A qualitative examination into the support needs of people living with obesity during transition from tertiary obesity treatment

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20239028

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A thesis submitted in fulfilment of the requirements for the degree of

Master of Research

School of Medicine

Western Sydney University

2022

Acknowledgements

I would like to acknowledge and express my gratitude for the support and contribution of my supervisors, Dr Kate McBride, Associate Professor Freya MacMillan, and Dr Aymen El Masri, who made possible the completion of this thesis through their expert guidance and mentorship. I would like to give special thanks to Dr Kate McBride, for giving me the opportunity to take part in her project.

I would also like to acknowledge and express my appreciation to Dr Kathryn Williams, who also co-authored the research manuscript and provided guidance on several aspects of the project.

Finally, I want to thank my family for their love, support, and encouragement.

Statement of Authentication

The work presented in this thesis is, to the best of my knowledge and belief, original except as acknowledged in the text. I hereby declare that I have not submitted this material, either in full or in part, for a degree at this or any other institution.

[redacted]

11th February 2022

Declarations

I would like to declare that this project was conceived by my primary supervisor, and initiated, with the conduct of seven interviews and a focus group, prior to the commencement of my candidature. As such, initial data analysis had taken place, but was not shared with me throughout my candidature. I completed six additional interviews with patients and co-facilitated a clinician focus group with my primary supervisor. I preformed data analysis on all of the available data, with my supervisors independently coding 25% of data sets to ensure trustworthiness of my coding. I wrote the first draft of the research paper presented in Chapter 3, with the input and feedback of my supervisors.

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Abbreviations

ADLs: Activities of daily living

AMA: American Medical Association

BMI: Body mass index

COREQ: Consolidated criteria for reporting qualitative studies

DXA: Dual-energy x-ray absorptiometry

GPs: General practitioners

HRQOL: Health-related quality of life

NDIS: National Disability Insurance Scheme

NSW: New South Wales

PHNs: Primary health networks

WHO: World Health Organization

Abstract

Background: As the number of people living with obesity in Australia increases, the maintenance of treatment outcomes is especially pertinent. Treatment at tertiary obesity services have proven to be successful, but patients need to be transitioned out of these services to community-based care to accommodate the influx of new patients. Little is known about the support needs of patients after transition from acute tertiary obesity services. It is important to establish the supports needed by these patients, especially in the context of maintaining treatment outcomes and ensuring continuity of care.

Methods: A qualitative study was conducted to identify the support needs of people with obesity as they transition to community care. Patients and clinicians recruited from a tertiary obesity clinic participated in semi-structured interviews and focus groups to explore factors influencing transition and supports needed in the community. Data was collected through audio recordings, transcribed verbatim and analysed thematically.

Results: A total of 16 patients and 7 clinicians involved in the care of these patients participated between July 2020 and July 2021. Themes identified included the influence of clinic and individual factors on transition, the benefits of phased transition, patient-centred communication, and the role of social support. It was found that dependency and lack of self-efficacy, as well as low social support, hindered transition efforts. It was also identified that patients required substantial integrated professional and social support structures in the community to adequately address their care needs both during and following transition.

Conclusion: Interventions are needed to provide social community services following transition to ensure adequate community care that can support the maintenance of treatment

outcomes. Such community services should be integrated with clinical services and address the social needs of people living with obesity.

Chapter 1: Introduction

1.1. Obesity

1.1.1. Definitions

Obesity is identified as an excess in fat stored in adipose tissue that negatively impacts health and wellbeing[1,2]. Body mass index (BMI) is the most commonly used tool to determine obesity in an individual, which is calculated by dividing weight in kilograms by the square of height in metres[2,3]. Obesity is often defined through BMI where a BMI of 25-29.99 kg/m^2 is considered overweight, and a BMI of ≥ 30 kg/m^2 is considered obese[3-5]. Obesity is further divided into classes, where class 1 is a BMI of ≥ 30-34.99 kg/m^2, class 2 ≥ 35-39.99 kg/m^2, and class 3 ≥ 40 kg/m^2, with greater severity in health complications and development of comorbidities coinciding with increases in obesity class[3,4]. BMI is a simple and inexpensive tool to measure obesity, though is often too simplistic as BMI categories can vary across populations and do not take into account individual body composition, leading to an underestimation or over estimation of body fat[2,3]. Other tools such as waist circumference may be more useful, especially for central adiposity, which is associated with greater occurrence of metabolic syndrome, due to the accumulation of fat near central organs[6]. However, this measurement also varies between populations and may lead to over and under estimations of obesity levels[6]. Body fat percentage as measured by dual-energy x-ray absorptiometry (DXA) is a more accurate measurement but is limited in its utility due to the associated costs and need for specialised equipment[7,8].

There has been some controversy as to whether obesity is solely a risk factor for developing chronic conditions or whether it is also a disease in itself[5,9,10]. The World Health

Organization (WHO), the American Medical Association (AMA) and the European commission define obesity as a progressive relapsing, yet preventable and reversible, condition resulting from a complex interplay of environmental and genetic factors[1,9]. This is due to the metabolic, biomechanical and psychosocial effects of obesity in both the presence and absence of related conditions[9,10]. The value of this definition is that it recognises the chronic life-threatening potential of obesity and its impact on daily living, while highlighting the need for intervention on the highest policy level for both prevention and treatment[9]. Organisations also promote this definition to reduce the stigma around obesity, as a medical diagnosis may contribute to a shift in perception from obesity as an individual and self-inflicted issue[9]. In Australia, obesity is generally still considered a risk factor for a multitude of chronic conditions, rather than being formally considered a disease in its own right[5]. While this does not hinder obesity prevention and treatment efforts, which are a significant part of public health policy, it has implications on qualifying obesity for funded multidisciplinary treatment plans, disability supports such as the National Disability Insurance Scheme (NDIS), and for structured treatment by general practitioners (GPs) and allied health professionals[5].

1.1.2. Epidemiology

The prevalence of obesity is increasing globally, with obesity rates tripling between the period of 1975-2016[1,2,11]. In 2016, 39% of adults aged 18 and older were considered overweight, while 13% were living with obesity, globally[1,2]. These figures are expected to rise, with more than 20% of the global population estimated to have obesity by 2030[1,2]. In 2018, the prevalence of overweight and obesity among Australian adults aged 18 and older was 67%, with 1 in 3 (31%) adults considered to have obesity, up from 1 in 5 (19%) in 1995[12]. If current trends continue, it is estimated that 75% of the Australian population will be considered overweight or obese by 2030[3,6]. When evaluating overweight and obesity status by region, it was found that rural Primary Health Networks (PHNs) had higher averages than metropolitan PHNs (68.5% vs 60.7%, respectively)[6]. The Nepean Blue Mountains PHN in New South Wales (NSW) had the highest rate of overweight and obesity (66.9%) across all metropolitan PHNs in Australia, while the Western Sydney PHN had the third highest (64.7%)[6]. This highlights the need to improve both obesity prevention and treatment efforts in these areas.

1.1.3. Impact on health and lifestyle

Obesity is associated with multiple negative health outcomes and decreased life expectancy[13]. In Australia, overweight and obesity account for 8.4% of the total burden of disease and are expected to reduce life expectancy by 2-10 years[12,13]. Obesity is associated with a number of conditions including, but not limited to, diabetes, cardiovascular disease, cancer, musculoskeletal conditions, and poorer mental health[4]. It has been shown that increased obesity results in decreased health-related quality of life (HRQOL), even in the absence of comorbid conditions, with this effect magnified in the presence of comorbidities, due to an increase in pain, immobility, and social issues[14,15].

Diabetes is strongly associated with obesity. It is estimated that 80% of people with diabetes are overweight or have obesity[16,17]. The risk of developing type 2 diabetes is seven times higher in people with obesity than their normal weight counterparts[17]. This risk remains high even in the absence of metabolic dysregulation, as metabolically healthy individuals with obesity have four times the risk of developing type 2 diabetes than metabolically healthy normal weight individuals[17]. Obesity is also correlated with increased presence of arthritic and musculoskeletal conditions, impacting on mobility when compared to individuals without obesity[15,16]. This is likely due to elevated joint pressure caused by excess weight, but it has been postulated that additional metabolic factors may exacerbate and cause arthritic and musculoskeletal issues[15,16]. Furthermore, obesity is associated with the presence of psychiatric diagnoses[15,16]. This relationship has been shown to be dose dependant, with increasing likelihood of being diagnosed with a mental health condition with increasing BMI[15,16]. It is believed that mental illness can precipitate obesity and vice versa, but the presence and direction of causality is unclear[15,16]. Weight loss in people with obesity is associated with a reduced risk of developing chronic conditions, with this most apparent on the risk of developing type 2 diabetes[4,15,18]. Weight loss has also been shown to improve glycaemic control as well as lower blood pressure, cholesterol, alleviate joint pressure, and improve mental health[4,15,18].

Obesity also has social implications for individuals. This is as experienced and internalised stigma impact social functioning and employment[19-21]. Experienced stigma may include bullying and discrimination due to weight status, perpetrated by derogatory or negative media representations[19,20]. Experienced stigma has been identified as occurring in a range of settings, including workplaces and health care services and often results in internalised stigma, where these experiences lead to negative beliefs about oneself resulting in feelings of shame, self-loathing, and emotional distress[19,20]. This has been shown to negatively impact relationships and self-worth[19,20]. People with obesity often reported fewer friendships and lower social participation, as well as increased drug use and suicidal tendencies than their normal weight counterparts, likely due to the stigma associated with having obesity[15,19].

Obesity also has economic impacts on individuals and society[6,21]. For individuals, employment status is negatively impacted by the presence of obesity in both genders[21]. This is likely due to a combination of factors, including job discrimination and stigma, as well as disability due to comorbidities[16,21]. At a societal level, obesity also has a high economic burden. In Australia, the financial costs of obesity were estimated to be $11.8 billion in the year 2018[6]. This was comprised of $5.4 billion in direct health care costs and $6.4 billion in indirect costs, related to productivity and employment[6].

Prevention efforts, including innovative programs and social marketing to promote healthy lifestyles, are in place to address the rising rates of obesity, though more work is needed to address the environmental and social determinants of obesity[6]. Despite efforts, the number of people living with obesity remains high. Due to the significance and impact of obesity, it is necessary to establish sustainable treatment options. Currently, weight regain is estimated at 80% after weight loss for lifestyle changes and at 50% following weight loss through bariatric surgery[22,23]. Hence, a focus on weight maintenance strategies is warranted. This is especially pertinent in the transition stage of treatment, where maintenance is needed while moving from one care setting to another. Support has been identified as an important predictor of the maintenance stage of obesity treatment[24]. An examination of the role of support, particularly during the transition stages of treatment is highly warranted, to prevent relapse and facilitate maintenance.

1.2. Transition and support

In health care, transitions of care occur when the care of patients is transferred from one service area to another[25]. For example, this can be between secondary and tertiary services, such as hospitals and specialist centres, to primary services, such as GPs and community health centres[25,26]. When transition is well executed, it allows for continuity of care and results in improved patient outcomes, social care, and cost effectiveness[26,27]. As such, successful transitions support integrated care between health services. Fragmented transitions may not adequately address patient needs, result in delays to adequate care, and increase the likelihood of relapse and readmission[27,28]. This, in turn, results in a greater burden on health care services. One of the main aims of the NSW Health Strategic Framework for Integrated Care is to manage health and social needs through primary services and community care, by integrating service clusters and improving coordinated transitions of care between service levels[29]. To achieve this, it is vital that transitions are adequately supported to meet the needs of patients and promote continuity of care.

Social support involves formal and informal relationships that provide informational, emotional, and instrumental exchanges beneficial to the individual, especially in times of stress[30-32]. This support can be structural, representing the availability of support givers, or functional, representing feelings of being well-supported[30,31]. Emotional support involves behaviours that foster feelings of comfort and security and includes having companionship[31]. Informational or cognitive support involves gaining knowledge or advice that improves understanding[31]. Instrumental or material support refers to goods and services that provide practical solutions and includes economic support[31]. While the significance of emotional support is well understood, the relative importance of informational and instrumental support is becoming more apparent in relation to health issues[30,32]. This was examined in a study which found individuals with fewer support resources were more likely to experience health problems, especially related to lack of companionship and economic support[32]. Social support is a potentially useful tool to promote health and wellbeing due to its accessibility, availability, and sustainability.

The role of support during transitions of care from tertiary treatment is not well understood. Hence, an exploration into the support needed during transition is necessary. As maintenance and management of weight loss and improved mental health and coping with stigma are factors influenced during transition, the role of support on these outcomes is an area that also needs to be explored.

1.2.1. Support for weight loss and maintenance

The literature on social support in weight maintenance is limited, however has shown conflicting results, appearing to promote and, in some instances, hinder weight loss maintenance in participants with obesity.

