

WESTERN SYDNEY
UNIVERSITY



A CENTRE OF TRANSLATIONAL RESEARCH AND
ACTION FOR EATING AND WEIGHT DISORDERS

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MISSION STATEMENT

To translate knowledge of disordered eating, weight loss, and weight gain, as experienced by those who have suffered the mental and physical health impacts of weight and eating disorders, with the aim for all to have a healthy and positive relationship with food and body size.

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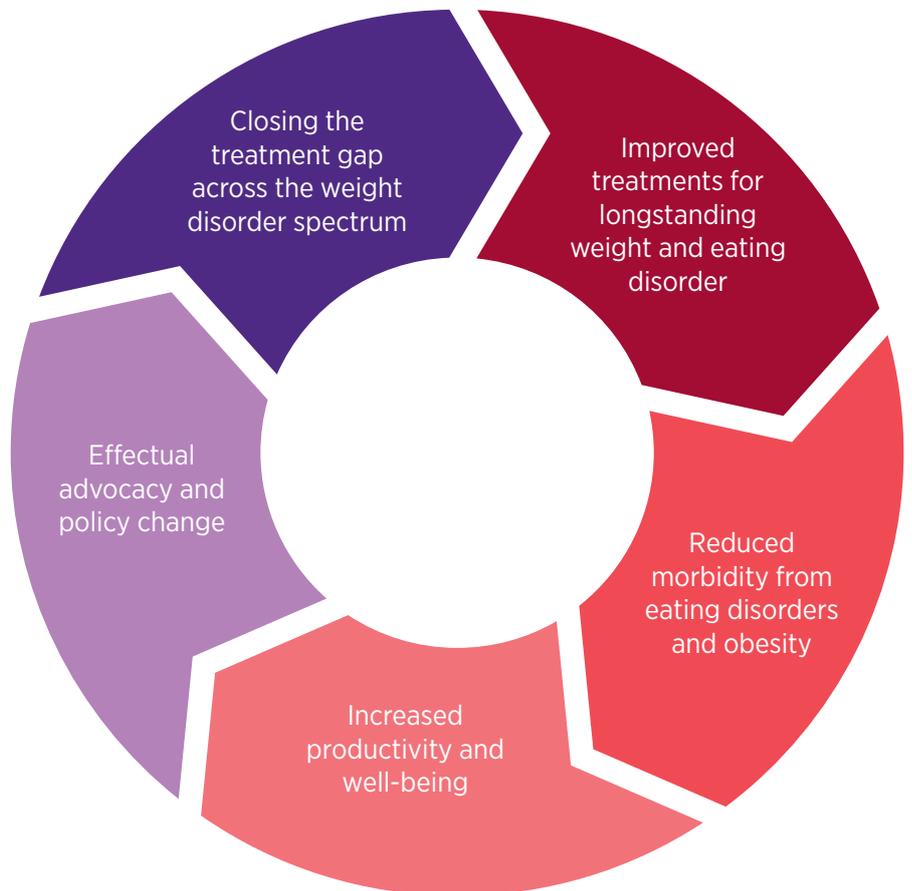
EXECUTIVE SUMMARY

As increasing numbers of people struggle with eating disorders and weight issues across the entire weight spectrum, a growing body of evidence is finding that eating disorders and obesity are intertwined in complex and important ways. At Western Sydney University (WSU), we believe future research initiatives should be integrated in order to reflect this crossover among weight-related issues and focus on translation of findings into policy and practice change.

The purpose of this White Paper is to provide an overview of past and present research by multi-disciplinary WSU experts relating to weight related conditions. We summarise challenges faced by researchers in the fields of eating disorders and obesity and highlight key learnings from each that could benefit the other. We build upon those findings to propose a collaborative, multi-disciplinary approach to future research. This program will draw on expertise from within WSU in the areas of psychology, nursing, midwifery, dietetics, obesity surgery, medicine, social sciences, exercise and activity, as well as on the experience and expertise of key community stakeholders. A fundamental component will be the strength of the WSU Translational Health Research Institute (THRI) in the measurement of public health impact, cost effectiveness and return on investment of appropriate interventions.

Future research will be developed in relation to our proposed model of optimising health and well-being for people with weight and eating disorders. We show how by working together and sharing knowledge, we have opportunities to have a major impact on the assessment, understanding, and health care of people with comorbid eating disorders and obesity, or either problem alone. Ultimately this approach will translate into improved outcomes for all.

Model: Optimising Health and Well-being for People with Weight and Eating Disorders.



ACRONYMS

AN	Anorexia Nervosa
ANZAED	The Australia & New Zealand Academy for Eating Disorders
ANZOS	The Australian and New Zealand Obesity Society
BED	Binge Eating Disorder
BN	Bulimia Nervosa
CaHPRI	Clinical and Health Psychology Research Initiative
CEDD	Centre for Eating and Dieting Disorders
CRE EPOCH	Centre for Research Excellence in the Early Prevention of Obesity in Childhood
ED	Eating Disorder
EDOC	Eating Disorders and Obesity psychology research Clinic
GBA	Gastric Balloon Australia
HAPIFED	a Healthy Approach to weight management and Food in Eating Disorders
MHPN	Mental Health Professional Network
MQ	Macquarie University
RCT	Randomised Controlled Trial
SONM	School of Nursing & Midwifery
THRI	Translational Health Research Institute
UNSW	University of New South Wales
USYD	University of Sydney
UTS	University of Technology, Sydney
WSU	Western Sydney University

DEFINITIONS

Eating disorders are moderate to severe mental illnesses characterised by disturbances in behaviour and thinking around food, eating, weight and/or shape.

Anorexia Nervosa (AN) is characterised by persistent energy intake restriction, intense fear of gaining weight and disturbance in self perceived weight or shape. Typically are underweight but may be normal weight (categorised under OSFED – below) if their pre-illness weight was high.

Bulimia Nervosa (BN) is characterised by repeated episodes of binge eating followed by compensatory behaviours (for example self-induced vomiting or excessive exercise). In addition, people with BN place an excessive emphasis on body shape or weight in their self-evaluation.

Binge Eating Disorder (BED) is characterised by regular episodes of binge eating. Unlike BN, a person with BED will not use regularly compensatory behaviours, such as self-induced vomiting or over-exercising after binge eating.

Other Specified Feeding or Eating Disorder

(OSFED) - According to the DSM-5 (APA, 2013), a person with OSFED may present with many of the symptoms of eating disorders such as Anorexia Nervosa, Bulimia Nervosa or Binge Eating Disorder but will not meet the full criteria for diagnosis of these disorders, or have recurrent purging without binge eating or Night Eating Syndrome.

(Sources: Centre for Eating & Dieting Disorders 2017; National Eating Disorders Collaboration 2017)

Obesity - Overweight and obesity are measured in adults using the Body Mass Index (BMI), which is calculated by dividing weight in kilograms by height in metres squared. Overweight is classified as a BMI of 25 or more with obesity determined at a BMI of 30 or more. These cut-off points are based on associations between chronic disease and mortality and have been adopted for use internationally by the World Health Organisation. Obesity is not considered a mental disorder, however there are associations between obesity and a number of mental health disorders, including BED.

