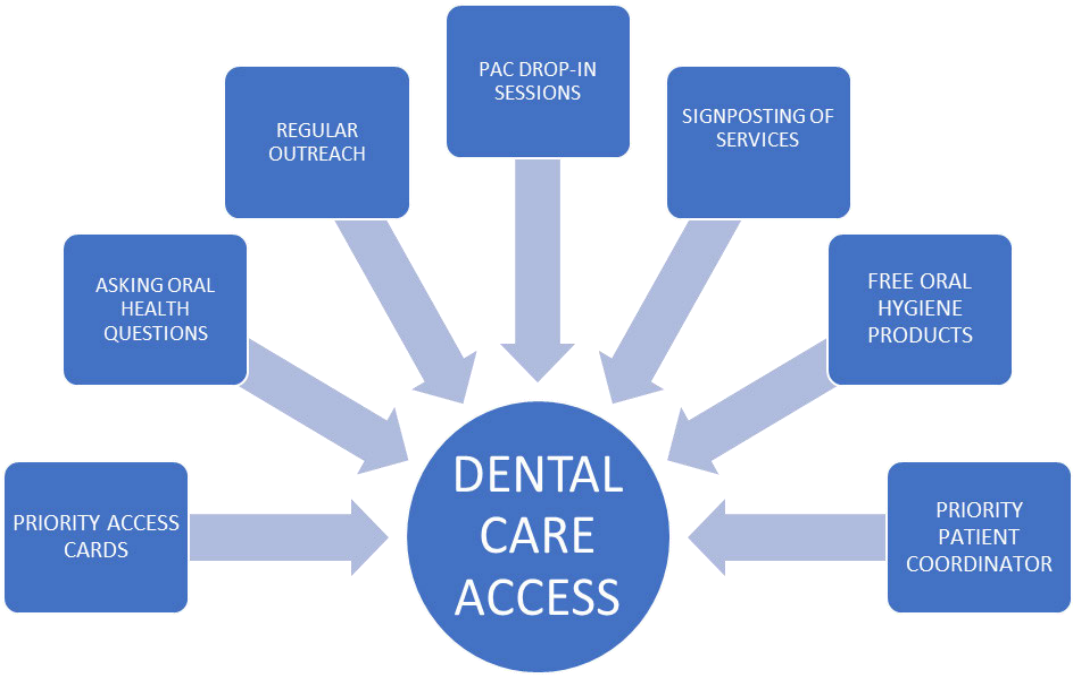

Figure 10: Summary of the dental program: Stage 1 (0-12 months)

4.3.1.2 Dental program: Stage 2 (12+ months)

The focus of this stage is to put dental care within-reach of people experiencing homelessness.

4.3.1.2.1 Co-location of publicly funded dental clinics

The co-location of publicly funded community dental clinics with other community health clinics to create 'health-hubs' would be beneficial. They would reduce the need for adults experiencing homelessness to travel to a central location to access dental care. Additionally, having different health practitioners located in the same site increases cross referrals and enables a more holistic approach to health (Caton et al., 2016).

4.3.1.2.2 Mobile dental units

The introduction of mobile dental units (dental vans) would mean that a more comprehensive range of dental treatment could be provided to PAC holders at outreach venues (Simons et al., 2012). The mobile dental units could also be used to provide publicly funded and private dental care to rural communities where access to dental care is limited.

4.3.1.2.3 A network of dental care providers

Establishing a network of private dental practitioners who are willing to treat PAC holders at no cost to the patient with fees refunded by DHSV would reduce the need to travel to a central location to access dental care.

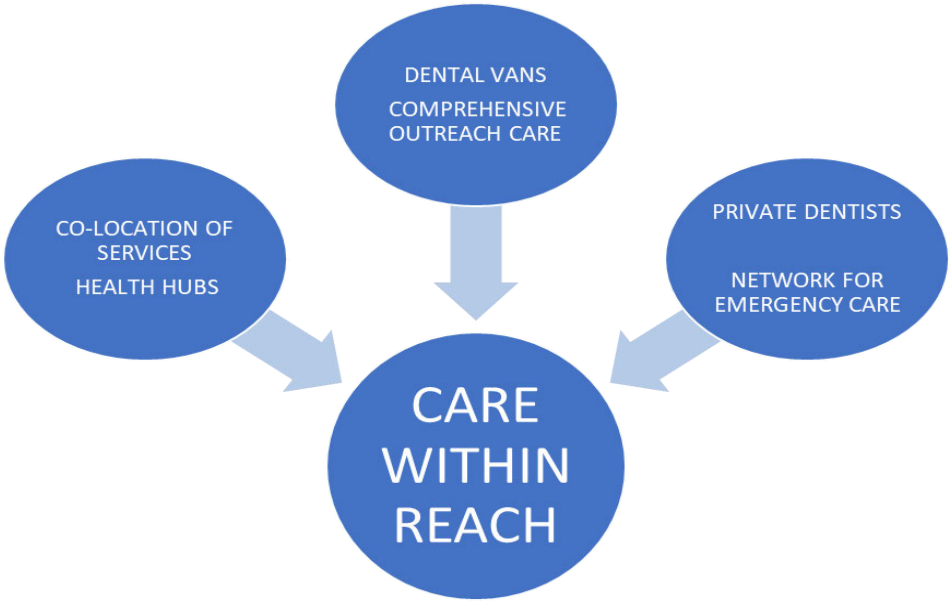

Figure 11: Summary of the dental program: Stage 2 (12+ months)

4.3.2 The outcome of the small group workshop

Twenty-four invitations to the small group workshop were sent to stakeholders and eight attended. Attendees included; two focus group participants who worked at the specialist homelessness service, two faith-based charity workers who provided support and emergency relief for adults experiencing homelessness, a representative from a local mental health service, a representative from the local community dental service, an academic involved in teaching dentistry students and a local private dental practitioner.

4.3.3 Summary of the small group workshop

Discussions at the workshop touched on the need for a framework documenting how the program would work, how it would be funded and who would lead and take responsibility for it. It was suggested a leadership group of stakeholders that met regularly would need to be established. There was concern that, without 'buy-in' from a network of stakeholders, the program would not be sustainable. It was suggested that having an ambassador for the program would be beneficial. PACs

and outreach services were seen as enabling access to care, but concerns were raised about how trust could be maintained if homeless adults were referred from outreach services to fixed site services. The need for homeless adults to appreciate the value of oral health and dental services was also highlighted.

Resources were also discussed, particularly regarding the efficient and effective use of dental resources. Concerns were raised about the loss of productivity associated with having block booked PAC drop-in sessions for homeless individuals. Also, it was felt that if several people turned up at once to a PAC drop-in session and had to wait, they may feel uncomfortable waiting in the waiting room. Mobile dental vans were seen as an ideal solution as they could be driven to different sites and could take services to where they were needed. The concept of sharing mobile dental vans, such as the Royal Flying Doctor Service (RFDS) vans, was discussed. Also, mentioned were the new DHSV school dental vans which could perhaps be used, outside of school hours, to treat people with PACs. Some local private dental practitioners may also be happy to treat PAC holders in their own practices at specific times for example, one Saturday morning a month. It was also suggested that volunteers may be able to use the community dental clinic's facilities to provide PAC patient services outside of normal working hours. The importance of having all information explaining and advertising dental services written in plain English was emphasised.

The SHS have recently introduced a rough sleeper outreach program that uses a van to provide support and services to rough sleepers in the evenings. Also, some local churches will be opening their door to rough sleepers during the winter months. It was suggested that dental advice and oral hygiene products could be given by out by volunteer dental practitioners and dental students via these services.

The safety of both dental team members and adults experiencing homelessness was discussed. Safety of staff leaving work late in the evening or after dark is a concern

for health organisations and would potentially be a concern for patients if they had no safe place to sleep.

Overall, stakeholders believed the program was feasible and at the end of the workshop, they suggested ideas about what would need to be done to get the dental program up and running in a 6-month time period. The listed ideas were ranked as follows:

1. Start small with a pilot program and evaluate the program.
2. Establish a working group of stakeholders to roll out the dental program.
3. Establish a source of funding.
4. Establish trust between dental team members and homeless individuals.
5. Establish clear guidelines about how the dental program will work and who is responsible for what.
6. Establish outreach services.
7. Advertise available accessible dental services.
8. Approach other dental services to share resources.
9. Provide education about the value of oral health and dental services.

The number of votes cast for each idea and the summed total of the votes for each idea are detailed in Table 11.

Table 11: Summary of ranking and voting at the small group workshop

Idea	Votes							No. of votes	Total score
Start small/Pilot	5	5	3	4	5	4	2	7	28
Working group	2	1	4	3	5	4	1	7	20
Funding	4	5	4	1	3	3		6	20
Establish trust	4	5	5	1	4			5	19
Governance framework	3	2	1	3	1	3		6	13
Outreach services	3	1	1	5				4	10
Advertising	2	2	2					3	6
Share RFDS vans	2							1	2
Education on value of oral health	2							1	2

Based on the rankings and summing of the results, it was important that the program began as a small pilot involving a limited number of support organisations. This idea ranked highest, had the highest score and the greatest number of stakeholder votes. The next two highest ranked ideas concerned establishing a working group and funding for the program. The fourth ranked idea, the need to

build trust, scored relatively (19/40) well and attracted the vote of five stakeholders. It was the highest ranked idea that was not focussed on management and organisational issues. The next highly ranked idea, the need to establish a governance framework, attracted a higher number of stakeholder votes (6/8) than the need to build trust (5/8) and again reflected a focus on management and organisational issues. Developing outreach services attracted the vote of half of the stakeholders but only scored ten out of a possible 40 votes. Advertising the dental program was the only other idea to get a vote from multiple stakeholders. Both the idea of sharing the existing resources of mobile dental service providers and the need to educate adults experiencing homelessness about the value of good oral health only received a single stakeholder vote.