Social support has been generally associated with success in weight loss maintenance[33]. In a systematic review examining reviews of weight loss interventions in diabetes prevention, the authors reported high quality evidence in favour of social support, particularly from family, though it is important to note that the sample size (n=127) contributing to this analysis was small[33]. Interventions with a social support component resulted in significantly greater weight loss at follow-up of 12 months or more when compared with similar interventions without social support[33]. Subsequent studies have reiterated these findings. For example, in a longitudinal analysis of a cluster randomised weight gain prevention trial, where the majority of participants were overweight or had obesity, friend and co-worker support for healthy eating and familial support for exercise were associated with greater weight loss at 24 months[34]. Similarly, family undermining of healthy eating was associated with weight gain at 24 months[34]. Friend and co-worker undermining as well as family support of health eating were not associated with weight changes, though the generalisability of the findings may be limited due to specific study populations (public high school employees of predominantly White racial/ethnic background), and measurement limitations of self-reported scales used (survey of social support for diet and exercise behaviours)[34]. The StrongWomen trial had similar findings, where social support for healthy eating, but not exercise, was associated with self-reported weight maintenance at 3 years follow-up[35].

Additionally, a trial comparing peer and professional support cost-benefit interventions versus usual care in an internet weight maintenance program, found both professional and peer groups had successful weight maintenance at 10 months, with similar effectiveness between the groups, compared to usual care[36]. As the intervention component consisted of reinforcement to maximise benefits, an adequate comparison to usual care is limited[36]. These findings suggest that social support plays a complex role in successful weight maintenance which is yet to be understood.

There have been instances where social support has been shown to hinder weight loss maintenance. This was apparent in a systematic review of randomised controlled trials examining the effect of family support on weight-related outcomes[37]. Despite a tendency for greater weight maintenance with a family support component, the authors noted numerous studies where spousal involvement appeared to hamper weight maintenance, though publication bias is possible as the literature search was non-exhaustive[37]. Two further randomised controlled trials have shown similar results, where greater support at baseline was correlated with poorer weight maintenance, though the authors noted a potential for bias due to self-reported psychosocial measures and inherent limitations of the social support scales, undermining what may be construed as support[38,39]. They also did not measure if level of support changed during time until follow-up[38,39]. Furthermore, the MedWeight study, a cross-sectional study of data from a Greek registry of individuals with overweight or obesity, found participants who regained weight reported greater perceived support for healthy eating and exercise from family and friends, and greater overall support, than those who maintained weight loss[40]. Further analysis revealed that those who maintained weight reported receiving support in the form of active participation and compliments, while those who regained weight received verbal instructions and suggestions[40]. This suggests that the type of support may be a greater predictor than the availability of support for successful weight maintenance. The differing results for social support in weight maintenance suggest a need for qualitative studies that can elucidate this complex relationship.

There are few qualitative studies that explore social support and weight maintenance among individuals with obesity. In studies exploring social support in internet weight loss communities, where over 75% of participants were overweight or had obesity, motivation was central in the experience of support during weight loss[41]. The authors noted that this support should be extended to weight maintenance, as many participants felt that support decreased once they reached their weight loss goal[41]. In a study of follow-up support offered following obesity treatment, participants generally did not feel that they had post-program support networks that would allow them to continue making lifestyle improvements[42]. Another study examining why some people with overweight and obesity chose to diet, found that diet programs were chosen on the perception of the individual receiving increased support from providers, regardless of the effectiveness of the diet[43]. Participants also reported feeling exploited by dieting companies but found them necessary as they believed other long-term supports to be unavailable[43]. These studies, while not generalisable, suggest that social support is primarily sought for motivation, though is often perceived to be unavailable. Further studies are needed due to the limited research available in this area.

1.2.2. Weight Stigma, mental health, and the role of social support

Weight stigma is an increasingly important topic in obesity research, as its impacts appear to hinder obesity treatment[19,20,44]. Weight stigma has also been identified as a barrier to healthcare access and treatment, as well as a contributor to psychological distress[19,44]. Weight stigma can be described as internalised; the application of negative stereotypes and devaluation of oneself due to weight status, and experienced; negative stereotyping and discriminatory experiences related to weight status[19,20]. There is emerging literature that suggests that weight stigma is an important psychosocial factor in weight maintenance in people who previously had obesity.

Internalised weight stigma has been shown to negatively impact weight management behaviours. This was apparent in a systematic review of the relationship between weight status perception and weight loss factors[45]. There was strong evidence to suggest that those who perceived themselves as overweight were more likely to attempt weight loss, but were also more likely to gain more weight over time, in comparison to those who did not perceive themselves as overweight[45]. There was also strong evidence to suggest that perceiving oneself as overweight was associated with disordered eating, though the authors note possible publication bias may have affected findings, as well as possible measurement bias, as most included studies relied on self-reported measures[45]. Disordered eating, weight cycling, and stress were also associated with internalised weight bias in self-reported data from a large weight watchers' sample[46]. This association was not found with experienced weight stigma, though causality could not be inferred due to the cross-sectional nature of the study[46]. Similarly, a retrospective analysis of individuals attempting weight maintenance or weight loss after a 1-year period of initial weight loss found that internalised weight stigma, but not experienced stigma, hindered weight maintenance attempts[47]. It was found that the odds of maintaining weight decreased by 28% for every unit increase in internalised weight stigma, though there is potential for measurement error due to self-reporting of variables[47]. Other studies have also reported a relationship between internalised weight bias and weight regain, though associations have been weak and not consistent across different groups[48,49].

There have been instances where experienced weight stigma has been associated with weight management behaviours. This was observed in a German weight control registry study, which described self-reported changes of weight loss maintainers over a 2-year period, as well as data on past experiences of weight-related teasing[50]. The study found experienced stigma to be associated with increased emotional eating and reduced successful maintenance, though potential measurement bias, due to self-reported measures of BMI and stigma experiences, and memory bias, due to recall of childhood stigma experiences, is noted[50]. These findings align with the framework presented in a review of the psychological impact of stigma, where experienced stigma often translates into internalised stigma[51]. The authors also suggest weight stigma disrupts eating and weight management behaviours, in turn maintaining both obesity and stigma, creating an obesity cycle[51]. These results contrast with findings from a group-based behavioural obesity program, which found that greater stigmatizing experiences predicted greater weight loss and maintenance at 6 months[52]. A history of weight-related stigma experiences was associated with negative psychological factors such a stress, poor body image, fear of fat, and anti-fat attitudes, but appeared to positively effect weight management outcomes, though the direction of causality could not be inferred due to simultaneous assessment of variables[52]. Additionally, participants who had recently lost and maintained weight might have greater recall of stigmatising experiences, limiting conclusions due to a short maintenance period of 6 months and small sample size (n=185)[52].

Support is known to significantly contribute to wellbeing and improved outcomes for mental health conditions, but the effects of support in the context of obesity in relation to stigma and mental health is less understood[53]. It has been found that there is a stronger association between weight stigma and diminished mental health with increasing BMI[54]. It has been theorised that stigma and low social support are both a consequence, and cause, of obesity and poor mental health[54]. While little evidence exists on the benefits of social support in this context, it is hypothesised that the negative consequences of weight stigma may be reduced through social support, hence safeguarding against stigma-related stress for mental health[54,55]. Several studies have discussed the potential for social support to foster shared social identity and acceptance within larger groups that can aid in coping with stigma and cultivate confidence, social functioning, and self-esteem[55-57].

As findings suggest that weight stigma is a likely obstacle in weight maintenance, social support may aid in improving mental health outcomes, coping with stigma, and in turn facilitate weight maintenance.

1.2.3. Supportive tools for weight loss and maintenance

Supportive tools identified for weight loss and maintenance included digital technologies such as applications and websites, as well as telemedicine.

Digital technologies are supportive tools for weight loss and maintenance for their ability to provide social support, through interactions with peers and the provision of information, as well as encourage behaviour change through methods such as self-monitoring[58]. These technologies are often found to be convenient, easy to use, and well accepted by users[58]. There have been mixed results on the use of digital technologies for weight loss and maintenance. A randomised controlled trial examining a 12 month maintenance intervention involving either internet support or face-to-face support, found that the internet group gained significantly more weight than the face-to-face group[59]. Limitations of the study included self-reported measures for diet and exercise, and a lower attendance in internet group chat meetings[59]. Other studies found no difference between face-to-face groups and those using digital technologies, such as websites and phone applications[60-63]. These studies suggested that digital technologies were able to result in comparable weight loss and maintenance to in-person programs[60-63]. Furthermore, a systematic review examining the use of digital devices for weight loss concluded that these technologies had significant potential in supporting weight loss, though more studies were needed in order to determine efficacy[58].

Telemedicine, which involves the use of telecommunication technologies to provide professional care, may also be a useful tool in providing professional and informal support, improving access, especially for remote patients, and enabling continuity of care[64]. Multiple studies have shown that telemedicine can provide similar results to in-person appointments for weight loss and maintenance as well as for general aftercare following weight loss procedures[65-69]. A recent review on telemedicine interventions for weight loss reported that telemedicine may successfully aid weight loss in a safe and convenient manner, though efficacy was difficult to determine due to the small sample sizes within studies[64].

1.2.4. Support during transition

There have been limited studies exploring the role of integrated support in transitions of care in obesity. The few studies that explored the transition experiences of people living with obesity focused on the transition from hospital to home/community following surgery or acute hospitalisation, rather than transition following discharge from outpatient tertiary obesity services.

The availability of resources and suitable equipment have been identified as an important consideration during the transition of people with obesity from hospitals, as a lack of these has been shown to delay and complicate transitions of care. In a descriptive study of home care nurses caring for people with obesity, the lack of suitable equipment and access to resources, such as appropriate transport and accommodation, impacted on the nurses' ability to provide adequate home care[70]. This was also a finding in other home care studies, which further highlighted the need for specialised equipment such as pressure reduction mattresses and wide chairs, which are often expensive and difficult to organise[71,72]. This was consistent with findings from studies undertaken in other care settings, such as nursing homes, though conclusions are limited due to the descriptive nature of these studies, low sample sizes, and the scarcity of research conducted on transitions of care for people with obesity[70-73]. Despite this, the availability of resources and specialised equipment have been identified as necessary in other care settings, such as the outpatient management of people with obesity, where it was noted that specialised equipment and resources such as wide chairs, accommodating blood pressure equipment, and wide corridors allow for supportive management of people with obesity[74].

Coordination of the transition process is also an important consideration in transition of care, which may be impacted by patient factors such as level of independence and presence of a competent carer, and factors such as trained staff and adequate communication. A study surveying staff on the barriers to transition among individuals with obesity from hospital to community, found that the absence of a competent carer was one of the primary causes for delays in transition, and that transition was more difficult with lower patient independence[75]. This was reiterated in other studies, where family support was found to play a significant role in home care, with factors such as mobility outside the home, mental health support, and aid in personal care, all necessary considerations for successful transitions[76,77]. Lack of communication and appropriately trained staff were also identified as barriers leading to poorly executed transitions[78]. For staff, this was especially true for morbid obesity, where difficulties in addressing patient care needs, such as self-care, transportation, and tailored discharge plans existed, due to a lack of equipment and training[78]. In terms of communication, a lack of communication between patient and staff, as well as between different health professionals, was seen to be an obstacle to continuity of care[78]. In a study examining the effects of a transition intervention from hospital to home in adults with type 2 diabetes and obesity, it was found that the intervention groups had lower rehospitalisation rates and improved glycaemic control in comparison to the usual care group[79]. Patients in the intervention group received either diabetes education or diabetes education and additional support during transition in the form of a home care nurse visit, additional follow-up, and care plan[79]. The diabetes education plus home care intervention group had the lowest rates of rehospitalisation at 90 days post-discharge, though the difference was non-significant at 12 months post-discharge[79]. As this was a retrospective study, the researchers were limited to available data from a small convenience sample of participants[79].

These studies indicate that additional coordinated support may improve care during transition for people with obesity, though evidence for this is limited.

1.3. Service optimisation and delivery

Engaging patients, carers, and communities, including health care professionals, may allow for the coordination and integration of health care services through improvements in quality of care[80]. Involvement of both patients and health professionals in service delivery is likely to lead to reduced hospital admissions, improved effectiveness, efficiency, and quality of care, as well as improved outcomes such as quality of life through enhancing education, policies, and governance[80-82]. Health professional involvement may also improve the delivery and adoption of research-based interventions[83].

Creating meaningful evidence-based services that reflect needs and values of stakeholders and end users allows for a collaborative approach to service optimisation[83]. As such, improving and supporting transitions of care from obesity treatment requires the input of both clinicians and patients.

1.4. Rationale

Obesity rates are rising, which is placing a strain on related health services as capacity, staff, and resources, are limited. Metabolic health services provide acute treatment and support for obesity and its complications[84]. As patients are transitioned from the service to accommodate the ongoing influx of new patients, adequate services are needed to support patients as they transition out of the service, while maintaining the health benefits achieved[85]. Considering the importance of transitions of care, the potential benefits of support for weight loss and maintenance and for coping with stigma and improving mental health, and the lack of literature on support during transition from outpatient services for people with obesity, further exploration of this phenomena is warranted[26,38,54]. As such, it is important to examine the supports needed by patients during this stage. Patients' perspectives on their own care can bring new insights on how services should be delivered, ensuring services appropriately address their needs[80,82]. In addition, an exploration and comparison with the perspectives of clinicians can optimise and improve services, while addressing potential barriers to care[80,82]. As such, the perspectives of both patients and clinicians are necessary to comprehensively explore what is needed to support patients transitioning out of the service and promote health outcomes and weight maintenance.