(Sources: American Psychiatric Association 2013; Obesity Australia 2017)

THANKS/ACKNOWLEDGMENTS

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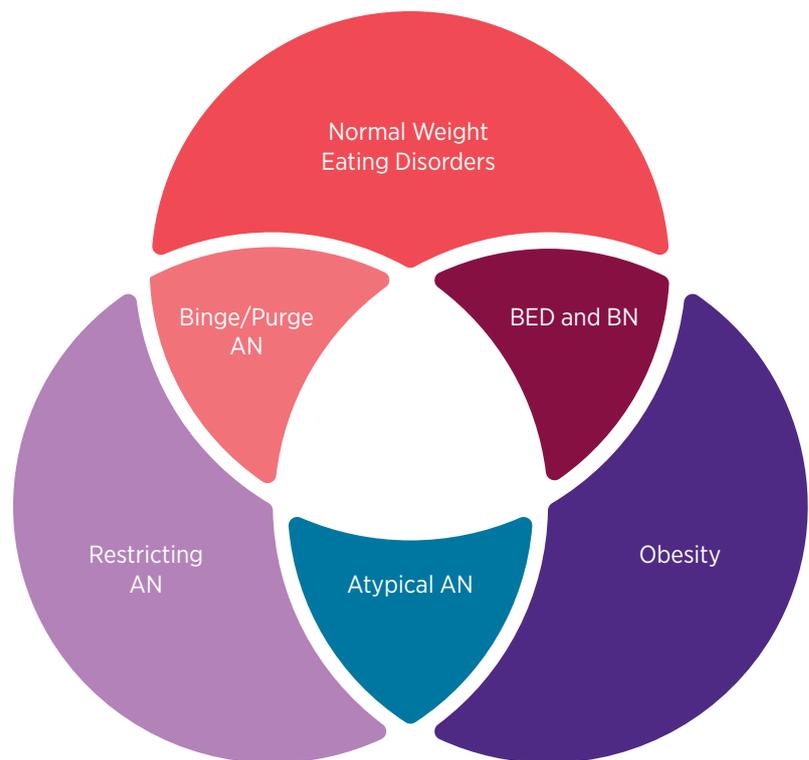




INTRODUCTION

Eating Disorders have traditionally been considered entirely separate to the growing problem of obesity. However, recent research suggests this polarisation is flawed and that eating disorders and obesity are related in many significant ways.

It is evident that a debilitating impact on health and well-being is common to those suffering eating disorders and those living with a larger size. Impairments include psychiatric and behavioural effects such as low self-esteem and social withdrawal, and may involve medical complications, premature death and an increased risk of suicide. Comorbid obesity and eating disorder has increased at a faster rate than either obesity or eating disorders alone (da Luz et al. 2017a; National Eating Disorders Collaboration (NEDC) 2017). One in five people with obesity also presents with disordered eating, usually Binge Eating Disorder (BED) but in some cases strict dieting and/or purging behaviours (da Luz et al. 2017a).



Yet despite these links, approaches to treatment have classically been quite distinct. Eating disorders have generally been regarded as psychosocial in origin and best treated by psychological therapies, in particular cognitive behavioural therapy or family-based interventions with some pharmacotherapy as appropriate. In contrast, obesity has been considered a medical condition with metabolic and genetic origins, thought best treated by mainstream medicine involving dietary, drug or surgical treatment. Therapies for eating disorders generally do not address weight management while, conversely, most weight loss programs do not address psychological aspects.

Further, polarisation and interpretation of messages can be misinterpreted across the camps – where health at every size message can be interpreted as minimising risks of obesity and messages from obesity field may be misinterpreted that weight loss is all that

matters. A key concern regarding this divide is that in attempting to address one condition, we are at risk of exacerbating the other. When inappropriate messages are presented or practices undertaken, those who are obese may be at risk of developing or intensifying an eating disorder, while others might find themselves eating excessively.

This present White Paper outlines these major public health concerns and the effects of comorbidity for sufferers, as well as the very real challenges that are faced when attempting to assist people with these conditions. Our objective is to increase collaboration among interested research groups and community stakeholders with the ultimate aim of improving treatment outcomes. It is our contention that only an integrated approach can reduce the burden of illness for all people, whatever their position on the weight spectrum.

1. THE CHALLENGE

SUBSECTION 1A – PREVENTION AND TREATMENTS FOR OBESITY: WHY ARE THEY FAILING?

In Australia, treatments for obesity are associated with poor long-term outcomes with high levels of relapse and attrition (Cheng et al. 2016; Sumithran et al. 2016; Shaw et al. 2005). The approach is generally multi-disciplinary requiring the efforts of surgeons, physicians, dietitians and psychological therapists, yet outcomes remain disappointing. Despite this, levels of public concern are high and there is almost universal positive endorsement of treatments.

OBESITY FACTS

- 27.9% Australians obese
- 35.5% overweight
- 1 in 5 present with obesity & eating disorder
- Estimated total cost - \$8.6 billion

Since 1995 there has been:

- 7-fold increase in obesity with binge eating
- 11-fold increase in obesity with strict dieting

We contend that it is the neglect of problems with disordered eating that have contributed to poor outcomes in obesity treatment. Research has found that over the past 20 years obesity comorbid with binge eating has grown 7-fold in Australia and obesity with very strict dieting/fasting 11-fold (da Luz et al., 2017). As a consequence there is a new eating disorder called Atypical AN (APA, 2013), reflecting starvation in normal weight people who were previously obese.

NOT JUST A PHYSICAL ISSUE

Obesity and its physical comorbidities such as diabetes and cardiovascular disease have been associated with mental health disorders including anxiety and depression (Jantaratnotai et al. 2017). These need to be assessed and treated simultaneously, taking into account weight stigma (O'Brien et al. 2016; Peckmezian & Hay 2017). A major reason prevention and treatment of obesity is failing we contend may be due to the severe neglect of the predisposing and perpetuating psychological and behavioural comorbidities.

In contrast to treatment for those living with a larger size, treatments for eating disorders are based in psychological medicine and have moderate effects for outcomes. Discussing comorbid obesity and eating disorder in a supportive way also provides a platform to discuss, assess and treat other mental and physical health problems. However, identifying the underlying eating disorder can be an obstacle to such discussions. For example, many people presenting for treatment with bariatric surgery under-report their eating problems for fear of not being accepted for surgery.

THE WAY AHEAD

To address these challenges, research exploring how better to address obesity with eating disorder is needed. Examples of critical issues include:

1. How to discuss childhood obesity with parents, what language to use, where and when to refer for specialised management. Children are generally included in discussions and consultations with healthcare professionals, therefore greater awareness of language and approach (e.g. weight scales/BMI charts etc.) is crucial to limit the likelihood of eating disorder onset, particularly in teens.
2. How to assess eating disorders in people living in a larger size or at risk of obesity.
3. How to optimally treat comorbid eating disorders and obesity.
4. How to create non-obesogenic environments that do not then promote eating disorders. i.e. environments that promote healthy activity levels without exercise becoming compulsive or aversive.

“ So I got to a point where I was only eating about 1,000 calories a day and I was working out between five and eight hours a day . . . And my hair started to fall out. I was covered in bruises. I had dark circles under my eyes. Not to get too completely graphic, but my period stopped altogether and I was only sleeping three hours a night. ”

KAI HIBBARD, FORMER CONTESTANT ON 'THE BIGGEST LOSER'. HER LOWEST BMI AT THE END OF THE SHOW WAS 23.2, WHICH IS CONSIDERED WITHIN THE NORMAL RANGE OF BETWEEN 18.5 AND 24.9

SUBSECTION 1B – THE CHALLENGES AT THE OPPOSITE END OF THE WEIGHT SPECTRUM

People with eating disorders such as anorexia nervosa (AN), bulimia nervosa (BN) or binge eating disorder (BED) have as poor outcomes and increased mortality as people with other major mental or physical health problems. Whilst AN is at the extreme opposite end of the weight spectrum to obesity, it is also of high impact and cost, with onset in the key years of youth and often resulting in early death (Treasure et al. 2015). It can be highly debilitating, challenging to treat and expensive to manage, especially in adults who generally come late to treatment with a more enduring form of illness. There are widely varying outcomes from very poor for around 1 in 10 sufferers to complete recovery for an unknown (as no good definition of recovery exists) minority, and many avoid treatment for fear of weight gain or obesity.