4.4 Chapter 4 Summary

In this chapter, the findings of the two phases of this study have been described. Although we were unable to explore the dental care pathways taken by adults experiencing homelessness, the factors affecting the uptake of dental care by adults experiencing homelessness in a non-capital city area of Victoria, as perceived by staff working at a homelessness and housing organisation, were identified. The factors were categorised using the Levesque et al. (2013) patient-centred access to primary health care framework and used to scaffold the design of a two-stage dental program that could be used locally to improve access to dental services and promote oral health.

The first stage of the program involves seven steps that could be implemented relatively easily. The steps were; introducing PACs, asking oral health questions at IAP sessions, having regular dental outreach sessions, providing block-booked sessions at the local public-dental clinic to allow drop in visits, clearly signposting services, providing free oral hygiene products and having a member of public-dental staff who was responsible for organising and running the dental program. The second stage is to be implemented over a longer timeframe and focusses on putting

dental services within-reach of homeless adults. The strategies employed in stage two are; co-locating public-dental services with other health and support services, introducing mobile dental units and establishing a network of dental practitioner working in private dental practices who would provide care free of charge to PAC holders.

The dental program design was assessed by a group of local stakeholders who found that the dental program would be feasible. The stakeholders also suggested what would need to be done to make the program sustainable. The consensus of the stakeholder group was that a pilot version of the dental program should be rolled out and evaluated. The dental program would also require a group of interested stakeholders to manage it and a source of funding. In the following chapter these findings will be discussed in relation to the existing literature and the significance of the findings will be explained.

5 Discussion

5.1 Introduction

In the previous chapter, the findings of the three studies incorporated in this research design were reported. The findings of Phase 1 included the transcendental phenomenological study, the qualitative descriptive study and the categorisation and tabulation of the barriers and enablers of dental care according to the Levesque et al. (2013) framework. These findings provided, a description of the perceptions homelessness and housing support staff had about the barriers and enablers of dental care experienced by homeless adults locally. They also included a description of strategies that could be used to promote oral health to adults experiencing homelessness. The categorisation and tabulation of the barriers to dental care identified in the study (Table 12) highlighted where on the patient pathway through care the barriers arose. This enabled the strategies identified as enabling access to care to be targeted at specific barriers and incorporated into the design of the dental program. The findings of Phase 2 were presented as a report that detailed and justified the design of the dental program and as a description of the feedback given by local stakeholders on the program's design and feasibility.

In this chapter, the research findings are discussed in relation to the research objectives, the Levesque et al. (2013) framework and the current literature. The failure to recruit any adults experiencing homelessness into the transcendental phenomenological study will be discussed first. This will be followed by a discussion about the barriers and enablers of dental care and oral health promotion that were highlighted in the qualitative descriptive study. The barriers and enablers will be discussed both in relation to the Levesque et al. (2013) framework and the current literature.

The report on the dental program design (section 4.3.1) contains both a justification for the design elements that were incorporated into the dental program and a discussion about the enablers of dental care and how oral health could be promoted. The dental program design itself is not discussed further in this chapter. Instead, the discussion about the findings from Phase 2 in this chapter will focus on the local stakeholder's appraisal of, and feedback on, the dental program design.

Following the discussion of the findings of Phase 1 and Phase 2 of the study, the strengths and limitations of the study and the researcher's reflections on the study will be discussed.

5.2 Objective 1: Explore the care pathways and experiences of homeless adults who seek dental care in a non-capital city area of Victoria.

5.2.1 Discussion of the transcendental phenomenological study

The objective of exploring the pathway and experiences of adults who experience homelessness whilst living in a non-capital city area of Victoria was not achieved. It proved impossible to recruit any participants into the transcendental phenomenological study within the agreed six-month time frame and the study was abandoned. The six-month timeframe was agreed upon because it limited the intrusion that the research had on the day to day running of the organisation. It also reflected the time pressures of my PhD candidacy. The recruitment strategies used, harnessing the support of staff at the SHS and using participants to recruit other participants through snowballing, appeared sound. The relationships built between staff at homelessness and housing support organisations and their clients have been used previously to recruit adults experiencing homelessness into a qualitative oral health study (Mago et al., 2018).

Recruitment of individuals experiencing homelessness into oral-health research can be difficult. De Palma (2005) reported that of the initial 147 homeless people who

she had provided dental treatment for and who consented to participate in her study, only 33 could be contacted again and despite being contacted and agreeing to an interview, many did not turn up (De Palma & Nordenram, 2005). De Palma suggested this was due to the time that elapsed between their dental treatment finishing and the interviews being arranged and suggested that interviewing participants whilst their dental treatment was still ongoing would increase participation (De Palma & Nordenram, 2005). However, it could be argued that this would be unethical. The relationship between a dental practitioner undertaking qualitative research whilst providing dental care for an individual who was experiencing homelessness would be unequal and the individual may feel pressured to participate (The National Health and Medical Research Council, 2007 (Updated 2018), p. 16).

One explanation for the failure to recruit any adults experiencing homelessness was the set-up of the SHS which meant it was not possible for the researcher to meet and gain the trust of homeless individuals she was trying to recruit. Commonly studies involving homeless individuals recruit participants from places that people experiencing homelessness gather such as; homeless-dental service clinics (Caton et al., 2016; Coles & Freeman, 2016; De Palma & Nordenram, 2005; Hill & Rimmington, 2011; Pritchett et al., 2014; Rowan et al., 2013), community health service clinics (Chi & Milgrom, 2008), community drop-in centres (Beaton et al., 2018; Parker et al., 2011), mobile dental vans (Beaton et al., 2018), drug rehabilitation services (Van Hout & Hearne, 2014) and crisis accommodation sites such as hostels and shelters (Abel et al., 2013; Beaton et al., 2018; Pereira et al., 2014). Such sites give researchers an opportunity to meet and gain the trust of potential participants. However, the SHS involved in this research did not provide accommodation on-site and its support services were structured around clients making appointments and meeting with support workers in private interview rooms. Although there was a small area within reception set aside for homeless clients to make hot drinks and prepare dehydrated foods, there was no dedicated area for clients to socialise and

they were discouraged from remaining on-site for long periods. There were no community drop-in centres, shelters or hostels in the local area for homeless adults meaning that the researcher could not hang out and spend time building a trusting relationship with potential participants. It is likely that this contributed to the failure to recruit participants into the transcendental phenomenological study.

One strategy that should have been considered would have been to seek permission to recruit clients from the specialist SHS in the regional centre. Initially, both the main SHS and a specialist SHS, which provides support to homeless women and children, were approached for their help with the study. Although the specialist SHS did not respond to initial approaches about the study, they may have been prepared to assist with recruitment and should have been contacted to see if they would help. Additionally, the flyer advertising the transcendental phenomenological study was not very eye-catching and used complex language. A new, more attractive flyer written in simpler language should have been designed and used.

5.3 Objective 2: Explore the factors influencing access to dental care by homeless adults living in a non-capital city area of Victoria and discover where opportunities exist to promote oral health.

5.3.1 Discussion of the qualitative descriptive study

The second objective of this study, to explore the factors influencing access to dental care by homeless adults living in a non-capital city area of Victoria and discover where opportunities exist to promote oral health, was successfully achieved. The findings of the qualitative descriptive study used to achieve the second objective identified factors that were perceived, by homelessness and housing support workers, to prevent adults experiencing homelessness from accessing dental care. The factors were labelled as barriers and grouped into six

common themes; the multiple competing needs of adults experiencing homelessness, the cost of dental care and dental hygiene products, the organisation of the local public-dental services, the fear of being judged, anxiety about dental treatment and difficulties managing dental appointments. The barriers were described and categorised using a patient centred access to primary-care framework (Levesque et al., 2013). The following discussion will link the barriers identified both to the Levesque et al. (2013) framework and the existing literature.

5.3.1.1 Discussion about multiple competing needs

The multiple competing needs of adults experiencing homelessness were perceived to be a barrier to accessing dental care. The multiple competing needs of adults experiencing homelessness were categorised, according to the Levesque et al. (2013) framework, as a patient factor that affected the ability to seek and engage with dental care. The multiple competing needs of adults experiencing homelessness are not unique to the Australian context. They were also reported as a reason for oral health being a low priority for homeless adults' living in a major city in the UK (Csikar et al., 2019). Coles and Freeman (2016) suggested that oral health could not be considered in isolation from the socioeconomic and psychosocial factors that impact an individual experiencing homelessness. They theorised that a deconstruction of oral health occurs as an individual withdraws from their "social networks and society" and that as the individual's pathway into homelessness continues, so does the deconstruction of their oral health (Coles & Freeman, 2016, p. 54). At the same time, exclusion from "routine dental goods and services" also occurs (Coles & Freeman, 2016, p. 54). Oral health is reconstructed when an individual is "able and finally ready to 'move on'" from homelessness (Coles & Freeman, 2016, p. 54).

5.3.1.2 Discussion about the cost of dental care

The cost of dental care was another factor perceived to prevent access to dental care in a non-capital city area of Victoria. The costs of care related not only to the

cost of dental treatment, but also to purchasing oral hygiene products and medications. The cost of care was categorised, according to the Levesque et al. (2013) framework, as a patient factor that affected a patient's ability to afford care. The cost of dental care has been reported as a barrier to care in Australian capital cities. Ford et al. (2014) reported that over two thirds (67%) of homeless adults in Brisbane delayed or avoided dental care due to cost. In the same city, Stormon et al. (2018) found that over half of homeless adults who utilised a facilitated care pathway to access dental care had avoided dental care in the past 12-months due to cost. Parker et al. (2011) found around two thirds (61%) of adults experiencing homelessness in Adelaide would have difficulty paying a $100 dental bill which was twice the rate of the age-matched general population.