1.5. Research Aims

Studies examining the support needs of people with obesity, especially as they transition out of treatment services, are lacking[20]. As such, this project is designed with the aim to develop such an understanding by exploring the perspectives of past and previous patients of a metabolic health service and their clinicians, to identify what support is wanted and needed, during transition out of the service into long-term community care.

The overall research question is "What are the support needs of people with obesity as they transition out of obesity services?"

1.5.1. Objectives

The objectives of this study are to:

- Explore types of support needed during transition out of tertiary care
- Identify available supports and barriers to patient's access of ongoing support
- Explore components of successful support.

These objectives will aid in addressing what support is preferred and how current services, both within and external to the clinic, can be improved to deliver this. They may also address why some support is more successful than others.

1.5.2. Significance

This study is significant as it explores a vital but under-researched area of the support needs of people with obesity, and directly addresses health service needs[85]. It also allows for service planning that is based on research and the input of patient and clinician stakeholders in the planning and delivery of these services, which can facilitate more tailored, appropriate, and acceptable services[80,82]. Improving transition may enhance the success of current and future obesity treatments by promoting maintenance of health outcomes, thus increasing long-term effectiveness. The potential economic implications of this includes improving cost-effectiveness of treatments, as long-term maintenance can reduce frequency of relapse and the need for recurrent treatment. Local health districts could also benefit from this research, as improved weight management services have been identified as a priority and qualitative research could inform such services[3,86]. As enhancing success allows individuals with obesity to maintain health outcomes, including weight loss, "weight cycling" can be avoided, reducing negative health outcomes[23]. Maintaining long-term results may also aid in overall health and wellbeing of individuals, aligning with the NSW health strategy for reducing the burden of obesity[86].

1.6. Thesis structure

The current chapter (Chapter 1) has provided an introduction, brief literature review, and rationale for exploring the support needs of people with obesity. Chapter 2 will outline the methodology underpinning this thesis, including the rationale and methods employed. Chapter 3 will present the findings of the study in the form of a research paper that has been submitted for publication in a peer-reviewed journal. Chapter 4 will discuss future directions for research and practice.

Chapter 2: Methodology

2.1. Overview

This chapter provides an outline of the methodology used in this study, including a rationale for the design and a discussion of ethics.

2.2. Rationale

Exploring patient and clinician perspectives was achieved through a qualitative study employing semi-structured interviews and focus groups as the data collection method. Qualitative studies involve the collection of descriptive data which can be recorded through observation or investigation, such as open-ended questionnaires or interviews[87]. Qualitative research allows for the exploration of the factors which explain realities and relationships which could not have otherwise been obtained through quantitative methods[87,88]. Meaningful explanations are in turn provided through the identification of patterns within the data, resulting in a greater understanding of the context under investigation. Qualitative studies are valuable when there is greater uncertainty regarding phenomena. This can be in the early stages of inquiry, where it can be used to illuminate issues and guide hypothesis generation, during implementation and evaluation stages, to elucidate perceptions of acceptability and feasibility, and whenever variables investigated cannot be quantified[88,89].

In health research, empirical quantitative approaches have historically been the dominant research methodology, preferred due to their objectivity and generalisability[90,91]. More recently, qualitative methods are increasingly being used given their ability to explore complex ‘wholes’ and has expanded the knowledge base of health research[91,92]. Qualitative studies have been used in health research to influence the implementation and evaluation of services, policies, and guidelines as well as exploring novel research areas. It has allowed for stakeholders, such as clinicians and health service users, to be involved in research and delivery, providing more collaborative approaches to health care[90,91]. It is thus agreed upon that the determination of the research method should be guided by its appropriateness in answering the research question.

A qualitative study was therefore most appropriate for investigating individuals with obesity, and their clinicians' perceptions, as it allowed for the collection of meaningful descriptive data to explore the support needs of people with obesity as they transition out of obesity services. The methods of this study are described in accordance with the consolidated criteria for reporting qualitative studies (COREQ) checklist (Appendix 1)[93].

2.3. Population

The population involved in this study were adults who were currently or previously living with obesity and the clinicians involved in their treatment. Participants were recruited from a public tertiary level hospital-based obesity service, based in a local health district in Greater Western Sydney. The area within which the service is located has the highest rate of obesity (66.9%) across all metropolitan Primary Health Networks (PHNs) in Australia[6]. It also has high rates of other chronic conditions, such as diabetes, as a result of a combination of factors including an 'obesogenic' environment and pockets of severe economic disadvantage[94].

2.3.1. Inclusion criteria for patients

- Current or previous patients of the metabolic health service
- ≥ 18 years of age
- Willing to provide consent and participate in the study

Child and adolescent patients were not included as their needs were deemed to be unique to their age group and beyond the scope of this study.

2.3.2. Inclusion criteria for clinicians

- Employed and directly involved in the care of patients at the metabolic health service
- Willing to provide consent and participate in focus group

These criteria allowed for the recruitment of clinicians involved in the care of patients, who were in an ideal position to discuss support needs during transition.

2.4. Sampling and Recruitment

Purposive sampling was used to recruit participants by identifying those relevant to the aims of the study[95]. This method was chosen as specific participants were required to address research aims, making purposive sampling more appropriate than random sampling, where participants may not be relevant to the study[95]. Maximum variation and snowball sampling were used to reach participants. This allowed for the selection of participants at different stages of the transition process as well as the identification of otherwise hard-to-reach potential participants through current participant referrals, respectively.

Patients were recruited through flyers (Appendix 2) and referrals from clinic staff (website, email, or phone number) and their peers. Informed consent (Appendix 3) was obtained in writing or online, depending on the mode of referral and patient preferences. Patients were then contacted by phone or email to schedule interviews and, depending on preference and current COVID-19 public health orders, were conducted through an online platform (Zoom), by phone, or face-to-face. Clinicians were contacted by email and invited to participate in one of two focus groups. Furthermore, consent was also confirmed verbally prior to the initiation of data collection.

2.5. Data collection

Data were collected using semi-structured focus groups and one-on-one interviews, depending on participants’ preference and availability, between July 2020 and July 2021. Semi-structured interviews and were chosen as they allowed for a conversational approach while maintaining rigour and consistency[96,97]. As such, subjective data can be obtained, as participants can engage through elaboration and inquiry, while maintaining focus on the research agenda[97]. This allows for flexibility in discussing both anticipated and unanticipated topics, thus gaining a comprehensive understanding of the research subject. Additionally, focus groups were included to address the time constraints of clinicians, as well as facilitating discussion between participants to provide an in-depth investigation into their beliefs and attitudes on support during transition[97].

An interview guide (Appendix 4) was developed to focus on support needs during transition while allowing for open discussion to collect rich and meaningful data[97,98]. Demographic questions were also included to collect information such as age, gender, length of treatment, and participation in support groups. The interview guide was developed based on existing literature, research experience, and contribution of health promotion, public health, and obesity experts. The interview guide was not pilot tested. Questions were developed to be specific and focus on a particular topic at a time, be appropriately worded and sequenced to ensure flow and comprehension, and make use of scheduled and unscheduled probes to allow for elaboration[98].

Interviews and focus groups lasted between 30 – 60 minutes in duration and were audio recorded using a voice recorder to capture detailed responses, to facilitate data analysis. These recordings were then transcribed verbatim using secure third-party services. Transcripts were then de-identified, to ensure participant anonymity, and audited, to guarantee correctness of the transcript. Only researchers and participants were present during data collection. No repeat interviews were conducted, and transcripts were not returned to participants.

Data collection was ceased when data saturation was determined. This was achieved by concurrently analysing data during the data collection process, to find repetitive and emergent themes[99,100]. This was determined through consultation with multiple researchers.

2.6. Data Analysis

Data was analysed thematically through an iterative process involving six phases[101]. This included data familiarisation, code generation, development of themes, reviewing themes, defining and naming themes, and report production. Parts of this process were concurrent with data collection and were repeated until the data collected met the aims of the study.

The data were analysed using the qualitative data analysis software Quirkos (Edinburgh, UK). Quirkos was chosen for its ease of use and for the identification of patterns in a visual and systematic manner. Transcripts were checked for accuracy and re-read multiple times to facilitate data familiarisation. Initial codes were generated inductively across the entire data set to identify elements relevant to the research question. Initial themes were developed by finding patterns across these codes that relay meaning. Themes were then reviewed and refined, by discarding, combining, and splitting some themes to better reflect and convey meaning. Subsequently, themes were defined and named in terms of the scope and focus of each theme, resulting in a narrative analysis reporting themes and data extracts. The coding framework was independently established by GA and KM then compared, discussed, and 25% of the total data were cross-checked by KM, KW, and AE to promote trustworthiness of the data interpretation[102,103]. Participants did not provide additional input on the findings following their participation in an interview/focus group.

2.7. Reflexivity

The research team consisted of active faculty members with PhD-level qualifications, clinicians, and a post-graduate research student. All have had experience and/or training in qualitative research methods. Participants were interviewed by the primary supervisor (KM) and myself (GA). No previous relationship existed between researchers and participants. Participants were made aware of the credentials of the interviewers and motivations for the research. The research team were aware of assumptions and biases they may have and challenged these through regular group discussion of results to promote reflexivity.

2.8. Ethics

Ethics approval was sought and granted by the Nepean Blue Mountains Human Research Ethics Committee 2019/ETH13681, prior to the commencement of recruitment and data collection. As such, this study aligns with the National Health and Medical Research Council’s National Statement on Ethical Conduct in Human Research. In accordance with this, the principles of autonomy, beneficence, and justice were used to guide the research methodology[104].

The principle of autonomy establishes that human participants must be respected, and their intrinsic rights recognised throughout the research[104,105]. This encompasses the right to be informed, provide consent, and withdraw without penalty. In accordance with this, informed consent was sought from participants and information was provided through a participant information sheet, which outlined the aims of the study, the methods of data collection, and ethical considerations, such as the right to withdraw at any point. Information on contacting researchers for further information was also provided. Additionally, when interview and focus groups were conducted, informed consent for collecting and recording data were reiterated verbally and participants were reminded of the ability to withdraw at any point. Participants were also encouraged to discuss any queries regarding the study.

Beneficence entails managing the potential benefits of the research against any risks it might pose to participants[104,105]. As such, researchers must aim to minimise risks and consider the welfare of the participant while conducting research, as well as convey any potential benefits and risks to participants. This was achieved by providing participant information sheets which outlined potential benefits of the research and addressed potential risks. These risks were identified as managing distress as well as maintaining privacy and confidentiality. Participants were made aware that in the event of distress, interviews would be stopped until the participant wishes to continue, otherwise it would be ceased. In such circumstances, participants would be referred to both immediate and long-term counselling service, where necessary. Privacy and confidentiality of participants were maintained by removing identifying information from participant data and replacing them with pseudonyms. Participant data, including recordings, transcripts, and demographic information were stored on secure servers only accessible by the research team.

Justice requires fair distribution of the benefits of the research, as well as fairness in recruitment, exclusion, and access to results of the study[104,105]. This was ensured during recruitment through the distribution of flyers and snowball sampling to reach participants. Recruitment methods were free from coercive language and did not offer unreasonable incentives. Additionally, the method of recruitment allowed participants to contact researchers or use online platforms for consent, ensuring that relationships with clinic staff did not influence the recruitment and consent process. Despite a purposive sampling process, the inclusion criteria were broad, negating unfair exclusion of participants. Furthermore, participants were informed of how results would be utilised, and were offered to be provided with the outcomes of the research once available.

Chapter 3: Research Paper

3.1. Overview

This chapter contains a manuscript stemming from this project titled ‘Support needs of people living with obesity during transition from tertiary obesity treatment to community care’ that has been submitted for publication in the peer-reviewed journal Obesity Research and Clinical Practice. The chapter is formatted following the journal’s author guidelines.

3.2. Introduction

Over 65% of adults and 25% of children in Australia are overweight or living with obesity and, as a result, live with a range of complications such as diabetes and cardiovascular disease[6]. The World Health Organization (WHO) classifies obesity as a chronic condition resulting from excessive fat accumulation increasing risks to physical and mental health, as well as heightening social and economic burdens on both individuals and communities[5]. For simplicity, obesity is measured as a body mass index (BMI) of ≥ 30 kg/m^2[6].

In Australia, severe cases of obesity are treated at the tertiary level, often hospital-based, services, which have proven successful in achieving treatment outcomes, such as weight loss, improved metabolic parameters, and behavioural and psychological skill building[84]. Patients are often transitioned out of these services into community-based care following the acute phase of treatment, to accommodate the influx of new patients[85]. Transition out of hospital services is a crucial stage, as maintenance of treatment outcomes is required for sustainability of weight loss.

Adequate services are needed to support patients as they transition out of obesity services to community care, as acute clinic interventions are unlikely to have continued efficacy without long term community support due to the chronic and often lifelong nature of obesity[5,85]. While primary care and allied health services exist, there may be issues in the integration of these services with tertiary care[84]. The care needs of people with obesity are often unique, requiring specialised equipment and discharge planning when transitioning from hospital to home[75]. As such, it is important to explore the supports and services needed during transition out of tertiary obesity clinics for people with obesity, as this phenomenon has not previously been sufficiently examined through qualitative techniques.