EATING DISORDER FACTS

- Estimated 9% prevalence
- 47% BED, 12% BN, 3% AN, 38% Other
- Mortality rates twice as high as general pop. (5.86 times higher for AN)
- Approx 700,000 untreated at any time
- Total social & economic cost estimated \$69.7 billion

Source: nedc.org.au

THE TREATMENT GAP

It is a paradox that whilst people are highly motivated for weight loss, appropriate help-seeking and engagement in treatment is often lacking and consequently outcomes are often poor. On the other hand, there is also a huge shortfall in help-seeking for eating disorders where there are evidence-based treatments and generally good outcomes. Reviews suggest that fewer than 25% of people with an eating disorder ever seek treatment (Hart et al. 2011). This gap is particularly evident for people with comorbid obesity and eating disorder who are likely to present to a clinic requesting help to lose weight, possibly as it involves less stigma (Star et al. 2015). Closing these gaps is a major contemporary challenge and requires action from community partners and government as much as from researchers. However, eating disorder research has not traditionally attracted the same attention from policy-makers as obesity research.

Critical questions to be investigated with an integrated approach (i.e. questions combining issues relevant to obesity such as weight stigma) include:

1. How can fiscal, societal (e.g. stigma) and personal barriers to accessing care be reduced for people with eating disorders?
2. How can the eating disorder field more closely match the obesity field in terms of attention by policy makers, levels of public health concern and treatment-seeking?
3. How can the treatment experience for people with eating disorders be better understood and improved alongside people's experiences of weight loss treatments?
4. What is recovery for an individual with AN, and how can it be achieved? How can both fields move away from a preoccupation with weight gain/loss as key indices of recovery?
5. How can we prepare the health workforce to appreciate the range and importance of eating disorders?



2. BACKGROUND: STRENGTHS AND LIMITATIONS OF EXISTING APPROACHES

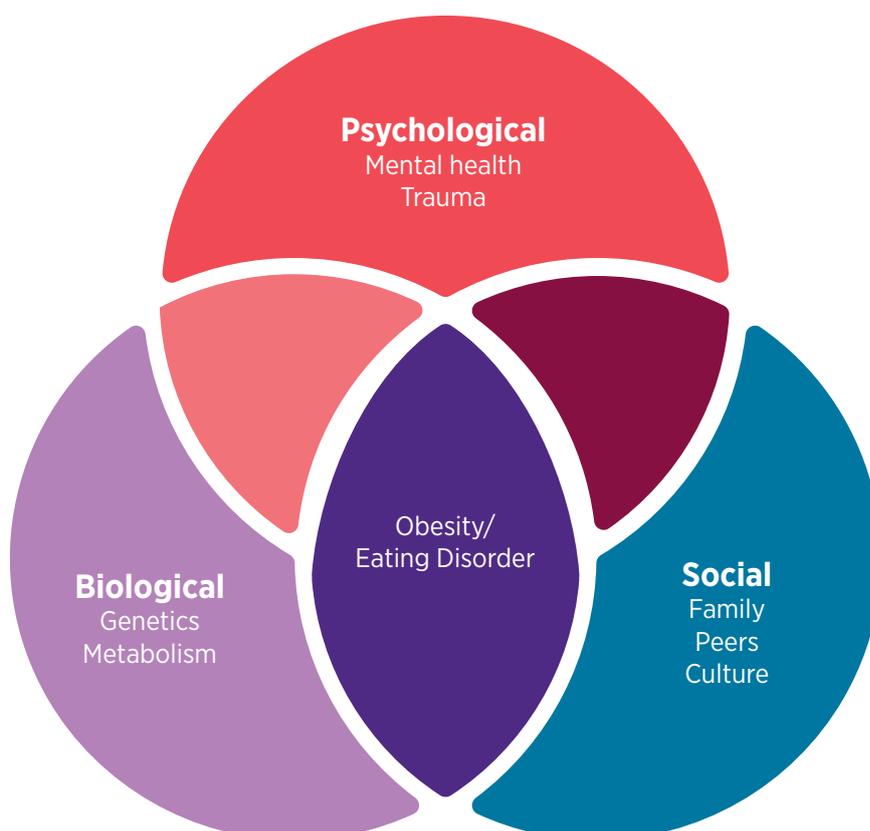
SUBSECTION 2A- BEHAVIOURAL TREATMENTS WORK WELL IN EATING DISORDERS – WHY NOT FOR OBESITY?

Current behavioural approaches to obesity treatment have been largely unsuccessful over the long term. These poor results are likely due to limited understanding of the biopsychosocial risks and maintaining factors of obesity. These factors are almost all shared with eating disorders including mood disorder, genetic predisposition to overweight, and childhood abuse (Raman et al. 2013; Shaw et al. 2005).

Globally the best evidence-based treatment for weight-loss is surgery (Cheng et al. 2016) followed by combination regimes, e.g. pharmacotherapy with very low energy dietary programs (Sumithran et al. 2016). Considerable time and money are spent on these treatments but little attention may be paid to the underlying psychological factors or to the need for ongoing psychological support as people emerge from a weight disorder, particularly when weight loss is rapid such as after bariatric surgery.

In contrast, medical and psychological therapies are the mainstay of effective treatments for eating disorders (Wilson 2005; Hay et al. 2014). Therapies such as interpersonal psychotherapy, family therapy, cognitive remediation and dialectical behaviour therapy have been successfully applied to eating disorders yet are under-researched in obesity (Hay et al. 2014; Linardon et al., 2017; Tanofsky-Kraff et al. 2017; Tchanturia et al., 2017). Dr Evelyn Smith of WSU's School of Social Sciences and Psychology has led the application of therapies such as cognitive remediation and schema therapy to obesity with positive outcomes including improved weight management (Raman 2015; Smith, Hay & Raman 2015).

Family-based therapy has been found highly effective in young people with AN (Jewell et al. 2016) and are being trialled to inform more successful treatments for childhood obesity (Wilfley et al., 2017). Further, Western Sydney research led by Dr Lucie Ramjan has shown the value of peer mentorship in the treatment of AN, and such mentoring by people with experience of living in a larger (and changing) size could also be supportive for those living with a larger size (Fogarty, Ramjan & Hay 2016; Rieger et al.2014).



SUBSECTION 2B – OVERCOMING AMBIVALENCE AND THE TREATMENT GAP IN EATING DISORDERS

Positive endorsement of weight loss behaviours is prevalent in our community and is heightened to extreme degrees in people with eating disorders. Due to this positive regard for thinness many are ambivalent about treatment and those who do present, particularly those with AN, are often at an early stage of change, or not yet contemplating change (Vitousek, Watson & Wilson 1998). This, coupled with high dropout rates, makes recovery from AN challenging. Professor Hay was a lead researcher in a unique RCT of people with AN that was highly criticised by one peer reviewer for its “unbelievably” low attrition rate. The program involved a unique shift in the focus of therapy from weight regain to improved quality of life for people with at least seven years of illness (Touyz et al. 2013).

There is a need for more empirical evidence to distinguish aspects of interventions for eating disorders that are helpful to recovery from those that impede recovery. Whilst specialist psychological interventions are effective for AN treatment, there is no one psychotherapeutic approach that is superior to another yet there is very little research into commonalities, i.e. the non-specific effects of therapy (Geller & Srikameswaran 2015) and how to avoid the potential for harm with better alignment of evidence based treatments to individuals and their families (Conti e t al., 2017). Further, there is no agreed definition of recovery.

Challenges for eating disorder interventions include:

- Encouraging those with an eating disorder to access treatment in an obesogenic environment that promotes thinness
- Reducing fears around losing control over weight (for people of all sizes)
- Accessing hard to reach groups such as people from culturally and linguistically diverse backgrounds (CALD) and Aboriginal and Torres Strait Islander people
- Balancing the need for experiencing personal safety with a sense of personal agency in therapeutic interventions (particularly when the person is medically at risk).