The cost of dental care did not only include the cost of dental treatment but also the indirect costs associated with buying oral hygiene products and medications. In Adelaide, toothbrush ownership amongst homeless adults was investigated in relation to oral health self-efficacy, oral health knowledge and fatalism and found to be associated with oral health self-efficacy and oral health knowledge (Jones et al., 2016). Jones et al. (2016) suggested that levels of toothbrush ownership could be increased by improving oral health knowledge. However, the study did not investigate whether the cost of purchasing a toothbrush affected ownership. In Scotland, homelessness support workers reported that having oral hygiene products to give to their clients was "particularly helpful" (Coles et al., 2013, p. 154).

As a factor that prevented access to dental care, the cost of dental care was not exclusively related to an individual's ability to pay for care; it was also linked to the approachability of the public-dental clinic. It is most likely that the cost of dental care would have prevented adults experiencing homelessness from receiving care from local private fee-for-service dental practitioners. However, in Victoria, priority access to free dental care is available to adults experiencing homelessness at public-dental clinics (DHSV, 2019b) meaning that, cost should not have been a barrier to

accessing care at the local public-dental clinic. The fact that it was not known that free dental care was available reflects the failure by the local public-dental clinic to effectively advertise its priority patient services to adults experiencing homelessness.

5.3.1.3 The organisation of the local public-dental service

A lack of knowledge of how to access available and accessible dental services is reported by homeless individuals in Australian capital cities and major cities worldwide. Over three quarters of homeless youths using a pop-up dental clinic in Brisbane did not know where to access a dental service (Stormon et al., 2019). In the USA, Conte et al. (2006) found that over one third of people attending a dental service at a homelessness services event did not know where to seek dental care. A lack of advertising of dental services for homeless individuals existed in Canada (Mago et al., 2018) and in the UK, staff involved in providing homeless-dedicated dental services were unaware that other homeless-dedicated dental services existed in the local area (Hill & Rimmington, 2011).

Csikar et al. (2019) suggested that adults experiencing homelessness did not know how to access information about accessible dental services due to “the lack of an appropriate point of contact” (p. 139). In Victoria, to reduce confusion about how homelessness and housing services can be accessed, the Opening Doors framework limits access to homelessness services to specific SHSs (Council to Homeless Persons, 2019). The funnelling of adults experiencing homelessness towards SHSs that are part of the Opening Doors framework makes them an ideal place to provide information about accessing local dental services and priority access dental services.

The availability and accommodation, and appropriateness of the services provided by the local public-dental clinic negatively affected homeless adults’ ability to access dental care. The public-dental clinic’s protocol for managing missed appointments, of moving patients who failed to attend pre-booked dental appointments to the bottom of the waiting list, effectively excluded some homeless adults from

accessing the clinic. In the UK, missed appointments also resulted in homeless adults being excluded from some National Health Service dental practices (Caton et al., 2016). Dental services are organised to run efficiently and missed dental appointments are costly to service providers. However, poor rates of attendance at pre-booked dental appointments by homeless individuals are common (Caton et al., 2016; Ford et al., 2014; Simons et al., 2012; Stormon et al., 2019).

In the UK, over a nine-year period, only half (51%) the homeless individuals using a homeless-dedicated dental service in London returned for a second dental visit and less than one third (28%) of patients completed their prescribed dental treatment (Daly, Newton, & Batchelor, 2010). At the same homeless-dedicated dental service, an average of 11% of clinical appointment time was lost due to missed and cancelled appointments at the fixed-site clinic and 21% was lost in the mobile dental clinics (Simons et al., 2012) suggesting that a level of inefficiency should be expected when delivering services to homeless individuals. A higher rate of attendance (85%) was reported following a dental intervention in Brisbane at which oral screenings were completed onsite at support organisations and further dental appointments were arranged, during the same week, at a fixed-site University dental clinic (Stormon et al., 2018). The relatively high attendance rate following the intervention may be explained by the fact that the intervention was a one-off event and that dental appointments were scheduled very soon after the intervention. Special events at which volunteers provide dental care or a dental examination and referral on for dental care have become established as a means for homeless adults to access dental care (Doughty et al., 2018). However, they are “labour intensive in terms of administration” and, in the Australian setting, have not been evaluated over the long term (Stormon et al., 2018, p. 49).

A further barrier resulting from the organisation of the local public-dental service was the need to call the public-dental clinic early in the morning for an on the day emergency appointment. This organisational protocol effectively prevented adults

experiencing homelessness who did not have a working mobile phone from accessing emergency dental care. Mago et al. (2018) reported a similar finding in Vancouver, Canada where not having a working mobile phone was found to prevent homeless adults from making dental appointments. The consequences of being unable to access emergency dental care can be significant. Self-management of dental pain amongst homeless adults can take the form of using drugs and alcohol (De Palma & Nordenram, 2005; Van Hout & Hearne, 2014). This can perpetuate the cycle of addiction for users (Van Hout & Hearne, 2014) and make rehabilitation more difficult (Seirawan et al., 2010). Doctors and hospital emergency departments are commonly used as a source of dental care in Australia by homeless adults (Stormon et al., 2018). The finding of this research study, that homeless adults attempt self-treatment in the form of extractions, confirm those of Van Hout & Hearne (2014) who also reported self-extraction to self-manage dental pain.

5.3.1.4 Discussion about dental anxiety

The ability of adults experiencing homelessness to seek and engage with dental care was also perceived to be affected by their anxiety about having dental treatment. Anxiety about dental treatment results in delayed and avoided dental visits (Australian Research Centre for Population Oral Health The University of Adelaide South Australia, 2012). Severe dental anxiety affects approximately one in four people experiencing homelessness (Collins & Freeman, 2007; Freeman et al., 2011). Stormon et al. (2018) report that in Brisbane, almost one third (32%) of homeless youths did not visit the dentist due to anxiety, and that fear prevented almost a quarter of homeless adults (23%) from accessing dental services (Stormon et al., 2018). Csikar et al. (2019) reported that anxiety about having treatment amongst homeless adults was amplified if the treating practitioner was a student or a recently qualified dental practitioner. The use of outreach dental services to build trust between dental team members will help to reduce anxiety. Additionally, encouraging mental health service providers to ask oral health questions and provide PACs will enable them to support clients experiencing homelessness who

suffer from dental anxiety. Providing outreach dental services, which enable trust to be established, requires ongoing effort on the part of dental service providers (Simons et al., 2012).

5.3.1.5 Discussion about feeling judged

The focus group finding that homeless adults feel they are judged by dental service providers which negatively affects their dental care seeking, confirms the findings of Csikar et al. (2019) and Mago et al. (2018). In the qualitative descriptive study, both drug use and mental health issues were identified as conditions, experienced by homeless clients, that were likely to result in being judged. Brondani et al. (2017) found that drug users with mental health problems felt they were labelled, stereotyped, socially excluded, discriminated against and powerless when they visited the dentist. The feelings of powerlessness added to feelings of anxiety (Brondani, Alan, Donnelly, & Milgrom, 2017). Homeless adults perceive dentists to be judgemental and focussed on treating patients as quickly as possible (Csikar et al., 2019). According to Mago et al. (2018), homeless adults perceive dentists to be "dishonest" (p. 227), "disrespectful" (p. 227) and focussed on financial reward making visiting the dentist a "humiliating" (p. 229) experience. Dental anxiety can be overcome, and dental treatment provided, if a trusting and supportive relationship between the patient and dental practitioner exists (Armfield & Heaton, 2013). Providing opportunities to build trust through outreach dental-team visits is fundamental to the dental program design.

Oldroyd et al. (2017) state "trust needs to be built between service providers and clients so a therapeutic relationship can develop" (p.1230). Outreach dental visits provide an opportunity to build trust and are an essential element of many dental services that successfully provide dental care to adults who are experiencing homelessness (Caton et al., 2016; Oldroyd et al., 2017; Simons et al., 2012; Stormon et al., 2019; Stormon et al., 2018). Outreach dental team visits are successfully used to promote good oral hygiene and provide information about how dental services

can be accessed (Stormon et al., 2019). Another important factor is that dental services, both outreach and those provided in fixed-site dental clinics, are provided by dental staff who are non-judgemental and good communicators. Dentists who routinely care for people living in poverty demonstrate a "socio-humanistic" (p. 992) approach to caring for them (Loignon et al., 2010). This approach has five key elements "(1) understanding patients' social context; (2) taking time and showing empathy; (3) avoiding moralistic attitudes; (4) overcoming social distances; and (5) favouring direct contact with patients" (Loignon et al., 2010, p. 992). Educating dental team members about homelessness will increase the dental team's ability to provide a socio-humanistic approach to caring for adults experiencing homelessness and is incorporated in the dental program design.

In Victoria, the Council to Homeless Persons runs a training program in understanding homelessness. The program is run by people with experience of homelessness and aims to "provide a comprehensive overview of key homelessness issues" (Council to Homeless Persons, 2020). Running such a program for staff at the local public-dental clinic would help increase their understanding of the needs of adults who are experiencing homelessness. Increasing awareness of the issues faced by homeless individuals and understanding how such issues can lead to exclusion from dental services is a key step in making dental care more accessible (Freeman, Doughty, Macdonald, & Muirhead, 2020). Freeman et al., (2020) suggest that such "education and training" should occur at "undergraduate, postgraduate and qualified dental health practitioner levels" (p. 4).

5.3.1.6 Discussion about managing dental appointments

The chaotic lifestyles of adults experiencing homelessness have been identified as a barrier to dental care (Caton et al., 2016; Csikar et al., 2019). This study found that sometimes dental appointments were missed despite a person's best efforts to attend. Additionally, it found that concerns about managing dental-post-operative care could be a barrier. This has not previously been reported as a barrier to dental

care which is perhaps a reflection of how dental service providers perceive the dental care process. That is, that dental treatment is performed by the dental practitioner and that recovering from dental treatment is to be managed by the patient.