Patients' perspectives on their own care can bring important insights on how care should be delivered, ensuring client-centred services that appropriately address their needs[106]. In addition, exploring and comparing the perspectives of clinicians with patients can optimise and improve services, while addressing potential barriers to care[83].

As such, we aimed to explore the supports needed by patients during transition from a tertiary obesity clinic in an Australian healthcare setting through a qualitative exploration of the perspectives of both patients and clinicians.

3.3. Methods

Exploring patients and clinicians perspectives was achieved through a qualitative study employing semi-structured interviews and focus groups, described in accordance with the consolidated criteria for reporting qualitative studies (COREQ) checklist[93]. Ethics approval was granted by the Nepean Blue Mountains Human Research Ethics Committee 2019/ETH13681.

3.3.1. Participant recruitment

Purposive sampling was used to recruit participants. Participants were recruited from a public tertiary level hospital-based obesity service based in a local health district in Greater Western

Sydney. The area within which the service is located has the highest rate of obesity (66.9%) across all metropolitan Primary Health Networks (PHNs) in Australia[6]. Current or previous adult patients, and clinicians involved in their care, were invited to participate in the study. Patients were recruited through flyers and referrals from clinic staff and their peers, while clinicians were contacted by a researcher via email and invited to participate in one of two focus groups. Informed consent was obtained in writing or online, depending on the mode of referral and participant preferences.

3.3.2. Data collection

Participants were contacted by phone or email to schedule interviews and focus groups which were conducted through an online platform (Zoom), by phone, or face-to-face either at the service or a convenient location. Data were collected using semi-structured focus groups and one-on-one interviews between July 2020 and July 2021. The interview guide was developed based on existing literature, research experience, and expert contribution. Questions focused on identifying existing support and further support needed from professional and social networks during transition.

Interviews and focus groups lasted between 30 – 60 minutes and were recorded using a digital voice recorder before being transcribed verbatim using secure third-party services, with all identifying information removed from the transcripts. Only researchers and participants were present during data collection. No repeat interviews were conducted, and transcripts were not returned to participants. Data collection was ceased when data saturation was determined, as no new major themes arose from the data[99].

3.3.3. Data analysis

Data was thematically analysed using an inductive approach, as outlined by Braun and Clarke[101]. De-identified transcripts were coded using the Quirkos program (Quirkos, Edinburgh, UK). Transcripts were checked for accuracy and re-read concurrent to code and theme generation to facilitate data familiarisation. Initial codes were generated inductively across the entire data set and initial themes were developed by finding patterns across these codes. Themes were reviewed and refined then defined and named in terms of the scope and focus of each theme, resulting in a narrative analysis reporting themes and data excerpts in tabular form. Participant identification numbers and pseudonyms were used to label excerpts. The coding framework was independently established by GA and KM then compared, discussed, and 25% of the total data were cross-checked by KM, KW, and AE to promote trustworthiness of the data interpretation.

3.3.4. Research team/reflexivity

The research team consisted of active University faculty members, clinicians, and a research student. All have had experience and/or training in qualitative research methods. Participants were interviewed by KM and GA. No previous relationship existed between researchers and participants. Participants were made aware of the credentials of the interviewers and motivations for the research. The research team were aware of assumptions and biases they may have had and addressed these through group discussion of results to promote reflexivity.

3.4. Results

A total of twenty-three patients and seven clinicians were contacted. Seven patients did not participate due to inability to make contact, leaving sixteen patients (13 female) and seven clinicians who were interviewed and included in this study.

TABLE 3.1: DEMOGRAPHIC DATA FOR PARTICIPANTS

Patient characteristics	**Mean (range)/count (%)**
Age	51 (35-65)
Gender	
Female	13 (81%)
Male	3 (19%)
Clinic patient	
Current	9 (56%)
Past	7 (44%)
Part of social support group	
Yes	8 (50%)
No	8 (50%)
Clinician characteristics	
Gender	
Female	6 (86%)
Male	1 (14%)
Role	
Clinical Psychologist	2
Dietician	3
Endocrinologist	1
Physiotherapist	1

Thematic analysis resulted in three main categories being identified; service-related factors influencing transition, individual-related factors influencing transition, and bridging the gap to facilitate transition.

3.4.1. Service-related factors influencing transition

Service-related factors influencing transition included the role of the clinic and how staff facilitated transition. This involved organisation of the transition process, influence of both positive and negative clinic communication, as well as patients feeling cared for. Clinic resources and services also influenced transition, though constraints of funding hindered their provision (Table 3.2).

TABLE 3.2: SERVICE-RELATED FACTORS INFLUENCING TRANSITION

Service-related factors influencing transition	
Sub-themes	**Excerpt**
The role of the clinic and its staff Patients described the role of the clinic in providing care significantly influenced their transition experience. Receiving care that felt integrated through connection to internal providers aware of their medical history, and referrals to external practitioners provided participants with the feeling that they were being cared for, listened to and not overlooked. Having a 'good' connection with the clinic staff helped patients feel looked after and understood. This facilitated more effective communication of concerns and allowed patients to feel positive and supported during transition. Additionally, patients who expected transition and were aware of the transition process, reported a more positive experience, as they felt	"We want you to see that specialist…let us know what other medications you're on and they actually just listened. And then they put a plan in place to help me as well" P17 Tess "So I do trust that one more particularly. And I've always got on quite well with the dietitian. So yes. Just you know gelled" P17 Tess "I feel really empowered. I feel positive. The people there are trained to deal with – they understand our issues, and you feel in a good headspace when you go there" P3 Barry

involved in the decision to transition out, and were prepared to move on without the clinic. Other patients felt limited due to perceived negative communication from clinic staff, which hindered patients' ability to 'keep on track' during transition. Further, when transition was seen as abrupt, or in some cases was unexpected with little transition process, patients reported a very negative transition experience. These experiences led to unsuccessful transition as patients did not feel prepared.	"And we both agreed to end it. It wasn't just them telling me well you no longer sort of welcome here. So it was it was, you know, an agreeable sort of ending" P23 Mel "They didn't really put me down, but they said, oh, you've only lost that much weight… and that really put me in a bummer zone, and I actually put on a kilo after that visit so" P16 Jules
These mixed experiences are supported by the clinicians, who noted that mixed messaging around transition from different clinicians could occur, resulting in confusion and negative impacts on transition. Clinicians described their primary objectives during transition as Promoting self-efficacy, achieving a balance between engaging patients while promoting independence, and assessing readiness for transition.	"But when you have multiple clinicians and you're all delivering a slightly different message, depending on how you interact with the clients, that can be a bit confusing" C1 Mike FG1 "…what we actually do in the process is guided problem solving, actually looking at what processes are, assisting them to actually make decisions…we encourage self-efficacy" C2 Pat FG1

Clinicians also emphasised the benefits of a well-planned and phased transition, by informing patients early to expect an ‘end’ along with regular reminders about transition. Clinicians agreed an abrupt transition can leave patients unsupported, though reported this usually occurred when patients no longer attended and were subsequently lost to follow-up due to personal circumstances. Additionally, clinicians said some patients continued to rely on the clinic, despite being transitioned out, indicating resistance to transition despite a planned and phased process.	“I don’t want them to feel that this is the only place that they can feel comfortable exercising…same message across, like I take the approach of. You know, trying to engage them, but not allowing them… to try to draw boundaries that they are not trying to me for everything” C1 Mike FG1 “Thats the one technique to transition a bit slower and then we can cut ties, you know, once they’re feeling a bit more secure” C7 Pip FG2 “I’m constantly reminding them every session that now’s the time to start thinking about where you’re moving to so that you can continue this as soon as this group finishes” C1 Mike FG1

	"And I find that the transition phase out of this is very abrupt. Like life happens and they either move somewhere or they're gone to their study situations changed or they've got a job now and they just sort of disappear. And I suppose in terms of their support, then it's not really much…" C4 Sam FG1
Clinic resources and services When asked about what they needed to help them transition out of the clinic, patients felt having resources to keep them informed helped better prepare them, especially when information was clear and readily available. Information included general advice on diet and lifestyle as well as quick reference guides for recipes and exercise, which facilitated greater satisfaction with the clinic. Having access to multiple services in the clinic, including psychologists and support groups, along with referral to services outside the clinic, were also felt to assist the transition process. Other patients,	"I mean, the positives were I mean, you got a lot of useful information and practical advice, so" P20 Dom "…you have clinicians who have a good understanding, like for example, people working at Nepean Metabolic Clinic, those people. Like when I go to that clinic, I feel really empowered" P3 Barry "I know they're flat chat at the clinic, so they most probably wouldn't have time to sit and talk to someone once a week" P9 Evie

however, perceived a lack of resources to meet demand, including funding issues impacting on staffing, impacting service delivery quality.	
Clinicians identified provision of a safe environment with equipment, such as bariatric chairs and weighing scales, as well as information and referral to services, as tools patients can access in the clinic as they transition. Clinicians also acknowledged that clinic capabilities were restricted due to limited capacity, chronic wait list times, and insufficient funding, making some services (such as one-on-one consults) unsustainable in the longer term. Clinicians also felt provision of integrated clinic and community services required additional staffing and funding support. Funding for social work and case coordination were seen as particularly pertinent given these	"…like we have here, like bariatric chairs. People need to know that the place is adequate for them to be safe in" C5 Kel FG2 "…initially people seen one to one by all members of the team and then thinking, obviously, we have a huge wait list and thinking we can't sustain this. There's not enough staff to sustain regular appointments with everybody. And then also thinking there's benefits to groups. So that's why we brought in the the 'Be well' program" C3 Ron FG1

services' value when providing integrated support to patients within and beyond the clinic.	"Physio department who have been struggling with the chronic waitlist list for years" C1 Mike FG1 "But I think if you've got somebody like a case manager or A social worker" C6 Cas FG2

3.4.2. Individual-related factors influencing transition

Self-efficacy and self-promotion were individual-related factors which significantly influenced transition, with patients able to address their own support needs resulting in more successful transitions. Conversely, dependency on the clinic and its services, the presence of multiple comorbidities, as well as social issues and barriers, such as mental health problems and life-long weight issues, were likely to negatively impact the transition experience (Table 3.3).

TABLE 3.3: INDIVIDUAL-RELATED FACTORS INFLUENCING TRANSITION

Individual-related factors influencing transition	
Sub-themes	**Excerpt**
Self-efficacy and self-promotion Self-efficacy, motivation, and mindset were apparent in influencing transition experience. Patients who had a positive transition experience or were in the process of preparing their transition reported greater self-efficacy. This was observed in the language patients used to describe how they were supported through learning, self-motivation and setting up their own support networks. Patients also identified the importance of motivation and receiving encouragement in continuing to progress beyond the clinic. This motivation could come from either themselves (health-conscious mindset) or from others (i.e., peers, clinicians or family).	“I don’t know if I need any support [from the clinic] at this point…I think, for me, I've done a lot of reading and trying to understand how my body reacts with different foods” P16 Jules “I did not take the surgery, because I thought no. After the surgery I have to follow that lifestyle. If I can do it after the surgery, why can’t I do it now?” P9 Fran “But I know it's their encouragement has sort of taught me how to do how to know what's right” P23 Tess

Not surprisingly, the converse created issues for other patients, who reported a lack of motivation hindered their transition, as it was difficult to maintain and continue progress, and achieve goals when feeling ‘lazy’.	“…we all, not that we're health conscious because we broke the rules quite often, but we'd all be saying, oh, you know, maybe that's not a good choice. And, you know, if we do want a snack, well, then it's Hummus, then it's healthy, healthy dips and stuff. We try, even if we don’t always get it right.” P23 Tess “I always get these plan - you get these plans in your mind…then I just don't follow through with them. I procrastinate a lot” P2 Adrian
Clinicians agreed that patients with greater self-efficacy and ability to problem solve were more likely to successfully transition, as they were able to address their own support needs by leveraging existing support to form support networks and identify how to manage their health issues. Clinicians felt patients with low self-efficacy had difficulty accessing support on their own, as well as motivating and supporting themselves when encountering difficulties.	“…focused on bringing in the supports into their world as they're transitioning out…So it's sort of wrapping the community around them to try and support them as they carry on” C2 Pat FG1 “…language that sounds reassuring, i.e. I realise what I need to do now, which is address all these other things.” C7 Pip FG2

	“And here are some examples of networks that they can make, but that they physically needed to go out and. Yeah, hold their hand while they were doing that.” C5 Kel FG2 “…more variable in terms of capacity to take stuff on or willingness to take stuff on so wellI that sort of individualised characteristic” C2 Pat FG1
Dependency, comorbidities, and social issues Having a codependent relationship with the clinic was a significant barrier to transition. Several patients reported that they relied too heavily on the service and felt unable to make progress after they left. As a result, some patients felt unsupported by the clinic and did not like the reduced contact during transition, which resulted in dissatisfaction and negative perceptions of transition.	“I’d want to be put back to the clinic. I lost 20 kilos like that, and I gained it like that…and when that come up at Christmas time about them [the clinic] cutting us, you can ask any of the girls, I was hysterical. I was in tears” Keira Kingswood Focus Group “…they [the clinic] had the oomph to say, yes, they’ll keep up supported and all that sort of, but then over the time it just got slack” Rosebud Kingswood