Qualitative research, a major strength of WSU researchers in this field, can be useful in:

- Determining from a recovered patient’s perspective the aspects of treatment that were most useful
- Identifying aspects that positively and negatively impacted recovery
- Complementing quantitative investigations, and vice versa, to achieve triangulation in the literature

3. THE OPPORTUNITY: NEW APPROACHES

Australian Health Ministers (NSW and Federal) have nominated obesity and eating disorders as health priorities and have proposed the following initiatives:

1. **Mandatory weighing of every child and adolescent admitted to hospital.** <http://www.dailytelegraph.com.au/news/nsw/no-escaping-weighty-truth-nsw-to-bring-in-mandatory-tests-for-fat-kids-to-tackle-obesity/news-story/130a0d0565fa1fb9b2eb03e29bf07a18>
2. **An expansion of Medicare supported treatment for eating disorders.** <http://www.canberratimes.com.au/act-news/expanding-medicare-supported-treatment-for-eating-disorder-patients-20170507-gvzz0r.html>
<http://www.news.com.au/national/breaking-news/mayday-to-stop-eating-disorder-deaths/news-story/8372f9536f3c23fec3f0cfe3d5809002>
3. **NSW Health statewide service plan to expand and establish new services for people with eating disorders 2013-2018.** <http://www.health.nsw.gov.au/mentalhealth/publications/Publications/service-plan-eating-disorders-2013-2018.pdf>
4. **Eating Disorders included in the Fifth National Mental Health Care Plan.** www.coaghealthcouncil.gov.au/Portals/0/FifthNationalMentalHealthandSuicidePreventionPlan.pdf
5. **Continued funding (\$1.2 million) for workforce development and other NEDC projects – noting the recently launched National Agenda for Eating Disorders.** <https://thebutterflyfoundation.org.au/assets/Uploads/National-Agenda-for-Eating-Disorders-2018.pdf>

An alliance of key stakeholders has similarly called for action to improve the nutrition and reverse the obesogenic lifestyles of young Australians (opc.org.au/tippingthescales). We welcome attention by policy makers to weight related conditions, but the broader impacts must be considered. For example, mandatory weighing to identify overweight/obesity may lead to an emphasis on shape and weight over health. Such overvaluing of shape and weight is a causal and maintaining factor of eating disorders. It is also unclear how improved access to services will be linked to other strategies to improve the mental health of Australians and reduce suicide. However, failure to understand the weight disorder spectrum and integrate approaches has potentially adverse clinical consequences such as:

- Continued or new onset of obesity after treatment for BED & BN
- Overweight after weight regain in AN
- Eating disorders as a consequence of obesity treatments
- Promoting eating disorders during public health campaigns for obesity
- Obesity and eating disorders as consequences of inadequately supervised dieting
- Obesity as a consequence of 'permissive' eating disorder health promotion
- Weight rebound when BED is untreated in obesity

(*Foo et al. 2013; Hay et al. 2009; Locke et al. 2015; Stice et al. 2016; Wilson et al. 2010; Witt et al. 2014*)

SUBSECTION 3A – NOVEL INTEGRATED THERAPEUTIC INTERVENTIONS FOR OBESITY AND EATING DISORDERS

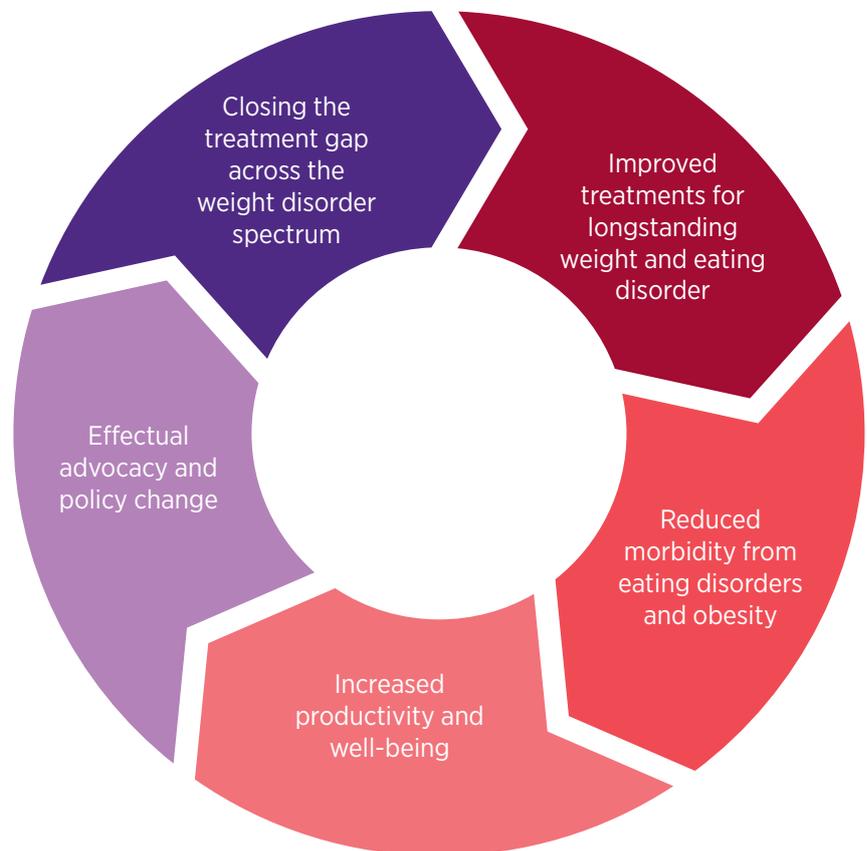
The way forward is to translate established approaches for the treatment of eating disorders into treatments for those with weight disorders. We propose an integrated program of research across Western Sydney and beyond involving key stakeholders and partners in the areas of eating disorders and obesity.

The research will include evaluations of the effectiveness of therapeutic interventions developed by the researchers and their collaborators. We will build upon approaches already developed by WSU researchers and focus on translating these into clinical practice. The aim is to promote widespread understanding of the key issues and the urgent need for action in reducing the twin burdens of obesity and eating disorders.

WSU researchers have already devised and implemented several novel programs for people with eating disorders and obesity including but not limited to: HAPIFED (da Luz et al., 2017b), an integrated cognitive behavioural (CBT) and weight management therapy, use of new technologies to promote healthy exercise (Kolt et al. 2012; 2017) and cognitive remediation therapy (Raman, 2015)

Our proposed research will address the key features of the Model by having a focus on working with stakeholders to develop referral pathways and improved training of professionals in assessment, management, and therapeutic interventions for eating disorders, obesity and their comorbidity. A key aspect of these trials will be a mixed methods approach, i.e. utilising both qualitative research to engage the community in discussion of, for example, how parents can talk to children about weight and eating, and quantitative measures of determinants and outcomes. The research program will be an ideal opportunity to understand how integrated and collaborative care can work.

Model: Optimising Health and Well-being for People with Weight and Eating Disorders.



PARTNERSHIPS

Trials will be based in clinics of industry partners such as the Wesley Hospital Day Program, SWS Local Health District at Camden and Campbelltown and the WSU Eating Disorders and Obesity psychology research Clinic (EDOC). We will link into the Sydney Partnership for Health Education Research and Enterprise (SPHERE) Diabetes, Obesity and Metabolism Clinical Academic Group. This program focusses on secondary prevention and early intervention for people with diabetes and those at risk, such as women planning pregnancy, Aboriginal and Torres Strait Islander and CALD young people aged 16 – 25 years. SWS Local Health District has already established an academic unit (the Diabetes, Obesity, Metabolism Translational Research Unit-DOMTRU), which includes several WSU researchers, to study population-wide and clinical interventions to promote healthy lifestyles and treat diabetes and obesity. Camden and Campbelltown Hospitals is set to develop obesity services, building upon the

metabolic rehab clinic at Camden Hospital. The Diabetes, Obesity and Metabolism group at WSU are helping to shape the work underway.

A central question for stakeholders and policy makers is the cost-effectiveness of treatment programs and required level of investment needed to have a significant and sustained impact. THRI researchers at WSU, notably A/Professor Kenny Lawson, have expertise in: economic evaluation (including, cost-utility, cost-effectiveness and cost benefit analysis), assessing inter-sectoral impacts, and estimating the overall return on investment of treatment programmes which policy-makers require before implementing new services and community interventions. Research at Deakin University (Le et al. 2017), has highlighted the paucity of research into the cost- effectiveness of even the most established treatments for AN and BN. More local research in this area will ensure EDs with obesity are put to the fore of policy-making.