5.4 Objective 3. Design and explore the feasibility of a dental program that can be used in a non-capital city area of Victoria to promote preventive dental visiting and improve oral health amongst adults experiencing homelessness.

5.4.1 Discussion of the small group workshop

The aim of the small group workshop was to seek feedback on the dental program design, assess the feasibility of the dental program and seek suggestions on what would be required to get the program up and running. This discussion focusses on the points raised during the stakeholder's discussions at the workshop and the ranking of the ideas generated by the stakeholders. In answer to the question, "is the program feasible?", stakeholders believed that it was. However, they highlighted some challenges that would need to be overcome for it to be successful. Challenges related to the effect the dental program would have on the public-dental clinic and the sustainability the dental program.

5.4.2 Discussion of the dental program design

Concerns were raised about the impact the introduction of block booked appointments, to allow adults experiencing homelessness to opportunistically drop-in for a dental appointment, would have on the clinic. This proposed departure from the traditional model of dental service delivery in which individuals contact the service, schedule an appointment and attend a fixed-site dental clinic at a specific pre-booked time could impact the efficient running of the public-dental clinic. Given the limited funding available for the provision of public-dental services in Australia

and the use of waiting lists to manage the demand for care (Australian Health Ministers' Advisory Council, 2015), this concern is legitimate. Unused dental appointments result in a loss of income and are costly to service providers. However, drop-in appointments are an important part of dedicated-homeless dental services. Irrespective of whether a fixed-site or outreach site was visited, all initial dental visits at a homeless-dedicated dental service in London, UK occurred on a drop-in basis (Daly, Newton, & Batchelor, 2010). Drop-in appointments overcome the barriers of needing to contact a dental service by phone, needing to attend a dental clinic at a scheduled time and allows homeless individuals to attend at a time when it suits them.

Stakeholder suggestions for getting the dental program up and running focussed on management and organisational issues. Starting with a small pilot program, establishing a working group, finding a source of funding, establishing clear guidelines about how the dental program will work and who is responsible for what were highlighted by stakeholders as factors important to the for the roll-out of the program. Each of these factors are important in programs aiming to improve the oral health of homeless individuals. Homeless-dedicated oral health promotion programs are not implemented or are delayed as a result of; a lack of resources to implement the program, a lack of interest in the program from individuals or organisations responsible for its implementation and individuals or organisations involved in the program having previous experience of programs that were implemented and suddenly stopped (Beaton & Freeman, 2016).

Even when access to care is facilitated, regular dental attending for check-ups and non-problem-based visits may not occur. There is little evidence to support the notion that homeless-dedicated dental services are successful in facilitating regular dental visiting for check-ups. Caton et al. (2016) reported it was “unusual for patients to return for regular check-ups” (p. 69) and Daly et al. (2010) found that less than one third (31%) of homeless patients who had used a dedicated-homeless

dental service subsequently attended for a check-up. Nevertheless, facilitating access to dental care and providing dental treatment leads to an improvement in OHRQoL (Abel et al., 2013) and self-concept (Kerr, 2018). Oldroyd et al. (2017) described a "bi-directional relationship" in which "low self-esteem results in poor self-care and poor (oral) health, which in turn exacerbates low self-confidence and mental health problems" (p. 1233). Thus, providing dental care will, help disrupt this bi-directional relationship, contribute to better mental health, general health and a sense of well-being.

5.5 Strengths and limitations of the study

This research has both strengths and limitations. An obvious limitation was that we were unable to recruit any participants with experience of homelessness into the transcendental phenomenological study. Consequently, we were unable to fulfil the first objective of the study and gain a better understanding of the pathways taken to dental care by adults experiencing homelessness. This means that the barriers identified in this study reflect those perceived by homelessness and housing support workers rather than those borne of personal experience. However, the barriers to dental care identified in the qualitative descriptive study were strikingly similar to those reported in studies that collected data from homeless adult participants (Csikar et al., 2019). This suggests that homelessness and housing support workers have a good understanding of the barriers faced by adults experiencing homelessness as they seek to access dental care which enhances the dependability of this study.

Arguably, the research design, which looked to the literature to discover the barriers and enablers of dental care and then used them to design the focus group topic guide, made it likely the findings of the qualitative descriptive study would confirm the findings of previous studies. However, focus group discussions were not limited to previously identified barriers and enablers of care. Participants were asked "are there any other factors you can think of that may prevent someone

experiencing homelessness from visiting the dentist?" and "is there anything else you could think of that would make dental care easier to access for people experiencing homelessness?". This meant that participants did not only discuss barriers and enablers that had been previously reported but also ones which they perceive to exist locally. This enabled local barriers such as the organisation of the local public-dental services to be identified as a barrier to care.

A further limitation of this research was the size of the focus groups which contained fewer than the ideal number of 5-8 participants. The "time constraints and work commitments" (p. 149) of homelessness support staff make recruiting them into oral health research difficult (Coles et al., 2013). Although the focus group sizes were less than ideal, group sizes as small as two have been reported in focus group studies where multiple focus groups have been held (Dunn et al., 2011). A benefit of the small group sizes was that they enabled the moderator to make eye contact with participants as a way of inviting them to make a comment and ensure that the focus groups was not dominated by any one person. The barriers to dental care identified in the qualitative descriptive study were similar to barriers identified by adults experiencing homelessness in Australian capital cities and major cities in the UK and Canada (Csikar et al., 2019; Ford et al., 2014; Mago et al., 2018; Parker et al., 2011; Stormon, Pradhan, et al., 2018) which enhances the credibility of this study.

Additionally, the study was limited to one regional city in Victoria. Public-dental clinics in Victoria are managed independently. Consequently, the organisation and management of the local public-dental clinic, including strategies such as moving patients to the bottom of the waiting list if they fail to attend scheduled appointments, may be different from other public-dental clinics. Because of this, the dental program design may not be generalisable to other non-capital city areas of Victoria.

A strength of this study was that it was supported by the regional city's main housing and homelessness support organisation which was also a SHS that provided IAP services. This meant that the study included staff who provided homelessness support and housing services. Because the SHS was part of the Opening Doors framework, it meant that anyone seeking homelessness and housing support in the local area had the opportunity to take part in the study. However, recruiting only from the SHS meant that adults experiencing homelessness who were not engaged with the SHS, or who were engaged with another specialist SHS in the area may have missed the opportunity to take part in the study. The study was also limited by the exclusion of non-English speakers because newly arrived refugees, who have difficulties speaking English, are at risk of homelessness (Flatau et al., 2015).

5.5.1.1 Researcher reflections

If I were given an opportunity to repeat this research and had the benefit of hindsight, I would adopt a community-based participatory research (CBPR) design rather than the selected qualitative multimethod design. A CBPR design would be beneficial because it adopts a collaborative approach that involves stakeholders in the study and reduces social inequities (Israel, Eng, Schulz, & Parker, 2012). Having adults with experience of homelessness on the research team and using their insight to help design the dental program would be invaluable. It would ensure that the program met their needs, rather than the needs they were perceived to have. I would also expand the study to include adults who were at risk of homelessness.

The community that the CBPR centres on would be the community of individuals who were homeless or at risk of homelessness and the people who support them. Participants in the CBPR would include, adults who were experiencing or at risk of homelessness, organisers and volunteers at the local community meal events, a representative from the local public-dental clinic, a representative from the local SHSs, a representative from the local community health organisation,

representatives from organisations providing mental health and drug and alcohol services and local private dental practitioners.

Although these organisations and individuals were invited to participate in this study, not all of them accepted the invitation. Whilst those that did participate in the study provided feedback on the design of the dental program and its feasibility, they were not given the opportunity to provide input in the design phase of the dental program. Having stakeholders involved in the design phase, rather than just simply feeding back on the design would potentially have increased the organisations' investment in the success of the program, increased the likelihood that the research findings were disseminated throughout the organisation and increased the chance of the organisation adopting the program (Israel et al., 2012, p. 11).

Clearly, using a CBPR research design as opposed to the selected multi-method design would not have guaranteed the recruitment of adults experiencing homelessness into the study. However, having multiple support organisations invested in the design and success of the program would potentially have increased the likelihood of recruiting adults experiencing homelessness into the study as multiple sites could be used for recruitment.

I believe my choice of the two-phase multi-method research design was, in part, a reflection of my experience and training as a dental practitioner. I had lived and worked locally for nearly thirty years and had a good understanding of how dental services were provided in the local area. Because of this, I felt I was in the best position to undertake the dental program design. Consequently, I undertook the design process alone. Thus, just as dental services work in isolation from other health services, I had worked in isolation to design the dental program. Despite my isolated approach, the feasibility of the design was confirmed by local stakeholders.

5.6 Chapter 5 Summary

The findings of the three studies incorporated in this research, their strengths and limitations and my reflections on the study have been discussed in this chapter. Unfortunately, we were unable to recruit anyone into the transcendental phenomenological study. Consequently, the discussion about Phase 1 of the research was related only to the qualitative descriptive study findings and the categorisation of those findings according to the Levesque et al. (2013) framework. The discussion about the qualitative descriptive study findings illustrated how homelessness and housing support workers believed adults experiencing homelessness were prevented from accessing dental care by both personal and health-service-related factors. The personal factors identified, including the cost of care, managing multiple competing needs, the fear of being judged and anxiety about dental treatment, were not unique to homeless adults living in a non-capital city area of Victoria and have been reported worldwide (Chi & Milgrom, 2008; Coles et al., 2011; Csikar et al., 2019; Mago et al., 2018; Stormon et al., 2018). Likewise, specific dental service organisational factors that act as barriers to dental care for homeless individuals have also been reported in the UK (Caton et al., 2016).

By detailing the personal and dental service organisational factors that prevented access to dental care in a non-capital city area of Victoria, the qualitative descriptive study provided an explanation of how homeless adults become excluded from "routine dental goods and services" (Coles & Freeman, 2016, p. 54). The dental program design (section 4.3.1) contained elements that addressed these personal and organisational factors. Although local stakeholders believed the dental program design was feasible, they highlighted the need for it to be well-managed and funded in order to be sustainable.