Patients also reported that comorbid conditions and social issues often hindered a successful transition. Some patients said these factors impacted on their ability to maintain exercise, attend clinic appointments and participate in activities, leading to an inability to maintain or lose more weight. Furthermore, almost all patients reporting mental health issues as a barrier to transition, as they impacted on their ability to participate in and complete tasks, including self-care and social activities. Life-long weight issues were an added complexity around transition, given the ease of falling back into deep-rooted patterns of behaviour and lifestyle.	"I get back on the bike and I'm fine and I'm going along and all of a sudden something else has happened and I can't use it. I feel like I'm taking once step forward and two steps back" P1 Anna "…liver issue doesn't help with not losing weight. And my pre-existing thyroid condition" P23 Mel "I'm kind of really neglecting myself. Not taking care of myself some days. I don't clean anything. That's not me. And the more and more things start to build up in the home, the more I get stressed" P14 Jane

	"…because you've got to understand that for most people, they've been living with this obesity for a long time. So, it's easy to go backwards" P3 Barry
Clinicians identified codependency as a significant barrier to transition, describing some patients as being overly 'needy', and being unwilling to transition to independence. Clinicians felt that these patients resisted transition by over relying on the clinic and clinicians, despite being in the process of transition, and expressed displeasure when support was weaned. Clinicians also found patient complexity level in terms of presence of comorbidities, mental health conditions, and social personal issues made a difficult transition more likely than in patients with low complexity.	"So I think a lot of people don't know who to go to for support and they hang on to us" C6 Cas FG2 "…they would still continue to ring the service every week or email or be in touch with clinicians on a weekly basis" C3 Ron FG1 "…became very reliant on each other and were very upset that we had to drop…to monthly, that didn't go down well!" C3 Ron FG1 "…someone who's got less of those complex issues that are sort of impacting on their experience, here, then you've actually got a little

	bit more wiggle room to manage with some of those other issues" C2 Pat FG1 "So whereas when I think there's when there's a huge number of other chronic care issues, a lot of family disruption and social disruption limited skill levels in terms of engagement with the world, I think that would be sort of where things are a little less functioning" C2 Pat FG1

3.4.3. Bridging the gap to facilitate transition

Several factors were identified as being necessary to bridge the gap to facilitate successful transition out of the clinic. This included the need for transitional and ongoing integrated community care, through the provision of professional supports and services, such as general practitioners, allied health, and social services. Community support structures, including peer support groups were also identified as a need. These support groups were deemed as being particularly important as patients were frequently socially isolated. Several guiding principles underpinning how these groups could be successful were identified (Box 3.1). Additionally, during COVID-19 lockdowns, telehealth and online support were the only means to consult with patients. This allowed both the clinic and its patients to identify this as a component that could also facilitate transition (Table 3.4).

BOX 3.1: GUIDING PRINCIPLES FOR GROUPS

Guiding Principles for groups

- **Educational**
  - Relevant educational topics
  - Experienced/professional advice
  - Counteract unsafe clinical advice
- **Flexible**
  - Allow input from attendees while maintaining group focus
  - Collaboration in choosing topics
- **Sustainable**
  - Long term group support
  - Support and training for facilitators

    - Funding and resources: Training, equipment, venues, literature,

- **Cohesive**

    - Experienced facilitator to manage group dynamics

    - Safe non-judgmental environment

    - Positivity

TABLE 3.4: BRIDGING THE GAP TO FACILITATE TRANSITION

Bridging the gap to facilitate transition	
Sub-themes	**Excerpt**
Community care: professional support and services Supportive community-based healthcare, such as allied health services, facilitated transition. Patients who felt supported described how having healthcare providers in the community who were aware of their issues, listened to them and provided help when needed was highly important to a successful transition. Healthcare providers described as being supportive included GPs, physiotherapists, dieticians, and psychologists. Correspondingly, feeling unsupported by healthcare providers was seen as detrimental to transition as they are an important source of professional input and support outside the clinic. Feeling unsupported stemmed from a perceived lack of communication and	"I go to my GP when I need to or if I have any queries or concerns and she does support me. She listens to me, and she knows where I'm coming from" P22 Jess "…you know even my physio, I do hydro with my physio every five to six weeks, even she said, you know, you're doing all the right things for your future health" P16 Jules "…if you get an old style physician who just looks at the person in a negative way, that you're doing this to yourself, that kind of thing, that won't be beneficial" P3 Barry

listening skills of the practitioner, which led patients to feel belittled by healthcare providers and viewed negatively because of their weight. During and after transition, when access to services available to patients of the clinic (e.g., psychologists, dieticians, physiotherapists) decreased or ceased altogether, patients described they still needed this support but had difficulties in access, primarily for financial reasons. Almost all patients stated that mental health support was essential beyond the clinic, with a need for extensive psychological support beyond the limited sessions partly covered by Medicare. Dietary support was also important, as patients felt ongoing help in creating diet plans and increasing food variety was necessary, however patients suggested this could be less formal and come in the form of 'quick reference' or daily/weekly meal suggestions. For physical activity, patients with mobility issues reported they needed physiotherapy support beyond the clinic, especially in the form of hydrotherapy,	"…the GPs don't really stop and listen to what…the patients saying, they just… "Here's some drugs. Now rack off," but if they would spend more time with them…that would help" P9 Evie "Definitely more psychological support, access to psychologists…the clinic offers limited…psychological services, but you really need more than that" P21 Kim "…trying to get mental health services. I've been trying to do that. That's pretty much impossible" P20 Dom "I want somebody to come in with and plan a diet out with me, because I'm hopeless at diets" Keira Kingswood

which was often difficult to access locally. Again, others reported less formal support was appropriate in the form of exercise guides and supported access to equipment and spaces such as gyms. Many patients had comorbid conditions and reported a need for long term management of these conditions. They also expressed a desire for more information/education opportunities regarding these conditions and how to specifically manage them in conjunction with obesity. Social work support needs were highly apparent among patients, which ranged from assistance with household tasks to financial assistance. Some patients specifically needed help accessing household assistance, including cleaning and food preparation services, due to mobility issues. Many patients needed help with financial assistance to help them access the full range of services needed to manage their conditions.	"…the quick reference kind of thing, so if I just had a question about a particular product, there was some way I could message or look it up or something and find the information that I needed, whether I could eat it or not" P21 Kim "…got exercises…which I find not that helpful, chiefly because I can't do a lot of the activities because it's all to do with the back" P1 Anna "I think if I do join a gym, then I might need some sort of specific support in that regard" P20 Dom "Continued support with my managing my diabetes and help me losing more weight" P21 Kim

	“I’ve got a lot of anxiety about my mobility which I’m trying to deal with, and it's still not possible with me to do those sorts of things” P2 Adrian “…mobility and that I didn’t have a very good cleaning regime and someone to come in twice a week just to help me keep on top of things. That’s when they – I would like someone to say, “Okay, these services are available, there’s this one and it’s this much an hour” P1 Anna “…cost is a big issue” P21 Kim
Clinicians also identified how important healthcare providers in the community were for successful transition, especially GPs who were familiar with their patients, though they did acknowledge that extended support from GPs may be difficult due to appointment time constraints.	“They have to work with their GP as well as a lot of it should be GP based” C6 Cas FG2

They also felt their patients often required longer term, integrated professional support, and that it was important to establish that support in the community. Clinicians also thought general practices could also provide additional support to patients (e.g., by providing informal group sessions). It was identified however, that many clinic patients do not have a regular GP. Clinicians also felt most patients needed psychological support as part of their community care, but were aware patients had difficulties accessing this. Need for social support/case coordination was also discussed by clinicians, who felt these services should be integrated with the clinic to bridge the gap between the clinic and community services, given the complexity of linking patients to multiple external services and support networks. They also felt more accessible financial support could address some of the issues faced by patients when accessing private therapy, as there was an insufficiency of funded therapy. Clinicians	"…usually engaged a clinical psychologist in the community. They've got a good GP" C5 Kel FG2 "If they've got a good GP, that's going to be really important" C6 Cas FG2 "…it wasn't really GPs because of time" C3 Ron FG1 "…they would still continue to ring the service every week or email or be in touch with clinicians on a weekly basis" C3 Ron FG1 "…staff anybody else within the GP practice. I don't know if this practice nurses. Or other kind of healthcare assistants that could support patients in the drop in session" C3 Ron FG1

believed this integration should occur at the local health district (LHD) level with involvement of local councils to facilitate places to accommodate patients in the community (e.g., with bariatric chairs, transport, GP support, and community services such as community centres and gyms).	"…lot of people would benefit from having a psychologist. That's where mental health and obviously this varies" C7 Pip FG2 "It's like it's sort of something would say that it's a holistic thing that needs to happen" C7 Pip FG2 "…someone that can kind of almost case coordinate that would be really good…something like kind of bridge that gap…That might be something that can kind of help that transition to other community supports" C4 Sam FG1 "So I think there's a real gap in that. So a lot of people with obesity actually have disability. And can't access NDIS and I think that's a real travesty" C7 Pip FG2

	"…many of our patients cannot afford a lot of private therapy. So when we're saying go and get mental health plans, there's always a gap of fifty or sixty dollars. And if you've got intense therapy to go through, that's a lot of money" C6 Cas FG2 "I think councils could also support through physical spaces and admin, I think everyone kind of has to come to the party a bit" C7 Pip FG2
Community support structures: support groups and their management Patients in our study expressed their need for support from family, friends, and peers with this appearing important in the transition process. Familial support came in the form of reminders, shared activities, and 'being there' for each other. Not having adequate support was described by patients as negatively impacting on their	"…to meet other people would be good, just to learn and interact" P2 Adrian "Well they do, well, three of us have had the gastric sleeve…so we all sort of deal with it together…we've all helped each other we've all supported each other… you know, listen to each other and just be there" P17 Tess

transition, as they felt that they were doing it on their own. Some patients reported receiving no help from their family, while others said they were actively isolated by family members, who were unsupportive in helping them connect with peers. Some patients said they are largely socially isolated and that being at the clinic gave them a chance to connect with peers that they otherwise would not have done. Patients described peers as those who have similar experiences, which facilitated both understanding and care. Patients felt peers understood their struggles and provided support in a non-judgmental way. As a result, leaving the clinic left some feeling of being disconnected, prompting them to start their own groups, as one of the reported primary benefits of groups was feeling supported by peers. Patients also felt that sometimes they just wanted extra one-on-one support that did not have to be professional.	"I guess, disadvantaging myself by just being alone at home" P14 Jane "…when people ring up and want to talk to me and he says, "Oh, no, she's asleep." I would love to talk to that person" Harriet Kingswood "…someone that's been through and has come out the other side, has had similar experiences to you…succeeding, they know what they're doing, they roughly have been through the same thing you have, and they can help you" P1 Anna "…but sometimes you just want to talk directly to a person privately" P14 Jane

This support arose from shared lived experiences, leading to not feeling alone, especially during difficult times. Peer support also led to enhanced social connectedness, as some peers became friends, which was another motivator. Additionally, patients felt they were in a safe and non-judgmental environment with peer groups. Being in a group helped them to collectively cope with stigma issues, including public incidences of stigma and bullying due to their size, and enabled them to go to public places, whereas individually they would have been reluctant. Not all participants felt this way however, with others finding peers uninfluential in groups when participants did not bond with their peers. Other patients felt some group members negatively impacted on group dynamics, either by being pessimistic or derailing group activities by focussing on their personal issues, due to dominant or ‘strong’ personalities.	“…if someone’s in desperate need to discuss something, and sometimes if they need just to talk one-on-one…they need more support than what we’re giving them at the moment. You can see that they’re falling through the cracks” P9 Evie “That we care. Everybody cares about what the other person’s going through” P15 Sarah “…because you can see they’re other people just like you, you’re not the only one. You’re not the only one who’s struggling, who wants to lose weight and you’re not able to lose weight” P9 Fran “…acceptance rather than stigmatised and put down sort of thing. Just knowing it's a safe place to talk and just learn from each other's experiences and make friends” P2 Adrian

Key barriers to attending groups was social anxiety, depression, and stigma, with some patients reporting it would be difficult for them to join or attend groups without having their anxiety adequately addressed. Some also felt larger groups were more likely to trigger this reaction.	on my early stages just listening to other people's issues that didn't relate to me P14 Jane So, some people can be negative…There can be strong personalities, P3 Barry "…it didn't take too many dominant personalities in a group for it to get a little bit too much" P20 Dom "I don't feel comfortable being in a support group… I'm not a very sociable person" P17 Tess