SUBSECTION 3B – IMPROVING THE TREATMENT EXPERIENCE ACROSS THE WEIGHT AND EATING DISORDER SPECTRUM

At WSU, health professionals are working at the cutting edge of research into closing the treatment gap and improving outcomes for people with AN or other eating disorders. These initiatives range from identifying people pre-treatment to ensuring the best outcomes during and post treatment. We are conducting research into how to target people with eating disorders during the critical periods of pregnancy and early motherhood when motivation is generally high (RE, VS, PH). In the area of treatment, we are working closely with collaborators and stakeholders such as Wesley Private Hospital to improve the experience of inpatients. An example is a current study of blind vs. non-blind weighing where patients are given the choice of knowing their weight or not (Franziska Fforeich ACTRN12616000816459). Choice was highlighted in the Butterfly Foundation's *Insights to Recovery* study as a key element for facilitating better outcomes (see <https://thebutterflyfoundation.org.au/about-us/information-and-resources/insights-in-recovery/>).

Researchers (PH, JC, LR) are also collaborating with the AN lab of the Clinical and Health Psychology Research Initiative (CaHPRI) on a number of studies exploring treatment experiences for eating disorders through:

- a meta-synthesis of qualitative research in adults who experience AN treatments
- survey research that explores treatment experiences for eating disorders.

This foundational research will inform future treatment interventions for AN. One of these could be narrative therapy which is a promising psychological intervention that may address issues identified in the Insights into Recovery project such as: the significance of safety and trust in the therapeutic relationship; interventions prioritising language, questions of identity and a sense of personal agency; and therapist understanding that recovery can be a long-term process that involves addressing both cognitive difficulties and quality of life.

Other research includes:

- A study highlighting the importance of the therapeutic relationship in AN recovery (LR). Similar dynamics may impact treatment outcomes for obesity and other eating disorders.
- An examination of the non-specific effects of underused therapies such as narrative therapy and family therapy (JC).
- Research exploring peer mentoring and peer support as a way to enhance current approaches – See Appendix 2 (LR, PH), including culturally tailored strategies (FM, DS).
- Study of the role of complementary medicine (PH with WSU Professor Smith), which was highly rated in the Butterfly Foundation's *Insights into Recovery* study.

Each of these studies addresses issues that may also be applied to the management and treatment of people with obesity.



4. WORKING TOGETHER FOR SYSTEMIC CHANGE: THE ROLE OF STAKEHOLDERS

Future collaborative research in the area of obesity and eating disorders will ensure comorbidity is identified, managed positively and appropriately, and pathways to services put in place. A close working relationship with other stakeholders is vital in order to translate and evaluate research findings into real world settings and optimises the likelihood of findings evolving into policy guidelines. Such relationships also enable us to understand the reception and relevance of our research to people with the lived experience of eating disorders and obesity.

We recognize that there are major gaps in health professional training regarding the understanding of eating disorders and the management of people with both weight problems and eating disorders. Our stakeholders are essential to facilitating and delivering improved training and experience, e.g. through dissemination of education by webinars and other educational opportunities for health care practitioners. Professor Hay was involved in a MHPN webinar on the case of a young person with an eating disorder and obesity, which was broadcast to over four hundred general and other primary health practitioners across Australia in September 2017.

Meetings have already taken place with some key stakeholders including the Butterfly Foundation. Below are details of other groups that have expressed an interest in future collaboration. Professor Phillipa Hay (chair) and others at WSU worked with the Butterfly Foundation on the Insights into Recovery project (2016) and co-authored a recent relevant scientific paper with their researchers (Peckmezian & Hay, 2017). HAPIFED (da Luz et al., 2017b) has been an important outcome of this collaboration with researchers at the Charles Perkins Centre.

Approximately twenty organisations and leading individuals from across the spectrum of eating and weight disorders who impact on research, practice and policy have confirmed their interest in the work of this WSU White Paper (Box). They all have direct activity in one or more of the areas pertinent to our Model of Optimising Health and Well-being (p. 20) i.e. development of referral pathways, delivery of health care and training of professionals in assessment, management and therapeutic interventions for eating disorders, obesity and their comorbidity.

STAKEHOLDERS

Australian and New Zealand Obesity Society (ANZOS)

<http://anzos.com/>

Lead national scientific organisation of health care professionals interested in obesity research, treatment or public health initiatives directed at the prevention of obesity.

The Australia & New Zealand Academy for Eating Disorders (ANZAED)

<http://anzaed.org.au>

Lead national scientific organisation representing and supporting the activities of professionals working in the field of eating disorders and related issues in prevention, treatment and research.

The Butterfly Foundation

<https://thebutterflyfoundation.org.au>

Lead national organisation for all people affected by eating disorders and negative body image.

Centre for Eating and Dieting Disorders (CEDD) - cedd.org.au & Charles Perkins Centre (CPC)

cedd.org.au & Charles Perkins Centre (CPC)

<http://sydney.edu.au/charles-perkins-centre/>

CEDD is a collaboration between The Boden Institute (CPC, University of Sydney) and Sydney Local Health Network with the purpose of developing and implementing strategic planning for eating disorders in NSW.

Gastric Balloon Australia (GBA)

<http://www.gastricballoonaustralia.com.au>

GBA is the largest Australian practice providing a multidisciplinary approach to weight loss/management.

Healthways Australia

<http://www.healthwaysaustralia.com.au>

Provider of personalised programs for individuals, workplaces and communities designed to help Australians gain control over their health and well-being.

Mental Health Professional Network (MHPN)

<https://www.mhpn.org.au>

MHPN is national and provides two interdisciplinary programs: MHPN practitioner networks and the National online professional development program.

Western and South Western Sydney LHDs including Metabolic Rehabilitation Program.

Camden/Campbelltown (NSW) and obesity services at Campbelltown Hospital and Bariatric service at Blacktown.

Notable Western Sydney public hospital practice providing a multidisciplinary approach to weight loss/management.

Northside West Clinic (The Northside Group)

www.northsidegroup.com.au

Healthcare provider offering both inpatient and day programs for people suffering from Eating Disorders and multi-disciplinary training and research in partnership with WSU and other Universities.

Shire Pharmaceuticals

<https://www.shireaustralia.com.au>

Leading international biotechnology company focused on people with Significant and Unmet Medical Need

The Sydney Partnership for Health Education Research and Enterprise (SPHERE)

Diabetes, Obesity and Metabolism Clinical Academic Group

<http://www.thesphere.com.au/initiatives/clinical-academic-groups/>

Weight Management Services (Children's Hospital at Westmead) & Centre for Research Excellence in the Early Prevention of Obesity in Childhood (EPOCH CRE)

www.schn.health.nsw.gov.au/parents-and-carers/our-services/weight-management/chw & <http://www.earlychildhoodobesity.com>

EPOCH CRE brings together researchers, practitioners and policy-makers from Australia, New Zealand and England to work collaboratively on approaches to prevention of obesity in children aged 0 to 5 years.

Wesley Hospital Ashfield and Kogarah

wesleymission.org

Healthcare provider offering both inpatient and day programs for people suffering from Eating Disorders; multi-disciplinary training and research in partnership with WSU and other Universities.

5. THE OUTCOMES: IMPACTING HEALTH AND WELLBEING IN GREATER WESTERN SYDNEY AND BEYOND

SUBSECTION 5A: POLICY

WSU researchers have a strong record of attracting external funding and building relationships that translate into tangible health benefits for the people of Greater Western Sydney. We consider it imperative that research from WSU be brought to the attention of key policy makers and jurisdictions in New South Wales, Australia and the international arena. These policy-makers include, for example, the International Academy for Eating Disorders, which has developed guidelines and criteria for credentialing eating disorder programs around the world.