The strengths and limitation of the study were also discussed as were the researcher's reflections on what she would do differently if she were able to repeat this research.

The following chapter will summarise the key findings of this study, identify the study's strengths and limitations, make recommendations about how this research should be translated into actions and suggest what further research should be undertaken.

6 Conclusion

6.1 Introduction

In the previous chapter the study findings were discussed in relation to the research objectives, the Levesque et al. (2013) framework and the existing literature. Additionally, the chapter included a discussion about the strengths and limitations of the study and the researcher's reflections on the study. In this chapter the key findings of the study are presented and linked back to the rationale underpinning the study. Recommendations about translating this research into actions are then presented before suggestions about future studies are made.

6.2 Key findings of the study

This study achieved its aim which was to design a dental program that could be used in a non-capital city area of Victoria to facilitate visiting for dental check-ups and preventive dental care and enable the promotion of oral health to adults experiencing homelessness. Both adults experiencing homelessness and people living outside of capital cities in Australia suffer poor oral health and the need to improve their oral health has been recognised (COAG Health Council Oral Health Monitoring Group, 2015). The dental program designed in this study addresses that need.

This study was the first study in Australia to explore and identify factors that prevent adults experiencing homelessness from accessing dental care in a non-capital city area. The factors identified included; the multiple competing needs that homeless adults experience, the cost of dental care, the organisation of public-dental services, the fear of being judged, being anxious about dental care and difficulties managing dental appointments. The finding that the organisation of public-dental clinics could effectively exclude adults experiencing homelessness

from accessing dental care was of interest and had not been reported previously. The study also found that strategies, used to improve access to dental care and promote oral health to adults experiencing homelessness in Australian capital cities and major cities worldwide, could be adapted and used in non-capital city areas of Victoria.

The dental program design incorporated strategies adapted from successful programs running in Australian capital-cities and major cities worldwide. These strategies included; using dental outreach teams to build trust, promote oral health and provide information about how dental care can be accessed, providing free oral hygiene products, asking oral health questions at IAP interviews, advertising priority access dental services at SHSs, having drop-in dental services available at the local public-dental clinic, using PACs to identify people eligible for priority access dental care and having a dedicated coordinator for the dental program. In the longer term, the dental program focussed on the strategy of putting dental care within the reach of adults experiencing homelessness. It aimed to provide dental services at convenient locations by using mobile dental vans, by co-locating dental services with other health and homelessness support services and by establishing a network of private dental practitioners who were willing to provide treatment for homeless adults at no charge to the patient.

The dental program design was based on a collaborative relationship between local public and private dental service providers, mental health service providers, drug and alcohol service providers and local homelessness and housing support service providers. The dental program enabled mental health service providers, drug and alcohol service providers and local homelessness and housing support service providers to refer clients directly to the public-dental clinic for priority access dental care. This enabled referrals to be made when clients were not in a housing crisis situation and were more likely to be interested in accessing dental care.

The program centred on building trust between adults experiencing homelessness and dental service providers. Regular outreach dental team visits at convenient locations were used to build that trust. The program also recognised the importance of dental team members understanding the issues faced by adults experiencing homelessness and having excellent communication skills. Implementing the dental program will require a change in the way local public-dental services are organised and delivered. This will include the adoption of a more flexible patient-centred approach to dental appointment scheduling and the protocols surrounding failed appointments at the local public-dental clinic. Input and feedback from local stakeholders confirmed that the dental program was feasible. Stakeholders highlighted the fact that the program needed to be funded and have a transparent and robust management structure.

6.3 Recommendations

A pilot dental program that incorporates the strategies included in stage one of the dental program design should be rolled-out. These strategies include; providing PACs to adults experiencing homelessness, asking oral health questions at IAP interviews, establishing regular outreach dental visits, blocking out appointments at the public-dental clinic to allow for drop-in dental visits, clearly signposting where and how priority dental services can be accessed, providing free dental hygiene products and appointing a priority patient coordinator to oversee the running of the dental program. As the program is rolled-out it should be evaluated. The evaluation should assess the oral health needs of the homeless adults who use the program. This needs assessment should investigate needs in terms of any needs that are not being met by the program as well as assessing dental treatment needs. The dental treatment needs of adults experiencing homelessness in regional areas have not been reported previously and it is assumed that they will be at least as high as they are for adults experiencing homelessness in capital city areas (Ford et al., 2014; Jago et al., 1984).

Once the oral health needs have been identified it will be possible to determine whether the local public-dental clinic has the capacity to meet those needs. As the need to improve the oral health of adults experiencing homelessness has been recognised by the Australian (COAG Health Council Oral Health Monitoring Group, 2015) and Victorian Governments (Dental Health Services Victoria, 2018b), the capacity of the local public-dental clinic should not be a limiting factor for the program and the program should be prioritised. The program should also be assessed to determine whether it does facilitate visiting for dental check-ups and preventive dental care and if the promotion of oral health results in improvements in clinical oral health and OHRQoL.

Feedback measures should include both qualitative and quantitative measures. Quantitative measures should include tracking the numbers of PACs issued and subsequently used and recording the number of people using the outreach dental services. Qualitative measures should include surveying homeless adults who use the program and attend a dental service to discover their satisfaction with the program and the care they received as well as an exploration of their experience of using the dental service. Likewise, stakeholders, including the local community dental clinic staff, should be surveyed to determine their satisfaction with the program.

A participatory approach to the evaluation will ensure that the needs of adults experiencing homelessness as well as stakeholders and dental service providers are met by the dental program. Feedback on the program from adults experiencing homelessness will be especially important as our failure to recruit any homeless adults into the transcendental phenomenological study meant their voice remained unheard and could not be used to help design and provide feedback on the dental program. The dental program should be adapted in response to the feedback provided.

Following the evaluation of the pilot dental program, if successful, the program should be expanded. The expanded program should include government-funded mobile dental vans and public-dental clinics that are co-located with other health and homelessness support services. A network of private dental practitioners who were willing to provide treatment for homeless adults at no charge to the patient should also be established. The expanded program should also be evaluated using a participatory approach.

The local public-dental clinic should review its policies on calling early for an on-the-day emergency dental appointment and placing patients who fail pre-booked dental appointments at the bottom of the waiting list.

6.4 Future research

Future research should focus on evaluating dental programs aimed at improving access to dental services for individuals experiencing homelessness. Evaluations should assess the impact of the dental program on improving access to care and the OHRQoL of the individuals experiencing homelessness.

One important factor in improving access to dental services is the ability of dental team members to communicate in a non-judgemental way and to build trust. Future research should look to design and assess education programs that are designed to improve the communication skills of dental team members.

However, although more research would be helpful, the oral health of adults experiencing homelessness and their OHRQoL remains poor and apparently little changed since Jago, Sternberg and Westerman published their study into the oral health status of homeless men in Brisbane thirty five years ago (Jago et al., 1984). What is needed now, rather than more research into the oral health status of adults experiencing homelessness, is action to address the oral health inequalities they suffer and to improve their OHRQoL. This research has resulted in the design of a program that will facilitate such action. This action will require a change from the

traditional dental practice model of service delivery which is failing Australian adults who experience homelessness. A new model, that focusses on collaborations with other health and community service providers and delivers care and advice within-the reach of the community it serves, is required.

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Appendices

Appendix 1 E-mail requesting support for the study

Good afternoon,

I am a Bendigo based PhD student and I am researching the oral health of adults who are experiencing homelessness. Specifically, I am interested in exploring how adults experiencing homelessness in rural areas access dental services, the barriers they face and how access could be improved. I was wondering if I could speak to somebody within your organisation and get some advice on how best to go about my study. Is there anybody I could make an appointment with to discuss my plans?

With thanks and kind regards,

Jacki Goode

PhD candidate

Appendix 2 **Letter of support for the study from the local homelessness and housing support organisation**

haven
HOME, SAFE

www.havenhomesafe.org.au

To Whom It may Concern
University of Tasmania
Research Ethics Committee

We have been approached by Jacqueline Goode a PhD student at the University of Tasmania to facilitate access to relevant staff and clients in her attempt to appreciate the organisational dynamics underlying the tendency of homeless people to suffer poorer oral health than might be anticipated.

Haven; Home, Safe is an integrated homelessness service with a property extending across Victoria. We have a substantial client base and employ a number of Tenancy Managers. I am happy to facilitate access to these people who will be the informant base for the research. The research will be conducted with reference to our Privacy framework and respondents have the right to accept or reject participation according to our rules. I suggest that the interviews take place on-site at our office in Bendigo, where we can provide interview rooms for discussions with clients of the service which have duress alarms and are adjacent to our reception area.

I am Manager Research and Evaluation and will facilitate Jacquelines access to the organisation and participants.

Yours Sincerely
Dr R D Jamieson
Manager Research and Evaluation

Bendigo
10–16 Forest Street,
Bendigo VIC 3550
bendigo@hhs.org.au
tel 03 5444 9000
fax 03 5444 0503

Geelong
6 Pakington Street,
Geelong West, VIC 3218
geelong@hhs.org.au
tel 03 5246 8900
fax 03 5222 2402

Mildura
143A Lime Avenue,
Mildura, VIC 3500
mildura@hhs.org.au
tel 03 5018 4200
fax 03 5023 5862

Preston
52–56 Mary Street,
Preston, VIC 3072
preston@hhs.org.au
tel 03 9479 0700
fax 03 9470 4400

Robinvale
52 Herbert Street,
Robinvale, VIC 3549
robinvale@hhs.org.au
tel 1300 716 776
fax 03 5026 1719

Appendix 3 Flyer advertising the transcendental phenomenological study

UNIVERSITY of TASMANIA | FACULTY OF HEALTH
Centre for Rural Health

Have you experienced being homeless whilst living in a rural or regional area of Victoria?