	"And also, I have social phobia and anxiety, so I kind of tend to avoid large gatherings" P21 Kim
Clinicians reiterated this need for social support, identifying that their patients are often isolated, with many having difficulties establishing and maintaining social support networks outside the clinic. Clinicians often tried to facilitate social support during group sessions, with some success They also felt this support should be consistent and long term where possible, as patients are unlikely to benefit from anything short term. Consistent with the participants, clinicians also felt peers could negatively impact on group dynamics with groups being 'dominated' by some personalities, resulting in benefit for only a few members. They felt this led to some patients feeling uncomfortable and therefore less likely to share their thoughts and feelings in group settings. Additionally, clinicians reported that some members of peer-managed	"…this group of people are often quite isolated" C3 Ron FG1 "…they're not people who are particularly great at reaching out and going to meet someone" C4 Sam FG1 "…engage, so your family, supports all of that, hey, you've actually done you've got a lot of those areas kind of that are helping" C2 Pat FG1 "…not one of our patients and I think there was 12 in that group, could list out a person that was supportive. So we said partner or parent or child or somebody who can help you to decipher what you

groups were unethically asking other members for money and had issue resolving disputes. The benefit of groups was also noted by clinicians, who agreed the greatest benefit of groups was the provision of social support, particularly for socially isolated patients. They felt groups could facilitate peer bonding, shared experiences, and comotivation in a comfortable and safe environment. They also described how groups allowed patients to participate together in activities that might otherwise have been too daunting to try, due to fear of stigmatisation. Additionally, clinicians reported that peers were able to help each other to establish and maintain community supports. Clinicians also believed fear was the greatest barrier to attending groups, with already isolated patients likely to find group attendance with people they do not know intimidating. They suggested patients be eased into groups by processes such as bringing a buddy to the first	know, what's going to help you. and not one of them could list out anybody and it was really sad" C6 Cas FG2 "…she hasn't got many contacts with friends and family support. But if she could connect with somebody" C3 Ron FG1 "…whatever support needs to be there, I, I believe it needs to be an ongoing and a at the time frame. Can't just be, you know, six, six months. That's an ongoing thing for their own support" C5 Kel FG2 "It seemed like after a while it became something that was benefiting just a few people that were trying to keep it that way…To the detriment of others" C4 Sam FG1

meeting. Clinicians also felt stigma was another major issue, reporting that patients holding bias and negativity towards groups of 'people like them' due to internalised stigma as barriers to participating in group activities.	"They don't have to actually have that much self efficacy. They just need to be there for each other sort of thing, you know?" C7 Pip FG2 "…a safe, you know, confidential platform or program where people could actually meet other people in a similar situation" C3 Ron FG1 "…some of them have gone swimming together because they were afraid to go by themselves…They've gone together then it's you know, you're not going to poke fun at both of us" C6 Cas FG2 "So to come into a group can be quite scary. So, obviously, there might be some you don't get because they won't come" C3 Ron FG1

	"…potentially having people that meet with some of what we've run group and having a buddy you can bring in with you? To break the ice" C7 Pip FG2 "And I think there's a lot of stigma attached to attending groups that are weight focused or weight management focus" C1 Mike FG1 "They don't want to go and find a group like themselves…that would be a nightmare for them" C5 Kel FG2
Telehealth and online support: COVID-19 and beyond Since the outbreak of COVID-19, telehealth was utilised to minimise disruptions to patient care. Telehealth was reportedly useful in maintaining appointments with health providers, ensuring patients health was not neglected during this time. Most patients described telehealth as very convenient, especially	"Not a problem with that. Yeah. I feel about the same whether it's face to face or over the phone. Yeah. Just without the travel" P16 Jules "…that's been pretty good. It's more convenient for me because I live a little ways away from the clinic" P21 Kim

as it saved time in terms of reduced travel. These patients also indicated that they would like opportunities for telehealth in the future, beyond COVID-19 restrictions. Some patients, despite acknowledging the benefits of telehealth, stated a preference for face-to-face appointments. This was largely due to technical issues, such as internet disruptions, and discomfort towards videoconferencing and feeling like they were less honest during telehealth. Additionally, support and information from online platforms was identified as useful during COVID-19, particularly the clinic Facebook page, which patients described as a useful way of receiving tips and other information, as well as staying connected with the clinic and their peers. Some patients also described that other closed groups on online platforms helped patients 'vent' feelings and connect to others while isolated.	"Unfortunately, the Internet around here isn't too good. So I had issues, technical issues with it" P20 Dom "I don't do the site, the actual face time, and that because I'm not comfortable in doing that so" P22 Jess "We've got a Facebook group where we can air things, like things that have happened, negative or positive. That's been supportive" P3 Barry

Clinicians also reported the benefits of telehealth for keeping in contact with patients and providing support during transition. Additionally, clinicians maintained some support groups through a videoconferencing platform, and reported that patients were still able to bond through these sessions, though acknowledged that this was not as optimal as face-to-face sessions. Furthermore, clinicians commented that social networking platforms such as Facebook may be beneficial in giving patients a place to belong.	"So they're bonding on the group. Even on telehealth" C3 Ron FG1 "It is it probably isn't as optimal as face to face. So I think of anybody, really. But I mean, the face to face is. Kind of important for a contestant because they're already online" C7 Pip FG2 "…even some social networking groups. So some Facebook or some sort of digital platform group that they that we know is accurate and useful that they can engage with and maybe that become their tribe as well" C6 Cas FG2

3.5. Discussion

Our results indicate that transition experiences vary considerably between participants who have attended a tertiary obesity service. While this appears to be a consequence of both individual characteristics and systemic factors such as transition processes/policies, there is potential to facilitate a more congruent experience. This may be achieved by addressing factors such as patient dependency and self-efficacy, patient-provider communication, and transition processes. It was also apparent that the support needs of people living with obesity were only partly addressed during and following transition to community care. This is evident in the need for additional, integrated support from social and health networks that were identified by both the clinicians and patients in our study. Additionally, both patients and clinicians highlighted the difficulties in organising and coordinating these supports, suggesting a need for greater integration of services. A summary of recommendations for clinical practice is presented in Box 3.2.

Dependency on the service and its clinicians was highly apparent. Level of dependency differed significantly between patients, and appeared to coincide with lower self-efficacy, with many patients lacking confidence to independently manage their own weight. These findings are consistent with a qualitative study of the follow-up support of a weight management program for patients with obesity in the United Kingdom[107]. This study found an over-dependence on healthcare professionals hindered independent weight management, as patients deflected the responsibility of management to more authoritative figures, such as health professionals[107]. Lack of self-efficacy may be the driving force behind this dependence, suggesting some patients may need supports to boost their self-efficacy as an integral part of their transition process. Additionally, a sub-group of our patients tended to seek codependent relationships. This was apparent in our study among patients who expressed frustration and resentment for being dependent on family members, and for not being looked after enough by clinicians. While the evidence for this is limited, some studies have suggested that families with obesity display similar codependent characteristics to those seen among addiction conditions[108]. Such persons may also gravitate toward codependency with their clinicians, who can take on the role of 'healer' or problem solver while the patient takes on the role of passive recipient, with neither benefitting, as self-efficacy remains low. Resentment is also likely to ensue when patient problems are not 'fixed'[109]. As such, patients are likely to benefit from access to greater support networks that may reduce reliance on professionals.

Codependency should be identified and treated in the context of low self-efficacy and self-esteem, anxiety, depression, lack of motivation, and isolation, which tend to cluster in both persons with codependence and obesity[110]. A primary aim of this strategy should be to increase self-efficacy. Family treatment may also be warranted in such a scenario, as it has been shown to be effective for mitigating codependence with other conditions, such as alcoholism and drug dependency[111,112]. Further, clinicians may need to be more aware of their own propensity to enter codependent relationships with patients, hindering development of self-efficacy, while also causing burnout to themselves.

Patient-reported provider communication also influenced how patients felt about their transition. Patients who described a negative transition experience expressed lower satisfaction with provider communication, receiving limited information regarding transition and discharge, and limited opportunities for collaborative/patient-centred care. The opposite was true for those who reported positive experiences. These findings highlight the importance of clear communication between clinicians and patients regarding goals and expectations of treatment and discharge. The variation in patient experience suggests a need to identify dissatisfied patients early and to intervene to resolve communication issues to promote positive transition experiences. Patient-provider communication is crucial to patient satisfaction, and interventions to improve this have reported improved health outcomes, including reduced readmission in hospital settings[113]. It is important to note, however, that internalised weight bias is more strongly associated with perceived clinician bias than experienced weight stigma, which may account for the differences in communication reported by our patients, which ranged from ‘judged’ to ‘empowered’[114]. Patient dissatisfaction was more prevalent among those who were ‘resistant’ to transition, as such it may be beneficial to identify patients’ readiness for discharge/transition through standardised tools. This may be achieved through the use of decision aids and categorisation of patients to aid clinicians in identifying patients in need of additional intervention and referral to community care and support networks. While discharge readiness tools and decision aids are widely used in other care settings, there is limited evidence for their use in tertiary obesity treatment.

Our results strongly indicate the potential positive impact of peer support groups to facilitate transition. Many of the patients in our study described being socially isolated, a finding reiterated by clinicians. Social isolation can exacerbate mental health conditions, such as anxiety and depression, and reinforce internalised stigma[15]. This is bi-directional, as mental health conditions and stigmatisation can lead to greater social isolation[15]. The combination of these factors can lead to poorer health outcomes, especially during transitory phases of treatment. There is a potential for peer support groups to partly address these issues through social participation and networking in a supportive community environment. These groups have been recommended as being useful for mental health and chronic conditions, as increasing support networks are beneficial for mental health and can support health management behaviours[53]. Although efficacy of peer support groups varies between studies, support groups may be beneficial in weight loss and maintenance, especially as they foster a sense of community between participants[115]. While little is known regarding the usefulness of peer support groups to facilitate transition to community care, peer support currently forms part of transitional discharge models for transition from psychiatric hospitals to community, which have shown to be cost effective and result in lower readmission rates[116].

Additionally, peer support groups may help patients cope with stigma. The patients who took part in our study and their clinicians reported patients being more confident in participating in public activities, such as outdoor recreation, when in a group setting with their peers. Research suggests that support groups manage stigma by allowing persons to connect with a larger social support network, providing safe and non-judgemental environments, and allow for coping with confronting situations as a group, though these have not been evaluated in relation to obesity[117].

The structure and operation of peer support groups that the patients in our study were already part of varied considerably, making evaluation of effectiveness in this context difficult. As some groups were more successful than others, we asked patients and their clinicians to identify elements that may lead to more successful groups. These included the need for experienced/trained facilitators, while keeping groups less formal with the use of lay peer support workers rather than clinicians. Access to funding and resources to promote sustainability was also seen to be important, as well as ongoing training support for facilitators and collaboration with groups members on group structure and content, so as to mitigate the spread of misinformation and over reliance on group facilitators. These suggestions have been reported elsewhere, where facilitator training and experience have both been found to be vital to success of peer support groups[118].

Barriers reported by patients to attending peer support groups include depression, social anxiety, and stigma, while clinicians identified stigma as the primary barrier to attendance, especially in younger patients. It has been documented that mental health conditions and stigma negatively impact social participation and this correlates with findings that obesity-related reduction in social participation is more common in younger individuals and appears to decline with age[119]. While stigma has not been explicitly reported as a barrier to support group attendance, research suggests that people with obesity hold strong explicit and implicit anti-fat attitudes and hence may not want to associate with others with obesity[120]. Clinicians in our study suggested that patients should be eased into groups through processes such as bringing a buddy to their first meeting, though little evidence exists for methods to address participation impacted by stigma. Further research is needed to explore methods to increase participation in groups impacted by stigma.

Telehealth may also be a potential ‘outreach’ support for patients as they transition out of the clinic. Telehealth was utilised by patients and clinicians due to lockdowns during the COVID-19 pandemic. Most patients found telehealth to be a convenient way of connecting with clinicians, especially as it addressed barriers such as transportation and time constraints. Literature suggests telehealth as an effective mode of health management for patients, especially in providing aftercare, though limitations to its use need to be addressed[67,121]. These include access to adequate internet and related equipment, such as microphone and/or webcam, and telecommunication devices, and digital literacy[121]. There is potential for the application of telehealth in transitioning patients out of tertiary services to community care, by allowing for longer follow-up periods while maintaining clinic efficiency, which is especially useful for more complex patients[67]. Telehealth also has the potential to be part of an integrated care framework, by facilitating transition to community care as well as communication and training between tertiary and primary healthcare practitioners[122].

The New South Wales integrated care strategy aims to relieve the burden from individuals in accessing care through the integration and coordination of services that enable seamless transitions of care, especially between tertiary/secondary services and community care[29]. Our findings indicate pressure on patients and clinicians to establish and access care networks in the community, leading to a lack of adequate integration. Both patients and clinicians reported that following transition to the community, patients continued to require dietary, mental health, and physiotherapy support, but some had difficulties in setting these up. Clinicians also identified that handover to general practitioners (GPs) were difficult, as not all patients had regular GPs and not all GP practices could provide adequate support to patients. These findings are concurrent with research indicating GPs are best situated to provide long term community care for people with obesity but require additional training, support, and role clarification to achieve this[123-125]. This is particularly important, as it has been identified that GPs are ill equipped to manage obesity with the current level of training and tools at their disposal. However, interventions to increase GP confidence and self-efficacy can mitigate this[126,127]. Additionally, this training should address the weight bias of GPs, which is extensively reported in the literature and deters patients from seeking their care[126]. Patients should also ideally be able to access multidisciplinary teams through primary care, which would help address their needs post-transition, though the lack of recognition of obesity as a chronic disease in Australia and associated lack of funding limits this option[5]. Considering the pressure on public health services to cope with rising obesity rates, integrated care networks may relieve some of this burden by addressing fragmented care, often leading to poorer outcomes and greater costs[84,85].