More closely, the Australian federal government has been working with the National Eating Disorder Foundation of which Professor Phillipa Hay is Deputy Chair of the Steering Committee. Their aim is to develop a range of resources, policies and documents related to closing the eating disorder treatment gap. These include addressing workforce deficits in the understanding of eating disorders and deficits across health professionals in the provision of clinical services and treatment. WSU researchers are also contributing to the NSW statewide eating disorder program which is addressing the huge gaps in assessment and care for people with eating disorders in public hospitals across New South Wales.

Associate Professor Kenny Lawson of THRI led the development of the highly cost-effective Scottish Cardiovascular Disease Policy Model which has a focus on socially deprived areas. Locally, he is working with WentWest Primary Health Network to assess the implementation of a new integrated model of primary care for chronic disease patients. Professor David Simmons of Macarthur Clinical School and THRI has led policy development in Gestational Diabetes in Australasia, been a member of technical and working groups into gestational diabetes at the World Health Organisation and the National Institute of Diabetes, Digestive and Kidney diseases in the USA and a range of lifestyle and peer support programs in New Zealand and the United Kingdom. He is working with Dr Freya Macmillan and the DOMTRU team in Greater Western Sydney on a number of healthy lifestyle and peer support programs involving local primary health networks and other stakeholders.

We anticipate our integrated research Model - Optimising Health and Well-being for People with Weight and Eating Disorders (p. 20) will have significant input into both current and new policy directives. For example, our research directly relates to the review of Medicare items and rebating for people with eating disorders. Our collaborative studies will evolve into policy guidelines when working in the area of obesity and/or eating disorders, to ensure comorbidity is identified, managed positively and appropriately, and pathways to services put in place.

SUBSECTION 5B: PRACTICE

As an outcome of this paper, we anticipate working with stakeholders to improve health professional training and experience through targeted educational opportunities such as the development of online resources, training modules and activities. The possibility of developing apps and an online information portal will also be explored. Further, we intend to play an important role in the evaluation of programs and resources developed and disseminated by stakeholders including The Butterfly Foundation and other private and public sector health care providers.

WSU researchers have a history of effecting changes to best practice. Dr Lucie Ramjan's 2004 paper, Nurses and the 'therapeutic relationship': Caring for adolescents with anorexia nervosa has been used as evidence in the production of nursing best practice guidelines in Canada (Registered Nurses' Association of Ontario 2006). Professor Hay led the RANZCP national guidelines for treatments in EDs (Hay et al. 2014), while Professor Virginia Schmied has made significant contributions to national policy and service development in the field of maternal child and family health at the local, state and national levels. Her research on women's and midwives' experiences of addressing weight issues in pregnancy has informed training and education for staff. The research also shaped the implementation of pregnancy weight management guidelines in a range of services and the development of interventions for obese women in pregnancy. Professor Gregory Kolt has effectively harnessed the capacity of the internet to improve the activity levels and health of Australians (Kolt et al. 2017).

SUBSECTION 5C: RESEARCH

WSU's research ethos is about impact. We believe excellent research is research that effects real-world change and results in practical, measurable outcomes. We support multidisciplinary, collaborative research that literally changes lives. Our pioneering research in the fields of obesity and eating disorders has already impacted upon the well-being of people in Western Sydney and further afield nationally and internationally.

The academic track record of our team is outstanding. We have attracted millions of dollars in research funding to conduct groundbreaking longitudinal and epidemiologic studies and randomised controlled trials. Between us we have published countless articles in internationally recognised journals; individually we have achieved recognition by being awarded positions within some of the country's leading research centres. Our roles supervising doctoral students ensure that research within our university remains relevant and advances collective knowledge.

Future collaborative research between WSU researchers and relevant community stakeholders will ensure our research continues to be revolutionary and published in peer-reviewed scientific publications. Findings will be presented at key forums and conferences to ensure they translate into best-practice policy and treatment guidelines. A major symposium was held at WSU in 2018 to communicate and discuss the translation of our research initiatives with key partners and stakeholders into policy and practice. An emphasis will also be placed on disseminating results beyond the scientific community via the media.

The ultimate goal of our research is to improve outcomes for those living with an eating disorder or larger size. The development of consumer resources will be another important research outcome. Further, we aim to translate our findings into empirically supported online/internet based self-help programs for consumers, and educational portals for treatment providers. This will be achieved with the participation and engagement with people with lived experience.

6. FUTURE DIRECTIONS

Australia has the capacity to lead the world in translating empirical research into real-world practice, thereby improving outcomes for people with eating disorders and obesity. At WSU, our leading expertise in both fields places us in a unique position to drive that movement and bring the two fields together. As editors and associate editors of internationally recognised peer-reviewed journals, members of national and international committees and regular keynote speakers at plenaries and conferences, we can ensure our research is widely disseminated and effectual.

We also will draw on the broader strengths of the University including (but not limited to): Business; Computing, Engineering and Mathematics; Education; Humanities and Communication Arts; and Law. Of particular relevance are the participatory action research and digital promotion of mental health and well-being programs in the Institute for Culture and Society, and the program within the School of Business on health service management research, notably, knowledge translation. For example, Dr Ann Dadich uses the innovative methodology of POSH VRE to understand and promote pockets of brilliance within health services. POSH VRE coalesces positive organisational scholarship in healthcare and video reflexive ethnography to award primacy to positive practices and experiences, as deemed by non-academic experts notably, managers, clinicians, consumers, and their families. POSH VRE focuses on which services, and those therein, that do exceptionally well, if not brilliantly. This focus has proven to be of scholarly, methodological, and organisational value.

Our collaborative Model (p 20) aims to bring together both fields of research and have significant implications for those suffering from an eating disorder or obesity and, importantly, the increasing number who struggle with both.

This can be accomplished by WSU researchers working with stakeholders and partners to:

1. Radically change current approaches for the behavioural management of people with obesity by addressing concurrent disordered eating and mental health problems (including but not limited to eating disorders and depression) in trials of innovative integrated interventions for weight loss management.
2. Close the gap in eating disorder treatment and improve the extreme personal and social impacts of AN and other eating disorders by harnessing the opportunities provided by new technologies to (i) improve access and outcomes in interventions for obesity and eating disorders, (2) redress deficiencies in health literacy and training of health professionals at all levels of care, and (3) test new approaches that improve the treatment experience for all.
3. Enable the eating disorder field to learn from the obesity field in order to achieve the same levels of public health impact and positive regard for treatment by working together.

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APPENDIX 1 – CONTRIBUTOR BIOGRAPHIES

Dr Penelope Abbott, School of Medicine

Penelope Abbott is a Senior Lecturer in General Practice within the School of Medicine. In the past five years she has received over \$4.5 million in research funding of which \$4.2 million is Category 1 grants, has published 35 papers and contributed to two professional guidelines. She works in multiple roles with researchers, clinicians and policy makers, including in the areas of Aboriginal and Torres Strait Islander Health, child health and chronic disease. She works as a general practitioner in clinical and academic roles and has particular interest in promoting quality primary care including for Aboriginal people, people involved with the criminal justice system and people with chronic disease. Her external affiliations include the Western Sydney and South West Sydney Primary Health Networks, the Royal Australian College of General Practitioners, Justice Health & Forensic Mental Health Network and the Aboriginal Health & Medical Research Council.

Dr Janet Conti, School of Social Sciences and Psychology

Janet Conti is a Lecturer and Academic Course Advisor for the Master of Clinical and Professional Psychology programs at WSU. She is also a Clinical Psychologist (MAPS) and Dietician (MDAA). Her research is in the area of qualitative research, particularly critical discursive methods, and in the area of eating disorders and their treatment. Janet completed her PhD in 2013 - a longitudinal research study into women's experiences of anorexia nervosa over ten years. In 2015, Janet received a WSU ECR grant and in 2016, a WSU Women's Research Fellowship to continue her research into narratives of anorexia nervosa. This has included mixed methods research into people's eating disorder treatment experiences, with a particular focus on treatment experiences of first-line treatments for adolescent anorexia nervosa. Janet has had six peer-reviewed publications over the past two years and presented at the International Congress of Qualitative Inquiry at the University of Illinois in 2016.