Would you like to help improve access to dental services for people who are experiencing homelessness?

Researchers at the University of Tasmania, Centre for Rural Health want to better understand what it's like to seek, need or receive dental care as someone who is experiencing homelessness so that they can make recommendations on improving dental

services.

You are invited to tell us about your experiences in a 20-30 minute interview with a researcher. Any information that you give will remain anonymous.

To be involved you must be 18 years of age or older, speak English and have experienced homelessness whilst living in a rural or regional area of Victoria.

If you are interested in participating or would like to find out more about information, please contact Jacqueline Goode via e-mail at jacqueline.goode@utas.edu.au or by phone on 0

Thank you for your interest in this study!

Appendix 4 Focus group topic guide

Focus Group Topic Guide

Certain factors have been identified as reasons that people who experience homelessness don't visit the dentist. I am going to list some of those factors now and I'd like to find out how important or unimportant you think each one is:

a. The cost of dental care
b. Not knowing where to go to get care
c. Dental services being poorly advertised
d. The process of registering for government assistance with 'Centrelink' in order to be able to use public dental services
e. Dental care being a low priority
f. Feeling embarrassed about your teeth
g. Feeling anxious or worried about having dental treatment
h. Previous bad experiences at the dentist.

Are there any other factors you can think of that may prevent someone experiencing homelessness from visiting the dentist?

Certain strategies have been used to try and improve access to dental care for people who experience homelessness. I am going to list some of those strategies now and I'd like you to tell me how well or how badly you think each strategy would work:

a. Dentists (or oral health therapists) visiting hostels/drop in centres to do dental examinations, give advice and organise further appointments at a dental clinic.
b. Having dentists (or oral health therapists) visit hostels/drop in centres to provide simple dental treatments on site.
c. Using mobile dental vans to provide dental services on site.
d. Being able to drop in to the dentist and get care without having to make an appointment.
e. Having dental services located in the same building as other health or support services.
f. Having students of dentistry and oral health therapy provide dental treatment.
g. Linking dental services with other support services such as drug and alcohol/housing support services.
h. Having a card/voucher that gives priority access to dental care at the public dental clinic.

Is there anything else you could think of that would make dental care easier to access for people experiencing homelessness?

When thinking about the dental health of people who are experiencing homelessness:

1. When is the best time to talk about dental health?
2. Who is the best person to give dental health advice?
3. What would make it easier for people experiencing homelessness to have their teeth checked?

Appendix 5 **Demographic information form-Focus group**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Staff Focus Group

Demographic Information Form

Name:

.....

Please provide your preferred contact details:

E-mail:

.....

Telephone:

.....

Postal address:

.....
.....
.....

I do not wish to be invited to the workshop, please do not contact me again ☐

I wish to review the preliminary results of the focus group meetings ☐

How do you support people experiencing homelessness?

.....
.....
.....
.....
.....

Approximately how long have you been supporting people experiencing or at risk of homelessness?

.....

Identification code .....

Appendix 6 **Invitation to small group workshop-Participants**

Dear XXX,

Last year you participated in a focus group that was part of a study called "Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria".

As a participant in the study the University of Tasmania, Centre for Rural Health, would like to invite you to a small group workshop at which the findings of the research project will be presented.

INVITATION: DENTAL PROGRAM TO IMPROVE ACCESS TO DENTAL CARE FOR ADULTS EXPERIENCING HOMELESSNESS - SMALL GROUP WORKSHOP

Date: Wednesday 20th March 2019

Time: 12.30pm – 2pm

Venue: Activity Room 2, Ground Floor, Bendigo Library.

The objective of the workshop is to seek your valuable feedback on a program designed specifically to address the dental care needs of adults who are experiencing or are at risk of homelessness. The small group workshop is also part of the research project and to attend we will again need your consent. To explain what being a participant involves, please find attached a Participant Information Sheet for the small group workshop.

If you would like to attend the small group workshop, or would like more information, please R.S.V.P to Jacqueline Goode via: e-mail: jacqueline.goode@utas.edu.au or phone: 04 . Light refreshments will be provided (please advise us of any special dietary requirements you have).

We look forward to seeing you there.

With kind regards,

Jacki Goode

PhD Candidate

Appendix 7 **Demographic information form-Transcendental phenomenological study**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Client Interview

Demographic Information Form

Name:

.....

Please provide your preferred contact details:

E-mail:

.....

Telephone:

.....

Postal address:

.....
.....
.....

I do not wish to be invited to the workshop, please do not contact me again ☐

I wish to review and/or edit what I said at my interview before it is analysed ☐

For how long have you experienced homelessness or been at risk of homelessness?

.....

Identification code .....

Appendix 8 **Small group workshop invitation-Stakeholders**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

INVITATION: DENTAL PROGRAM DESIGN - SMALL GROUP WORKSHOP

Date:

Time: 10am -11am

Venue:

Dear [xxxxx],

The University of Tasmania, Centre for Rural Health, would like to invite you to a small group workshop at which the findings of a research project that has investigated dental care access by adults experiencing, or at risk of experiencing homelessness whilst living in rural or regional Victoria will be presented.

The objective of the workshop is to seek your valuable feedback on a program designed specifically to address the dental care needs of adults who are experiencing or at risk of homelessness. The small group workshop is part of the research project and to attend we will need your consent to become a participant in the project. To explain what being a participant involves, we have enclosed with this invitation, a Participant Information Sheet for the small group workshop.

If you would like to attend the small group workshop, or would like more information, please R.S.V.P to Jacqueline Goode via: e-mail: jacqueline.goode@utas.edu.au or phone: 04 Light refreshments will be provided.

We look forward to seeing you there.

Yours faithfully,

Jacqueline Goode

PhD candidate

CENTRE FOR RURAL HEALTH
School of Health Sciences
University of Tasmania
Locked Bag 1322
Launceston TAS 7250

T: +61 3 6324 4009
F: +61 3 6324 4040
email: Rural.Health@utas.edu.au
URL: http://www.utas.edu.au/rural-health/home
ABN 30 764 374 782 / CRICOS 00586B

Invitation Workshop_Manager V2_15.5.18

Appendix 9 **Participant information sheet- Small group workshop**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Information sheet for small group workshop

---

1. Invitation
You are invited to take part in a research study entitled "Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria".

This study is being conducted by A/Prof Leonard Crocombe, Dr Ha Hoang and Jacqueline Goode from the Centre for Rural Health at the University of Tasmania.

2. What is the purpose of the study?
The purpose of this study is to better understand the reasons that adults who are experiencing homelessness do or don't visit the dentist, to discover what would make accessing dental care easier and to use that information to design a program to make it easier to get dental care and advice.

The results of this research will be used by the researcher, Jacqueline Goode, to obtain a Doctor of Philosophy degree.

3. Why have I been invited to participate?
You have been invited to participate because you are a manager of an organization that supports adults experiencing, or at risk of, homelessness or have previously participated in this study. We believe that you can provide valuable insights into how a program, designed to improve access to dental services, could be operationalized at a local level.

4. What will I be asked to do?
Being in the research project involves attending a small group workshop that will seek feedback on a program that has been designed specifically to improve access to dental care and oral health in adults who experience or are at risk of homelessness whilst living outside a capital city. The workshop will last 60-90 minutes and will be held in a meeting room at the Bendigo Library.

To attend this workshop, you must:

- Be aged 18 years or over
- Speak English
- Support adults who have experienced homelessness or have participated previously in this study

You will not be paid for participating in this research project. However, as a thank you for attending the workshop, at the end of the meeting, we would like to offer you a $20 Coles voucher towards your costs of attending.

5. Are there any possible benefits of the study?
Your participation in this study will help to

- give a better understanding of the factors that influence the uptake of dental care by adults who are experiencing homelessness
- design local services that improve access to dental care and advice for people who are experiencing homelessness.

6. Possible risks from participating in this study?
It is anticipated there will be minimal risks associated with taking part in this small group workshop. If you become upset or distressed as a result of your participation in the workshop, the research team will be able to arrange for counselling or other appropriate support. You can leave the workshop at any time without giving a reason.

Whilst all care will be taken to maintain privacy and confidentiality, you may experience embarrassment if one of the focus group members were to repeat things said in confidence during the workshop.

7. What if I change my mind during or after the study?
You are able to withdraw from this study at any time without giving a reason. If you wish to withdraw please notify a member of the research team.

You should be aware that it will not be possible to withdraw your data from the information that is collected during the workshop because the information collected will reflect the discussions and thoughts of the group as a whole and not individuals.

8. What will happen to the information when the study is over?
By participating in this study you are consenting to the research team collecting and using personal information about you. Any information that can identify you will be treated as confidential and securely stored. The information we collect about you will only be used for the purpose of this study and will only be disclosed with your permission, except as required by law.

The comments you make as part of the small group workshop will not be identifiable.

All information collected will be stored on password protected computers or in locked filing cabinets at the University of Tasmania, Centre for Rural Health in Launceston, Tasmania. Information will only be accessed by the research team members.

You have the right to know what information the research team has collected about you and you can ask the research team to change any information that you think is incorrect.

This study is expected to be completed by November 2020. Five years after the completion of this study, the information collected will be destroyed by deleting the electronic files and shredding any paper records.

You will be able to get a summary of the study findings by post or via email. If you wish to have a summary of the findings sent to you, please provide your contact details below.

Please send a summary of the findings to me at:

.....
.....

Please tick this box if you ***do not*** want a summary of the findings ☐

9. How will the results of the study be published?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified.

10. What if I have questions about this study?
If you would like to discuss any aspect of this study, please feel free to contact a research team member.