The patients also identified a need for home care, transportation services in the community, and specialised equipment, a finding reported when transitioning people with obesity from hospital to home[71]. Clinicians also reported that patients often required disability support for physical and mental conditions but had difficulties in access and that patients were unlikely to find equipment tailored for them outside of the clinic. This is in accordance with current literature which shows that the cooccurrence of obesity and disability is increasing[128]. In addition to this, extreme obesity on its own impacts functionality and patients often need assistance with activities of daily living (ADLs), as well as specialised equipment such as bariatric chairs and pressure reduction mattresses, which many be costly if not reimbursed[71]. These findings suggest a need for the examination of the potential for broader social service support for people with obesity. Extreme obesity is not recognised as a disabling condition and is not eligible for the Australian National Disability Insurance Scheme (NDIS), which provides information, reimbursement, and connections to community service for people with disability[129]. As such, patients require alternate processes to address their social service support needs, due to this lack of recognition.

Additionally, patients in this study reported they did not have access to weighing scales that could accommodate their weight outside of the clinic. This negatively impacted their ability to monitor their weight in a home/community setting. Studies on access to weighing scales are limited, though it has been reported that most commercial scales have a maximum weight of 150-180 kgs, and that scales with maximum weight above this range were more costly and less common[130]. As weight monitoring can be beneficial to weight management, patients are disadvantaged in this regard due to reduced access to weighing scales[130]. Lack of access to weighing scales, and social service support needs including specialised equipment, may require the integration and establishment of additional support networks which can be managed/addressed through social work and care coordination as well as from services such as the NDIS, through recognition of the impacts of obesity regarding disability.

The social service support needs of people with obesity may be addressed through social work and care coordination, which are vital to receiving integrated care as they address the community support needs of patients. The role or social work in obesity is becoming more apparent. It has been recently argued that obesity is increasingly recognised as a social justice issue, due to social determinants and weight discrimination associated with obesity, and hence a need for social work intervention[131]. Consequently, it is within the scope of social work practice to mobilise services and supports to address socioeconomic and psychosocial needs of people with obesity[131]. Care coordination also plays a significant role, as care coordinators can assist in navigating healthcare systems through support, information, and connections to other services, which can be beneficial for patients with obesity, due to their complex needs. A review of systematic reviews on care coordination interventions found improved health outcomes in a range of conditions including glycaemic control in patients with diabetes, service continuity in patients with mental illness (e.g., including lower depression severity and improved adherence), reduced hospital readmissions, and improved mortality in patients with heart failure and stroke[132]. Further research is needed on the potential for care coordination for people with obesity in tertiary health services, especially as it may address reliance on these services and serve as a bridge to facilitate integration with community services.

BOX 3.2: RECOMMENDATIONS FOR CLINICAL PRACTICE

Suggestions/recommendation for clinical practice
• **Transition**

    - **Resistance to transition**
        - Self-efficacy training
        - Psychological treatment for codependency (family therapy)
        - Clinician training to identify codependent patients/codependency in self
        - Transition readiness question/decision aids
    - **Facilitating transition**
        - Semi-structured peer support groups with regular training of facilitators
        - Telehealth for longer follow-up periods
- **Integration**
    - **Professional integration**
        - Telehealth system
        - GP training
    - **Social service support**
        - Social work and care coordination

Our study was limited by the lack of heterogeneity of the sample, as most participants were female and above the age of 45, though this reflects the demographics of patients attending the service. Additionally, while our results may be transferable to other settings, they are not generalisable. However, this is not the purpose of qualitative research, which rather aims to deeply explore a particular topic to identify the important areas requiring future interrogation.

3.6. Conclusion

We aimed to explore the support needs of people living with obesity in an Australian healthcare setting as they transition from tertiary to community care through a qualitative exploration of the perceptions of patients and the clinicians involved in their care. It was found that service and individual factors, such as perceived provider communication and patient dependency, respectively, significantly influence transition experience. Additionally, patients require integration and enhancement of community support service and structure to address their transition needs. Future research should aim to address social community service needs following transition to ensure adequate community care that can support the maintenance of treatment outcomes.

Chapter 4: Recommendations for future research and practice

4.1. Overview

This chapter provides additional recommendations for research and practice based on the findings in Chapter 3.

4.2. Introduction

This study is highly novel, as it has partly addressed the gap in research on the support needs of people with obesity during transition from clinic to community, which has not previously been examined. This study adds to the evidence as it indicates there is a need for integrated care models in practice to optimally manage obesity and it can guide future research by informing strategies to address the needs of people with obesity following the acute treatment phase. This future research should include an empirical examination of the service- and individual-related factors identified in this study and how they influence transition. In addition, approaches to optimise the transition experience, and the support and services needed within community care to facilitate successful transition should be mapped out and then evaluated. Boxes 4.1 and 4.2 below summarise recommendations for future research (Box 4.1) and practice (Box 4.2). These recommendations will be discussed in further detail in relation to previous literature.

BOX 4.1: RECOMMENDATIONS FOR FUTURE PRACTICE

Recommendations for future practice
- Development and implementation of individualised and patient-centred discharge tools

- Consistent patient communication training for all specialists
- Training and support for clinicians to identify and address codependency in patients, structured treatment for codependency in conjunction with the treatment of other psychological issues, and improved self-efficacy training, with a focus on more complex patients
- Semi-structured peer support groups with trained facilitators to promote transition out of tertiary care and into the community
- Telehealth system that allows for longer follow-up periods
- Integration of general practice to support patients in the community, with training and support for general practitioners
- Integration of social support services through care coordination and social work

BOX 4.2: RECOMMENDATIONS FOR FUTURE RESEARCH

Recommendations for future research

- Evaluation of the impact of stigma on perceived communication between patients and clinic staff
- Examining and evaluating the occurrence of codependency and its impact on obesity treatment
- Examining strategies that combat the stigma of joining peer support groups

- Examining and evaluating optimal implementation strategies and their effects on obesity treatment

4.3. Addressing issues in transition

Service-related factors were found to influence transition in this study, which included the benefits of phased transitions and feeling ‘ready’ to transition and perceived positive and negative communication resulting in positive and negative transition experiences, respectively. Patients reported positive transition experiences when transitions felt phased and that they were ready to transition, similar to study findings where patient discharge from specialist diabetes services to primary care were examined[133,134]. Patients in these studies expressed a desire to have clearer discharge conversations with specialists and have greater involvement in the decision to discharge[133,134]. Additionally, these studies found that patients being discharged ranged from low to high readiness for transition, a finding echoed in the variability of transition experiences of patients in our study[134]. In light of these findings, there is potential for the development and use of discharge tools in practice. These tools could influence practice by allowing for individualised and patient-centred discharge planning incorporating patient readiness and addressing of patient needs, leading to decreased negative transition experiences. Future research should also explore the impact of stigma on perceived communication between patients and clinic staff. Staff are well-trained in patient communication and many patients attested to this, yet others felt communication was poor. The literature indicates this considerable variation in experience is likely the result of internalised stigma, but more research is required to fully establish this as well as methods to mitigate its effects in tertiary obesity settings[114].

This study also found that factors such as self-efficacy and self-promotion were individual-related factors which positively influenced transition, while dependency and level of patient complexity (e.g., mental health and social issues, lifelong weight problems, and comorbidity) were individual-related factors which negatively influenced transition. This is congruent with existing literature identifying the co-occurrence of obesity and mental health issues and the potential for self-efficacy and empowerment to improve treatment outcomes[3,15,135]. Recommendations for future practice in light of these findings include training and support for clinicians to identify and address codependency in patients, structured treatment for codependency in conjunction with the treatment of other psychological issues, and improved self-efficacy training, with a focus on more complex patients. While studies have indicated the relationship between obesity and codependency[109,110], only one study has examined codependency specifically in the context of obesity, which found that current codependency assessments are adequate to identify codependency in subjects with obesity[108]. As such, future research should determine the likelihood of occurrence of codependency and its potential influence on obesity treatment. Further, as self-efficacy and self-promotion positively influenced patient experiences, interventions to increase patient engagement and empowerment in this population is likely to result in better transition to community care.

4.4. Facilitating transition

The findings of this research indicate a strong need for community support structures in the form of peer support groups, to address social isolation and stigma frequently experienced by these patients. This finding is consistent with other research on the benefits of peer support groups for social participation, coping with stigma, and weight loss and maintenance.

Additionally, peer support groups can be utilised to build self-efficacy, increase motivation, and empower individuals[136-138]. These benefits, though, have not yet been examined in the context of transitioning from tertiary obesity services to community care[40,53,115]. A transition peer support program should therefore be established and evaluated in this setting, based on the recommendations of participants in this study by being educational, flexible, sustainable, and cohesive. Of note however, clinicians in this study highlighted that patients may be reluctant to join support groups due to stigma associated with obesity, which has been identified in other settings, including mental health support groups[139,140]. Consideration of these factors should be given when establishing this program. Use of non-stigmatising language, weight inclusive criteria, and online groups, are some strategies that may address stigma, though there has been limited research in the context of support group attendance, particularly among individuals with obesity[141-143]. Future research should therefore investigate strategies to combat the stigma of joining peer support groups and identifying with other people with obesity.

In addition to peer support groups, participants of this study identified telehealth and online support as tools that could facilitate transition by providing longer follow-up periods. As such, future practice could benefit from telehealth programs that provide longer follow-up periods, which have already been shown to promote cost-effectiveness and efficiency in practices for obesity care[64,121,144].

4.5. Integration of services

This project also found a gap exists between clinic and community care. This needs to be more integrated to facilitate successful transition from acute tertiary care. Integration with services, such as general practitioners (GPs), allied health, and mental health services were found to be essential, as the burden of establishing these was currently placed on individual patients. These findings show similarities to studies on transition from acute hospitalisation to home for people with obesity, where services and equipment were found to be lacking for the period immediately post-hospitalisation[71,75,76]. Our findings add to this evidence-base, which highlighted that services and equipment are long-term community care needs following outpatient services, rather than solely immediate post-hospitalisation. It is therefore recommended that community services are integrated with the clinic to address the patient burden and resulting fragmented care. This integrated care should also incorporate social work and care coordinator interventions to address social care needs and to coordinate referral to community allied health, disability supports, and equipment needs. Further, we identified that general practice is recognised as integral to community care, though lack of adequate training and potential body weight bias, in some cases, may limit care for people with obesity, consistent with current literature on primary care obesity management[74,125,127]. Improved integration with GPs, through interdisciplinary collaboration and training, is recommended to promote continuity of care. Future research should investigate how to optimally implement these recommendations.

4.6. Strengths and limitations

This novel study addressed an area of obesity research and practice which has not previously been explored. The findings of this study have resulted in a number of recommendations to inform both current practice and future research to optimise service delivery within the clinical setting. Additionally, this study drew upon the input of patients and clinicians in research and practice design, which may result in services more closely reflecting the needs and values of stakeholders and end users. This underpins a collaborative approach to service optimisation, which has previously been demonstrated to improve service delivery in other settings[80,81]. Limitations of this project, however, include lack of heterogeneity in the sample, as 81% of patients were female and 88% were above the age of 45, though this reflects the demographics of the clinic patients. Additional limitations include the lack of perspectives of those involved in community care, such as GPs and allied health, as well as patient families. Further, as this is a qualitative study, inherent limitations exist, including lack of generalisability of results and the inability to establish causation. This is not due to lack of methodological rigour, however, as this was not within the scope of this study, which set out to explore in-depth participant perspectives. While results are not generalisable, they are transferable to other settings, due to the in-depth perspectives provided.

4.7. Conclusion

This project aimed to explore the support needs of people with obesity during transition from an acute tertiary service to community care. We found that people with obesity require additional supports to bridge the gap to community care, in the form of integrated professional and social services, and community support structures. We also found that individual and service-related factors, such as codependency and clinician communication, can influence transition experience, factors which could be addressed to optimise transition. The results of this study should be utilised by clinical obesity services to guide future research and practice.