Dr Ann Dadich is a Senior Lecturer within the Western Sydney University School of Business, a registered psychologist, and a full-member of the Australian Psychological Society. Prior to her academic career, Ann worked with different populations in the community, including young people and people with mental health issues. These experiences continue to inform her approach to conducting research that is both empirical and respectful. Since entering academe, Ann has accumulated considerable research experience in health service management, particularly knowledge translation –the ways in which different forms and sources of knowledge coalesce to inform practice. This is demonstrated by her publishing record, which includes 130 refereed publications; the research grants she has secured; and her awards received to date. In addition to teaching undergraduate students and supervising doctoral scholars, Dr Dadich holds editorial appointments with leading academic journals, including the Australian Health Review and the International Journal of Healthcare.

Professor Michael Edye

Michael Edye is Professor of Surgery at WSU and Divisional Director of Surgery and Anaesthetics at Blacktown and Mount Druitt Hospitals. His chief clinical interest is in minimally invasive upper GI surgery. In recent negotiations with the NSW Ministry of Health he was successful in establishing a new publicly funded metabolic surgery program based at Blacktown with capacity to provide much needed surgical interventions for people with severe obesity. Other notable achievements include initiation of the first laparoscopic donor nephrectomy program in the Northeast of the United States at The Mount Sinai Hospital in New York in 1996, development of techniques to increase the durability of laparoscopic repair of paraoesophageal hiatal hernia and research into kidney volume imaging to optimise donor renal function after live kidney donation.

Dr Rakime Elmir, School of Nursing & Midwifery

Rakime Elmir is a Registered Midwife and Lecturer in the School of Nursing and Midwifery. For several years Rakime has worked in a variety of maternity settings. She completed her PhD in 2012 focussing on women's experiences of severe postpartum haemorrhage and emergency hysterectomy. Following on from her doctoral work, Rakime has led several research projects exploring fathers' experiences of birth trauma, midwives' experiences of obstetric emergencies and women's experiences of eating disorders in the perinatal period. Rakime has been published in high impact Journals and has been successful attracting competitive internal University grants. She has nine publications and 13 presentations in the past five years and received two early career research grants.

Prof Golo Ahlenstiel, School of Medicine, Gastroenterologist and Hepatologist

Golo graduated and received his doctorate from the University of Bonn, Germany and subsequently undertook a Liver Fellowship at world renowned National Institutes of Health (NIH) in Washington, DC in the United States. Since coming to Australia he has completed basic and advanced training in Gastroenterology & Hepatology in 2013 and has worked as a staff specialist at Westmead Hospital since 2014. Golo currently leads the Liver Immunology group at Storr Liver Centre at The Westmead Institute for Medical Research. As the incoming Chair of Medicine at Blacktown Hospital, Golo pursues an active interest in research and education with more than 60 publications with more than 2500 citations. He is regular reviewer for international medical and scientific journals.

Golo is a VMO Gastroenterologist at the Hospital for Specialist Surgery and has regular endoscopy lists there and at Blacktown/Mt Druitt hospitals. Golo is a strong believer in high quality, accessible medical services and No-Gap bills all private procedures (as does the anaesthetist), bulk bills aged pensioners and provides discounts for HCC holders.

Professor Phillipa Hay, Translational Health Research Institute

Phillipa Hay is Professor of Mental Health in the School of Medicine at WSU. She has extensive expertise in longitudinal and epidemiologic studies as well as randomised controlled trials in eating disorders and related mental health problems of young people. She has a unique body of work reporting the point prevalence of eating disorders and their burden in the Australian general population, the only representative population data on eating disorders in Aboriginal and Torres Strait Islander peoples, as well as the increase in these problems, concomitant with increases in obesity. Her studies have provided key information to guide jurisdictions in planning health care services for eating disorders across Australia. In 2015 she received the Lifetime Leadership Award from the ANZ Academy for Eating Disorders and in 2013 was elected Fellow of the (international) Academy for Eating Disorders. In 2014 she was awarded a "Science Without Borders" Visiting Professorship from the CAPES research foundation in Brazil. Her work has also been funded by NHMRC, ARC and Rotary Health. She has over 200 peer reviewed scientific publications. Professor Hay has led the introduction of the first online journal in her research areas (*Journal of Eating Disorders*). She has extensive community engagement and in addition to service on committees for the International and ANZ AED, she is Deputy Chair of the Steering Committee for National Collaboration for Eating Disorders.

Professor Gregory Kolt, School of Science and Health

Professor Gregory Kolt is the Dean of Science and Health, Professor of Health Science, and Lead Dean Workforce Development at WSU. Prior to joining the University at the end of 2006 he was Associate Dean (Research), Professor of Health Science, and Founder and Director of the Centre for Physical Activity and Nutrition Research in the Faculty of Health and Environmental Sciences at Auckland University of Technology, New Zealand. Professor Kolt

has an academic background that spans several disciplines including psychology, physiotherapy, and education. He holds a PhD in Psychology, is a Registered Psychologist, and has worked extensively in academic, research, and practice settings in Australia and New Zealand. His research achievements are recognised internationally with around \$5.65 million of research grant funding and the publication of several books and book chapters, and over 150 journal publications. Professor Kolt is a recognised senior academic leader and manager with extensive experience in University settings. His leadership across the broad health science, science, and human science disciplines has led to the significant expansion, growth, and strengthening of these areas in his current role at Western Sydney University, and in his prior role at Auckland University of Technology (New Zealand).

A/Professor Kenny Lawson, Translational Health Research Institute

Kenny Lawson is Associate Professor in Health Economics at Western Sydney University. Kenny's research interests centre mainly on economic evaluation, and decision analysis, to inform the priority setting of both research funding to enhance the 'value of information' generated, and the translation of research into policy to generate value for money, and especially to reduce health inequalities. He entered academia seven years ago, and has extensive industry experience as an applied economist in public (e.g. Central Government) and private sectors (e.g. banking, consultancy) across four continents directly influencing his policy applied research interests. He has published 27 articles, including the Lancet (physical activity), Heart (CVD), Preventative Medicine (CVD), and International Journal of Health Equity (multimorbidity). He collaborates widely, nationally and internationally, and is an Adjunct Associate Professor at James Cook University, external advisor to Canadian Institutes of Population and Public Health (IPPH), fellow of Centre for Excellence in Intervention Prevention Science (CEIPS), Melbourne. He has been an invited speaker at several international events in prevention

policies and health inequalities, and has generated approximately \$2m in grant revenue.

Dr Haider Mannan, Translational Health Research Institute

Dr Haider Mannan is a Lecturer in biostatistics at Centre for Health Research and the School of Medicine, Western Sydney University. He has three roles-research, teaching and providing statistical consulting service to staffs and students. He has a research track record in the field of lifestyle factors (e.g. smoking, diet, eating disorders), chronic conditions (e.g. obesity, diabetes) and treatments (e.g. CABG, angioplasty stenting) associated with cardiovascular disease with a focus on risk prevention using policy modelling. His other areas of expertise include functioning and disability among the elderly and evaluation of population health interventions. His biostatistical expertise is wide including regression models for clustered and longitudinal data (e.g. multilevel mixed effects, GEE models), continuous, binary (e.g. logistic regression), survival (e.g. Cox regression, Weibull regression), categorical and ordinal outcomes, nonparametric methods, analysis of small studies and state transition models (e.g. Markov simulation/model, latent Markov model), all in the context of epidemiological/medical studies. He has published software for disease risk modelling using SAS macros. He is widely published in epidemiology and biostatistics with 21 as first authored and 12 in category 'A' journals including American Journal of Epidemiology, Preventive Medicine, European Journal of Preventive Cardiology, International Journal of Obesity, Obesity, Annals of Epidemiology, European Journal of Nutrition, Accident Analysis and Prevention and Statistical Methods in Medical Research

Dr Freya McMillan, School of Nursing & Midwifery

Freya MacMillan is a Lecturer in Interprofessional Health Science at WSU. Her research focuses on the development, implementation and translation of diabetes prevention interventions. In particular she uses community-engaged approaches to

ensure interventions are culturally-tailored and appropriate, to ensure acceptability and usability by communities most at risk. Currently, she is leading a church-based lifestyle intervention for Samoan communities across South Western Sydney, which utilises peer-support for diet and physical activity change. Additionally, she is involved in a peer-support based intervention being built-up across an entire semi-rural Shire in South Western Sydney (the Wollondilly Diabetes program), for the management and prevention of diabetes.