Name	A/Prof Leonard Crocombe
Position	Principal Investigator
Telephone	03 62267376

Name	Dr Ha Hoang
Position	Associate Investigator
Telephone	03 6324 4031
Email	Thi.Hoang@utas.edu.au

Name	Jacqueline Goode
Position	Student Investigator
Telephone	04
Email	jacqueline.goode@utas.edu.au

This study has been approved by the Tasmanian Health and Medical Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 6254 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number H0017059.

Thank you for taking the time to consider this information sheet. The sheet is yours to keep.

Appendix 10 **Participant information sheet-Focus group**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Information sheet for support worker focus group meeting

1. Invitation
You are invited to take part in a research study entitled "Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria".

This study is being conducted by A/Prof Leonard Crocombe, Dr Ha Hoang and Jacqueline Goode from the Centre for Rural Health at the University of Tasmania.

2. What is the purpose of the study?
The purpose of this study is to better understand the reasons that adults who are experiencing homelessness do or don't visit the dentist, to discover what would make accessing dental care easier and to use that information to design a program to make it easier to get dental care and advice.

The results of this research will be used by the researcher, Jacqueline Goode, to obtain a Doctor of Philosophy degree.

3. Why have I been invited to participate?
You have been invited to participate because you support adults experiencing homelessness who live outside of a capital city. We believe that you can provide valuable insights into how access to dental services could be improved for adults who are experiencing homelessness.

Involvement in this study is voluntary and you may wish to talk to a relative, friend or colleague about it before you decide whether or not to participate.

4. What will I be asked to do?
Being in this study involves attending a focus group meeting with 2-11 other people who provide support to people experiencing homelessness. The meeting will last approximately 45-60 minutes and will be held in a meeting room at your place of work.

During the focus group meeting, you will be asked for your thoughts on:

- The barriers that prevent adults experiencing homelessness from going to the dentist
- What would make it easier for adults experiencing homelessness to go to the dentist and have their teeth checked regularly

You will be asked these questions as part of a group. The focus group meeting will be audio-recorded and notes will be written.

To participate in the focus group meeting you must be:

- aged 18 years or over
- speak English

- have supported adults who have experienced being homeless, or have been at risk of homelessness whilst living outside a capital city in Victoria

You will not be paid for participating in the focus group meeting. However, as a thank you for participating, we would like to offer you a $20 Coles voucher towards your costs of attending.

As a focus group member, you will be invited to attend a small group workshop at which the results of the program design will be presented. At this small group workshop, your feedback on the program design will be sought. The contact details you provide in the Demographic Information Form will be used to invite you to the workshop. If you do not want to be invited to the workshop you can tick the 'please do not contact me' box.

5. Are there any possible benefits of the study?
Your participation in this study will help to

- give a better understanding of the factors that influence the uptake of dental care by adults who are experiencing homelessness
- design local services that improve access to dental care and advice for people who are experiencing homelessness.

6. Possible risks from participating in this study?
It is anticipated there will be minimal risks associated with taking part in the focus group meeting. You do not have to answer the questions if you don't want to and you can leave the meeting at any time without giving a reason.

Whilst all care will be taken to maintain privacy and confidentiality, you may experience embarrassment if one of the focus group members were to repeat things said in confidence during the focus group meeting.

7. What if I change my mind during or after the study?
You are able to withdraw from this study at any time without giving a reason. If you wish to withdraw please notify a member of the research team.

You should be aware that it will not be possible to withdraw your data from the information that is collected during the focus group meeting because the researchers will not be able to identify your voice in the audio-recording.

8. What will happen to the information when the study is over?
By participating in this study you are consenting to the research team collecting and using personal information about you. Any information that can identify you will be treated as confidential and securely stored. The information we collect about you will only be used for the purpose of this study and will only be disclosed with your permission, except as required by law.

The comments you make as part of the focus group meeting will not be identifiable.

All information collected will be stored on password protected computers or in locked filing cabinets at the University of Tasmania, Centre for Rural Health in Launceston, Tasmania. Information will only be accessed by the research team members.

You have the right to know what information the research team has collected about you and you can ask the research team to change any information that you think is incorrect.

This study is expected to be completed by November 2020. Five years after the completion of this study, the information collected will be destroyed by deleting the electronic files and shredding any paper records.

You will be able to get a summary of the study findings by post or via email. If you wish to have a summary of the findings sent to you, please provide your contact details below.

Please send a summary of the findings to me at:

.....

.....

Please tick this box if you ***do not*** want a summary of the findings ☐

9. How will the results of the study be published?

It is anticipated that the results of this research project will be published and/or presented in a variety of forums. In any publication and/or presentation, information will be provided in such a way that you cannot be identified.

10. What if I have questions about this study?

If you would like to discuss any aspect of this study, please feel free to contact a research team member.

Name	A/Prof Leonard Crocombe
Position	Principal Investigator
Telephone	03 62267376
Email	Leonard.Crocombe@utas.edu.au
Name	Dr Ha Hoang
Position	Associate Investigator
Telephone	03 6324 4031
Email	Thi.Hoang@utas.edu.au
Name	Jacqueline Goode
Position	Student Investigator
Telephone	04
Email	jacqueline.goode@utas.edu.au

This study has been approved by the Tasmanian Health and Medical Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 6254 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number H0017059.

Thank you for taking the time to consider this information sheet. The sheet is yours to keep.

Appendix 11 Consent form

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Consent Form

Title	Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria
Protocol Number	H0017059
Principal Investigator	A/Prof Leonard Crocombe: Email Leonard.Crocombe@utas.edu.au
Associate Investigator(s)	Dr Ha Hoang, Dr Jacqueline Goode (student researcher)

Declaration by Participant

I have read the Participant Information Sheet or someone has read it to me in a language that I understand.

I understand the purposes, procedures and risks of the research described in the project.

I have had an opportunity to ask questions and I am satisfied with the answers I have received.

I freely agree to participate in this research project as described and understand that I am free to withdraw at any time during the project without affecting my future care.

I understand that I will be given a signed copy of this document to keep.

Name of Participant (please print) _____

Signature _____ Date _____

Declaration by Researcher†

I have given a verbal explanation of the research project, its procedures and risks and I believe that the participant has understood that explanation.

Name of Researcher† (please print) _____

Signature _____ Date _____

† An appropriately qualified member of the research team must provide the explanation of, and information concerning, the research project.

Note: All parties signing the consent section must date their own signature.

Appendix 12 **Agenda-Small group workshop**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Small Group Workshop: a program to improve access to dental care for adults experiencing homelessness.

Time: 12.30-2.00 pm Wednesday 20th March 2019.

Place: Activity Room 2, Bendigo Library.

Workshop Agenda:

12.30-12.40: Welcome and introduction.

12-40- 12.55: Presentation of the dental program and questions.

12.55-1.05: Refreshments.

1.05-1.10: Write your thoughts on "How feasible is this program and what would need to be done to get it up and running in the next 6 months?"

1.10-1.20: List and display the thoughts of the group.

1.20-1.35: Discuss and clarify the thoughts of the group.

1.35 1.45: Voting for the most important steps to be taken to get the program started.

1.45-1.55: Summary and discussion.

1.55-2.00: Thank you and end of workshop

Appendix 13 Demographic information form-Small group workshop

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Small Group Workshop

Demographic Information Form

Name:

.....

Please tick the most appropriate stakeholder group:

- o I attended a focus group meeting/interview
- o I support people experiencing homelessness
- o I work at a dental clinic

Please send me a copy of the preliminary results of the workshop ☐

Preferred contact details to be used to send me a copy of the findings of the study.

.....
.....
.....
.....

Identification code .....

Appendix 14 Summary of the phases of the dental program-Small group workshop

Phase 1

Phase 2

Appendix 15 **Participant information sheet-Transcendental phenomenological study**

UNIVERSITY of TASMANIA

College of Health & Medicine
CENTRE FOR RURAL HEALTH

Participant Information Sheet for Client Interviews

1. Invitation

You are invited to take part in a research study called "Improving access to dental services and promoting oral health for adults experiencing homelessness in a non-capital city area of Victoria".

This study is being run by A/Prof Leonard Crocombe, Dr Ha Hoang and Jacqueline Goode from the Centre for Rural Health at the University of Tasmania.

2. What is the purpose of the study?

We want to better understand why adults who are experiencing homelessness do or don't visit the dentist and to find out what would make it easier to get dental care and advice.

The results of this research project will be used by the researcher, Jacqueline Goode, to obtain a Doctor of Philosophy degree.

3. Why have I been invited to participate?

You have been invited to help with this study because you are experiencing, or have experienced homelessness whilst living outside of Melbourne. You can help us by telling us how and where you get your teeth and gums checked.

Taking part in this study is voluntary, you do not have to take part if you do not want to. You may want to talk to a relative or friend about it before you decide whether or not to take part.

4. What will I be asked to do?

You will be interviewed by a researcher in an on-site consulting room at Haven; Home, Safe.

We will ask you about your experiences of getting your teeth and gums checked and about times you tried to get them checked but couldn't. We will also ask you about any times you have gone to a doctor, an emergency department or a pharmacist for help with a dental problem.

The interview will last between 20-30 minutes and will be recorded. You will not be identified in any of the recordings or notes that are made so that your comments cannot be traced back to you.

To participate in the interview you must be:

- aged 18 years or over
- speak English
- have experienced being homeless whilst living outside of Melbourne.

You will be able to review the information that you give in your interview before it is analysed and make changes to it if you think it is wrong.

You will not be paid for taking part in the interview. However, to thank you for taking part, we would like to offer you a $20 Coles voucher towards your costs of attending.

If you take part in this study, you will be invited to attend a small group workshop at which we will talk about what could be done to make it easier for people experiencing homelessness to get dental care. At the workshop, we will ask you for your feedback on what could be done. The contact details you provide in the Demographic Information Form will be used to invite you to the workshop. If you do not want to be invited to the workshop you can tick the 'please do not contact me' box.