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Appendices

Appendix 1: COREQ Checklist

Section/Topic	**Item No**	**Checklist item**	**Reported on page No**
Domain 1: Research team and reflexivity			
Personal Characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	"Participants were interviewed the primary supervisor (KM) and myself (GA)" p. 24
Credentials	2	What were the researcher's credentials? E.g., PhD, MD	"PhD-level qualifications, clinicians, and a post-graduate research student" p. 24
Occupation	3	What was their occupation at the time of the study?	"…active faculty members with PhD-level qualifications, clinicians, and a post-graduate research student" p. 24
Gender	4	Was the researcher male or female?	Female, female
Experience and training	5	What experience or training did the researcher have?	"All have had experience and/or training in qualitative research methods" p. 24
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	"No previous relationship existed between researchers" p. 24
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g., personal goals, reasons for doing the research	"…participants were made aware of the credentials of the interviewers and motivations for the research" p. 24
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g., Bias, assumptions, reasons, and interests in the research topic	"The research team were aware of assumptions and biases they may have had and challenged these through regular group discussion of results to promote reflexivity" p. 24
Domain 2: study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g., grounded theory, discourse analysis, ethnography, phenomenology, content analysis	"Data was analysed thematically" p. 23
Participant selection			
Sampling	10	How were participants selected? e.g., purposive, convenience, consecutive, snowball	"Purposive sampling was used to recruit participants." p. 21

Method of approach	11	How were participants approached? e.g., face-to-face, telephone, mail, email	"Patients were recruited through flyers… and referrals from clinic staff (website, email, or phone number) and their peers… Clinicians were contacted by email and invited to participate" p. 21
Sample size	12	How many participants were in the study?	"…sixteen patients (13 female) and seven clinicians who were interviewed and included in this study" p. 30
Non-participation	13	How many people refused to participate or dropped out? Reasons?	"Seven patients did not participate due to inability to make contact" p. 30
Setting of data collection	14	Where was the data collected? e.g., home, clinic, workplace	"…were conducted through an online platform (Zoom), by phone, or face-to-face" p. 21
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	"Only researchers and participants were present during data collection" p. 23
Description of sample	16	What are the important characteristics of the sample? e.g., demographic data, date	"Table 1: Demographic data for participants" p. 31
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	"The interview guide was developed based on existing literature, research experience, and expert contribution… The interview guide was not pilot tested" p. 22
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	"No repeat interviews were conducted" p. 23
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	"…were recorded using a digital voice recorder" p. 22
Field notes	20	Were field notes made during and/or after the interview or focus group?	Some field notes were made during interviews and focus groups
Duration	21	What was the duration of the interviews or focus group?	"…lasted between 30 – 60 minutes" p. 22
Data saturation	22	Was data saturation discussed?	"Data collection was ceased when data saturation was determined" p. 23
Transcripts returned	23	Were transcripts returned to participants for comment and/or correction?	"…transcripts were not returned to participants" p. 23
Domain 3: analysis and findings Data analysis			

Number of data coders	24	How many data coders coded the data?	“The coding framework was independently established by GA and KM then compared, discussed, and 25% of the total data were member checked by KM, KW, and AE” pp. 23-24
Description of the coding tree	25	Did authors provide a description of the coding tree?	“Thematic analysis resulted in three main categories being identified; service-related factors influencing transition, individual-related factors influencing transition, and bridging the gap to facilitate transition” p. 32 pp. 33-63
Derivation of themes	26	Were themes identified in advance or derived from the data?	“…were generated inductively” p. 23
Software	27	What software, if applicable, was used to manage the data?	“The data were analysed using the qualitative data analysis software Quirkos” p. 23
Participant checking	28	Did participants provide feedback on the findings?	“Participants did not provide additional input on the findings following their participation in an interview/focus group” p. 24
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes / findings? Was each quotation identified? e.g., participant number	“Themes were reviewed and refined then defined and named in terms of the scope and focus of each theme, resulting in a narrative analysis reporting themes and data excerpts in tabular form. Participant identification numbers and pseudonyms were used to label excerpt” p. 30 pp. 33-63
Data and findings consistent	30	Was there consistency between the data presented and the findings?	Yes
Clarity of major themes	31	Were major themes clearly presented in the findings?	“…three main categories being identified; service-related factors influencing transition, individual-related factors influencing transition, and bridging the gap to facilitate transition” p. 32
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	pp. 33-63

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. International Journal for Quality in Health Care. 2007. Volume 19, Number 6: pp. 349 – 357

Appendix 2: Participant recruitment flyer

LIVING LARGE: ENHANCING TERTIARY OBESITY SERVICES AND COMMUNITY CARE

Researchers from Western Sydney University and the Nepean Blue Mountains Local Health District are conducting a study on how to improve the transition from clinical obesity care services, such as the Nepean Family Metabolic Health Obesity Service.

Would you like to share your experiences of transitioning out of tertiary care and living with obesity?

We can talk to you either in a one-on-one interviews or focus groups (at a location convenient to you).

We are looking for participants who are:

- Over the age of 18
- Live in the Nepean Blue Mountains Local Health District
- Have been a patient at Nepean Family Metabolic Health Obesity Service (NFNHOS) or is a member of the Weight Issues Network (WIN)

The study hopes to identify service areas that can be improved, and how you may be supported in the community.

For more information, please contact Kate McBride on (02) 4620 3436 or at k.mcbride@westernsydney.edu.au

This project has been approved by Nepean Blue Mountains Human Research Ethics Committee 2019/ETH13681

Appendix 3: Participant information sheet and consent form

PARTICIPANT INFORMATION SHEET AND CONSENT FORM

Study Title: Enhancing transition from tertiary obesity services to community care for adults with obesity in Western Sydney – an intervention development study.

Chief Investigator: Dr Kate McBride
School of Medicine
Western Sydney University

Invitation

You are invited to participate in a research study investigating how obesity services and the wider community can assist individuals with obesity to move into community care. This study is being conducted by researchers from Western Sydney University (WSU), doctors involved with the care of patients at the Nepean Family Metabolic Health Service (NFMHS), Nepean Blue Mountains (NBM) Local Health District Health Promotion team members and representatives from the Weight Issues Network. The principle investigator is Dr Kate McBride (Senior Lecturer, WSU School of Medicine).
Other investigators are:
Dr Kathryn Williams (Senior Lecturer, Nepean Clinical School)
Dr Freya MacMillan (Senior Lecturer, WSU School of Science and Health)
Ms Linda Stanbury (Health Promotion Manager, NBM Population Health)
Ms Louise Maher (Senior Health Promotion Officer, NBM Population Health)
Mr Sam Hogan (Research Assistant, WSU Translational Health Research Institute)

Before you decide whether or not you wish to participate in this study, it is important for you to understand why the research is being done and what it will involve. Please take the time to read the following information carefully and discuss it with others if you wish.

What is the purpose of the study?

The purpose of this study is to investigate how to improve community support for people living with obesity in the NBM region. This will be investigated through the past experiences of individuals who are or have been patients at Nepean Family Metabolic Health Service (NFMHS).

Who will be invited to enter the study?

You are invited to participate in this study because you are a current patient of NFMHS, have been a patient in the past or are a member of the Weight Issues Network (WIN).

Do you have a choice?

Participation in this study is voluntary. It is completely up to you whether or not you participate. If you decide not to participate, it will not affect the treatment you receive now or in the future. Whatever your decision, it will not affect your relationship with the staff caring for you. New information about the treatment being studied may become available during the course of the study. You will be kept informed of any significant new findings that may affect your willingness to continue in the study. If you wish to withdraw from the study once it has started, you can do so at any time without having to give a reason.

What will happen on the study?

If you agree to participate in this study, you will be asked to sign the Participant Consent Form. You will be asked to participate in an online focus group via Zoom or one-on-one interview via Zoom on by phone (whichever you prefer), which will take approximately 60 minutes. This will take place at Nepean Family Metabolic Health Service,a public location of your choosing, or by telephone (one-on one interviews only). Interviews and focus groups will explore your experiences and thoughts about the clinic and how to improve support services. We will ask your permission to record the interview or focus group to assist in the transcription process. Zoom records both audio and video content. If you do not wish your face captured, we will ask you to turn off your video for the recording. At the end of the session, the video (MP4) recording will be destroyed and only the audio (MP3) recording kept. Audio recordings from the interviews and focus groups will be transcribed by a professional transcription company. If you have participated in an interview, you will have the opportunity to review your transcript prior to data analysis. De-identified transcripts will then be analysed by members of the research team.

This study will be conducted over 12 months.

Are there any risks?

The risks associated with this project are minor. However, there is a risk of distress when discussing personal experiences. If this occurs, the interview/focus group will stop and you will be referred back to the clinic should clinical advice be needed, or to an immediate help counselling service provided by Beyond Blue. They may be contacted either directly for an online chat through their website at https://www.beyondblue.org.au/ or contacted by telephone on 1300 22 4636.

Are there any benefits?

This study aims to further health knowledge and may improve future treatment of obesity, however it may not directly benefit you.

Confidentiality / Privacy

Of the people treating you, only the researchers named above or necessary others will know whether or not you are participating in this study. Any identifiable information that is collected about you in connection with this study will remain confidential and will be disclosed only with your permission, or except as required by law. Only the researchers named above will have access to your details and results that will be held securely at Western Sydney University.

Will taking part in this study cost me anything, and will I be paid?

Participation in this study will not cost you anything. You will be reimbursed for your time and reasonable travel expenses with a small thank you by way of a gift card

What happens with the results?

If you give us your permission by signing the consent document, we plan to discuss/publish the results. The results may be published in peer-reviewed journals and presented at conferences. The results from this may also be used to inform future policy decisions and community health strategies. The information in this project will be disclosed only to the investigators mentioned above.

In any publication, information will be provided in such a way that you cannot be identified. Results of the study will be provided to you, if you wish.

Complaints

This study has been approved by the Nepean Blue Mountains Local Health District Human Research Ethics Committee. If you have any concerns about the conduct of the study, or your rights as a study participant, you may contact: The Office of the Patient Representative Nepean Hospital, (Contact Details: 4734 3174 - Email address: NBMLHD-NepeanFeedback@health.nsw.gov.au). You should quote 2019/ETH13681

Contact details

When you have read this information, the researcher Dr Kate McBride will discuss it with you and any queries you may have. If you would like to know more at any stage, please do not hesitate to contact her on (02) 4620 3436 or at k.mcbride@westernsydney.edu.au. If you have any problems while on the study, please contact

Dr Kate McBride
Working hours Telephone No – 0438 630855
After hours Telephone No – 0438 630855

Thank you for taking the time to consider this study.

If you wish to take part in it, please sign the attached consent form.
This information sheet is for you to keep.

CONSENT TO PARTICIPATE IN RESEARCH

Name of Researcher:

1. I understand that the researcher will conduct this study in a manner conforming to ethical and scientific principles set out by the National Health and Medical Research Council of Australia and the Good Clinical Research Practice Guidelines of the Therapeutic Goods Administration.

2. I acknowledge that I have read or have had read to me the Participant Information Sheet relating to this study. I acknowledge that I understand the Participant Information Sheet. I acknowledge that the general purposes, methods, demands and possible risks and inconveniences which may occur to me during the study have been explained to me by ____________________________ ("the researcher") and I, being over the age of 16 acknowledge that I understand the general purposes, methods, demands and possible risks and inconveniences which may occur during the study.

3. I acknowledge that I have been given time to consider the information and to seek other advice.

4. I acknowledge that refusal to take part in this study will not affect the usual treatment of my condition.

5. I acknowledge that I am volunteering to take part in this study and I may withdraw at any time.

6. I acknowledge that this research has been approved by the Nepean Blue Mountains Local Health District Human Research Ethics Committee.

7. I acknowledge that I have received a copy of this form and the Participant Information Sheet, which I have signed.

8. I acknowledge that any regulatory authorities may have access to my medical records to monitor the research in which I am agreeing to participate. However, I understand my identity will not be disclosed to anyone else or in publications or presentations.

Name of participant _________________________________ Date of Birth __________________

Signature of participant _______________________________ Date: ______________________

Name of researcher ______________________________ Date: ____________________

Signature of researcher ______________________________ Date: ____________________

Signature of witness ________________________________ Date: ______________________

Appendix 4: Interview guide

Interviewer to introduce themselves then remind interviewee of confidentiality, option to withdraw from the interview at any point and to ask for permission to record the interview.

Demographic questions;

Age:

Highest education level:

Gender:

Postcode:

Existing clinic patient?

If yes for how long?

If not, on a waiting list or attending another clinic?

Part of a social support group?

- How have you been coping during COVID-19 (icebreaker) *prompts how has your lifestyle been affected, how has your medical care been affected*?
- What has helped or hindered you during this time?
- What further supports/resources in terms of lifestyle and/or medical care do you need to help you during this time?
- How can you best be supported by the clinic when it is time for you to transition out of the service?
- What supports do you think you would need from outside the clinic to help you make this transition? *Prompts family, mental health services, general practice, allied health, support groups*
- **For existing clinic patients only:** Tell me about your experiences of Telehealth during the COVID-19 pandemic.

- How do you feel about Telehealth being an alternative to face to face clinical appointments to form part of wider support outside the clinic going into the future?
- What support groups, if any, have you been part of prior to this interview?

If have taken part in a group:

- What do you think has contributed to the success of your group?
- How do you think these groups can be supported?
- What guiding principles do you think should apply to these groups (and new groups in the future)
- What do you think prevents others form joining in with these groups?

If have not been part of a group:

- What has prevented you from taking art in a social support group?
- What would make these group more attractive to join?
- How do you think these groups can be supported (*prompt e.g. by the clinic, by the community)?*
- Could this be reworded to ‘How do you think social support groups can link with General Practitioners or the Nepean Obesity Clinic to assist in transitioning to community care?
- How do you think having social support groups and community-based health care connected with support from the clinic could work for individuals who may not be able to access the obesity clinic?