5. Are there any possible benefits of the study?
Your participation in this study will help to:

- get a better understanding of the things that affect whether adults experiencing homelessness do or do not go to the dentist
- design local services to help adults who are experiencing homelessness to get dental care and advice

You will not get any dental treatment by taking part in this study.

If you would like to see a dentist, the research team will help organize an appointment for you at the Bendigo Health Community Dental Clinic.

6. Possible risks from participating in this study?
We feel the risks of taking part in an interview will be minimal. You do not have to answer the questions if you don't want to and you can leave the interview at any time without giving a reason. If you become upset or distressed as a result of taking part in the study, the research team will be able to arrange for counselling or other appropriate support. Any counselling or support will be provided by qualified staff who are not members of the research team. This counselling will be provided free of charge.

7. What if I change my mind during or after the study?
You are able to stop being in this study for up to four weeks after your interview. After four weeks your information will be analysed and we will not be able to remove it from the study. If you want to withdraw from the study please tell a member of the research team.

8. What will happen to the information when the study is over?
By taking part in this study you are agreeing to the research team collecting and using personal information about you. Any information that can identify you will be treated as confidential and securely stored. The information we collect about you will only be used for this study and will only be disclosed with your permission, except as required by law.

The personal information that we collect and use is your; name, contact details, and how long you have experienced homelessness.

The information we collect will be de-identified and stored on password protected computers or in locked filing cabinets at the University of Tasmania, Centre for Rural Health in Launceston, Tasmania. Your information will only be accessed by the research team members listed below.

You have the right to know what information has been collected about you and you can ask us to change any information that you think is incorrect.

This study is expected to be finished by November 2020. Five years after it finishes, the information collected will be destroyed by deleting the electronic files and shredding any paper records.

You will be able to get a summary of the study results by post or by email. If you wish to have a summary of the findings sent to you, please provide your contact details below.

Please send a summary of the findings to me at:

.....

.....

Please tick this box if you ***do not*** want a summary of the findings ☐

9. How will the results of the study be published?

We expect the results of this research project will be published and/or presented in a variety of different ways. In any publication and/or presentation, information will be given in such a way that you cannot be identified.

10. What if I have questions about this study?
If you would like to discuss any aspect of this study, please feel free to contact any member of the research team.

Name	A/Prof Leonard Crocombe
Position	Principal Investigator
Telephone	03 62267376
Email	Leonard.Crocombe@utas.edu.au

Name	Dr Ha Hoang
Position	Associate Investigator
Telephone	03 6324 4031
Email	Thi.Hoang@utas.edu.au

Name	Jacqueline Goode
Position	Student Investigator
Telephone	04
Email	jacqueline.goode@utas.edu.au

This study has been approved by the Tasmanian Health and Medical Human Research Ethics Committee. If you have concerns or complaints about the conduct of this study, please contact the Executive Officer of the HREC (Tasmania) Network on +61 3 6226 6254 or email human.ethics@utas.edu.au. The Executive Officer is the person nominated to receive complaints from research participants. Please quote ethics reference number [H0017059].

Thank you for taking the time to consider this information sheet. The sheet is yours to keep.

Appendix 16 Letter of ethical approval for the study

Office of Research Services
University of Tasmania
Private Bag 1
Hobart Tasmania 7001
Telephone + 61 3 6226 7479
Facsimile + 61 3 6226 7148
Email Human.Ethics@utas.edu.au
www.research.utas.edu.au/human_ethics/

HUMAN RESEARCH ETHICS COMMITTEE (TASMANIA) NETWORK

UTAS

15 August 2018

AssocProf Leonard Crocombe
C/- University of Tasmania

Sent via email

Dear AssocProf Crocombe

REF NO: H0017059
TITLE: Improving access to dental services and promoting oral health in a non-capital city homeless population: a multi methods study

Document	*Version*	*Date*
Low Risk Application		
Participant Information Sheet Focus Group 1	Version 1	7 Mar 2018
Participant Information Sheet Focus Group 2	Version 1	7 Mar 2018
Participant Information Sheet Focus Group 3	Version 1	7 Mar 2018
Participant Information Sheet Interview	Version 1	7 Mar 2018
Participant Information Sheet Workshop	Version 1	7 Mar 2018
Participant Information Sheet Client Interview	Version 3	4 Jul 2018
Demographic Information Form Focus Group 1	Version 1	7 Mar 2018
Demographic Information Form Focus Group 2	Version 1	7 Mar 2018
Demographic Information Form Focus Group 3	Version 1	7 Mar 2018
Demographic Information Form Interview	Version 1	7 Mar 2018
Demographic Information Form Workshop	Version 1	7 Mar 2018
Consent Form	Version 1	7 Mar 2018
Withdrawal of Consent Form	Version 1	7 Mar 2018
Invitation to workshop	Version 1	7 Mar 2018
Workshop Schedule	Version 1	7 Mar 2018
Interview Question	Version 1	10 Sep 2017
Topic Guide Focus Groups	Version 1	3 Nov 2017
Advertisement Focus Group	Version 1	7 Mar 2018
Advertisement Interview	Version 1	7 Mar 2018
Letter Requesting Support Dental Clinic	Version 1	7 Mar 2018
Letter Requesting Support	Version 1	7 Mar 2018

The Tasmanian Health and Medical Human Research Ethics Committee considered and approved the above documentation on **13 August 2018** to be conducted at the following

site(s):

University of Tasmania

Please ensure that all investigators involved with this project have cited the approved versions of the documents listed within this letter and use only these versions in conducting this research project.

This approval constitutes ethical clearance by the Health and Medical HREC. The decision and authority to commence the associated research may be dependent on factors beyond the remit of the ethics review process. For example, your research may need ethics clearance from other organisations or review by your research governance coordinator or Head of Department. It is your responsibility to find out if the approvals of other bodies or authorities are required. It is recommended that the proposed research should not commence until you have satisfied these requirements.

All committees operating under the Human Research Ethics Committee (Tasmania) Network are registered and required to comply with the *National Statement on the Ethical Conduct in Human Research* (NHMRC 2007 updated 2014).

Therefore, the Chief Investigator's responsibility is to ensure that:

(1) The individual researcher's protocol complies with the HREC approved protocol.

(2) Modifications to the protocol do not proceed until **approval** is obtained in writing from the HREC. Please note that all requests for changes to approved documents must include a version number and date when submitted for review by the HREC.

(3) Section 5.5.3 of the National Statement states:

Researchers have a significant responsibility in monitoring approved research as they are in the best position to observe any adverse events or unexpected outcomes. They should report such events or outcomes promptly to the relevant institution/s and ethical review body/ies and take prompt steps to deal with any unexpected risks.

The appropriate forms for reporting such events in relation to clinical and non-clinical trials and innovations can be located at the website below. All adverse events must be reported regardless of whether or not the event, in your opinion, is a direct effect of the therapeutic goods being tested. http://www.utas.edu.au/research-admin/research-integrity-and-ethics-unit-rieu/human-ethics/human-research-ethics-review-process/health-and-medical-hrec/managing-your-approved-project

(4) All research participants must be provided with the current Patient Information Sheet and Consent Form, unless otherwise approved by the Committee.

(5) The Committee is notified if any investigators are added to, or cease involvement with, the project.

(6) This study has approval for four years contingent upon annual review. A *Progress Report* is to be provided on the anniversary date of your approval. Your first report is due 15 August 2019. You will be sent a courtesy reminder closer to this due date.

(7) A *Final Report* and a copy of the published material, either in full or abstract, must be provided at the end of the project.

Should you have any queries please do not hesitate to contact me on (03) 6226 2764.

Yours sincerely

Alison Gulliver-Davies
Administration Officer

Appendix 17 University of Tasmania HREC letter requesting that the regional centre is not identified

22 November 2017

Ethics ref: H0017059

Title: Improving access to dental services and promoting oral health in a non-capital city homeless population: a multi methods study

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The above application was considered by the Health and Medical HREC at its meeting on 30th April 2018.

Before Ethics approval can be granted, **we ask that you address the Committee's comments,** which are provided below.

Please include a **clearly marked cover page** at the front of your revised application, **summarising the changes** and **indicating where these changes can be found**. Please incorporate the Committee's comments into this cover page.

It is important that you use the **'track changes'** facility when revising your documents, so the old and proposed new text can be checked quickly and efficiently.

Please send the revised documents electronically to before **9am on 17th May 2018** which is the deadline for the next meeting.

You will be notified of the outcome of the next meeting by email.

The requested revisions are as follows:

1. A redesign of this study will need to be undertaken in order for the application to meet the requirements of the National Statement. There are multiple overlapping vulnerabilities of the participant group which are currently not addressed within this application, for example, people in dependent or unequal relationships (Chapter 4.3 of the National Statement), people with a cognitive impairment, an intellectual disability or a mental illness (Chapter 4.5 of the National Statement), and people who may be involved in illegal activities (Chapter 4.6 of the National Statement).
2. The Committee strongly suggest engaging an appropriate homelessness support organisation within the Bendigo region to provide input into this redesign. The Committee also believe the study would be considerably strengthened with input from a researcher with qualitative research experience.
3. The Committee request that the supervisory team consult an appropriately qualified mental health professional, with experience in homelessness to provide input into this study.
4. There are significant risks to the researcher, which are not addressed within the application. These will need to be recognised, accounted for and appropriate management plans put in place within the redesign. These include but are not limited to; potential bonding between participant and researcher which is heightened with the provision of a researcher phone number; the potential for the researcher to

encounter the participants outside of the research context; difficult situations that may arise within the focus group setting.

5. The Participant Information Sheets (PIS) are currently not fit for purpose and an alternative consent mechanism will need to be considered; an example would be the use of verbal consent, which would overcome any potential literacy issues.
6. The Committee are concerned about the identifiability of the participants given the small participant pool. Within the HREA, please assure the Committee that in any resultant publications, the location of the research will be referred to as "Regional Victoria" rather than the town name.