Dr Lucie Ramjan, School of Nursing and Midwifery

Lucie Ramjan is an Associate Professor and Academic Course Advisor for the Master of Primary Health Care Program and International Programs in the School of Nursing and Midwifery at WSU. She is also a member of the Centre for Applied Nursing Research and an affiliate member of the Ingham Institute of Applied Medical Research. Lucie graduated with a Bachelor of Nursing (Honours – 1st Class) in 2003 and was awarded a PhD in 2007. Her research area is mental health, with a focus on eating disorders. In 2014 Lucie received funding from The Ian Potter Foundation to develop a mentoring program for people with anorexia nervosa. In 2015 Lucie was awarded a UWS Women's Research Fellowship to extend the latter pilot to all eating disorders. Lucie has cross-disciplinary and international collaborations with Nursing, Medicine, NICM, and ICS. Lucie has 31 peer-reviewed publications and 1 book chapter in the last five years.

Dr Milan Piya – Senior Lecturer in Diabetes at the Macarthur Clinical School

Dr Piya is widely published in obesity and related biomarkers, chronic inflammation as well as diabetes complications. He has been involved in bariatric research programs in the UK for the last 10 years and has recently joined the team at WSU and is setting up the bariatric research program at Camden /Campbelltown hospitals to work in partnership with the WSU/Blacktown program.

Professor Virginia Schmied, School of Nursing and Midwifery

Virginia Schmied is Professor of Midwifery and Director of Research in the School of Nursing and Midwifery, Western Sydney University and holds a Visiting Professorship at University of Central Lancashire (UK). Professor Schmied has a strong national and international reputation in the field of maternal and child health and her research addresses the social and emotional health and well-being of women and men in the transition to parenthood, perinatal mental health, infant feeding, and researching improvements in service delivery and professional practice. She is particularly interested in how relationship-based care leads to improved health outcomes for women and families. Professor Schmied has held ten national competitive grants from ARC and NHMRC and has conducted consultancy work including leading the development of the national framework for universal health and development services to children and families the Australian Government. She has published over 170 refereed journal articles, book chapters and published reports and regularly presents (including as a key note speaker) at national and international conferences. Her research has been translated to policy and practice, for example through the development of health policy, models of care, teaching resources for consumers and health professionals.

Professor David Simmons, School of Medicine

David Simmons is Professor of Medicine at the Macarthur Clinical School at WSU, Head of the Campbelltown Hospital Endocrinology Department, and Chair of the Campbelltown Hospital Clinical Council and Director of the Diabetes, Obesity and Metabolism Translational Research Unit. Between 2007-2014, he was the lead diabetes consultant at Cambridge University Hospitals NHS Foundation Trust, a service that included a level 3 obesity program. He also coordinated the Cross-Europe DALI study, focusing on gestational weight gain limitation and gestational diabetes prevention among overweight/obese women

and was chief investigator for the RAPSID RCT of peer support in type 2 diabetes (the largest RCT of diabetes peer support to date). He has over 270 publications, has won several national and international awards for his work in diabetes epidemiology, diabetes in pregnancy and diabetes service development and has sat on national, WHO and NIDDK working groups relating to gestational diabetes.

Dr Evelyn Smith, School of Social Sciences and Psychology

Evelyn Smith is a Senior Lecturer in Clinical Psychology and heads the Eating Disorders and Obesity psychology research Clinic (EDOC) at WSU. EDOC treats clients with eating disorders and weight issues, serves as a training facility for students, and performs research aiming to improve outcomes. There are preliminary but ongoing discussions with Nepean Hospital about the possibility of partnering with EDOC to develop outpatient care to the area. Since arriving at WSU in 2015, Dr Smith has secured over \$1.2 million in internal, national and international grants, including a Ramaciotti grant of AU\$300,000. She has led three RCTs and has had 25 publications, 10% of which are in the top 10% of citations in the field. She collaborates with academics interested in eating disorder and obesity at UNSW, USYD, MQ and WSU, and is currently involved in over 30 projects. She currently supervises 4 PhD students, 1 DPsych, and has supervised 20+ honours and master students. As a clinical psychologist she sees around 5 clients a week and is passionate about educating primary care specialists, educators and counsellors, among others, on assessment and treatment of eating disorders and obesity. Dr Smith was an invited plenary speaker on obesity at the 2017 national ANZAED conference.

APPENDIX 2 – MENTORING STUDY

MENTORING – A NOVEL APPROACH TO SUPPORT HOPE FOR RECOVERY IN PEOPLE WITH EATING DISORDERS

Mentoring support has been found to be important in improving quality of life and hope for recovery in eating disorders. Mentorship has the potential to support resilience and the development of skills to avoid admission or relapse to hospital. Dr Lucie Ramjan, Dr Sarah Fogarty, Dr Daniel Nicholls and Professor Phillipa Hay piloted a successful community mentorship program for women with anorexia nervosa in NSW in 2015 (Pilot 1). The project was innovative and the first mentorship program of its type, in that stakeholders were partners in the development and design of the program. Funding was received from The Ian Potter Foundation in 2014 for this work and findings are being disseminated at conferences and in peer-reviewed publications. The research received media attention on ABC 702 during Mental Health Week in 2015 – <http://www.abc.net.au/news/2015-10-07/anorexia-recovery-project-partners-women-with/6834140>

With further funding from a Women's Research Fellowship in 2015 (Pilot 2), Drs Ramjan, Fogarty and Professor Hay extended the work to include people of any gender and with any type of Eating Disorder.

Results: The preliminary data from Pilot 1 showed no significant quantitative results for mentors or mentees although the qualitative data from interviews and focus groups identified promising findings for the value of mentoring.

The preliminary data from Pilot 2 showed significant results in the Domain Hope Scale for mentees. Significant results were found between pre and post program scores for mentees in increasing hope overall ($p = 0.003$) and in the following hope domains: Social Relationships ($p = 0.027$); Romantic Relationships ($p = 0.032$); Family Life ($p = 0.047$) and Work ($p = 0.003$). There were no significant results for the mentors. The mentors' outcome measures remained stable from pre to post program completion.

Further research is needed however the results provide preliminary support for the mentoring program's benefits as an adjunct to treatment. We found that having someone who understands, to talk and share with, met a clear need for people with eating disorders. Mentoring programs that focus on improving hope may provide a value support for those in treatment for an eating disorder.

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Publications to date:

Ramjan, L.M., Fogarty, S., Nicholls, D., & Hay, P. (2018). Instilling hope for a brighter future: A mixed-method mentoring support programme for individuals with and recovered from anorexia nervosa. *Journal of Clinical Nursing*, 27, e845-857.

Ramjan, L.M., Hay, P., & Fogarty, S. (2017). Benefits of a mentoring support program for individuals with an eating disorder: A proof of concept pilot program. *BMC Research Notes*, 10: 709. <https://doi.org/10.1186/s13104-017-3026-6>

Fogarty, S., Ramjan, L., & Hay, P. (2016). A systematic review and meta-synthesis of the effects and experience of mentoring in eating disorders and disordered eating. *Eating Behaviors*, 21, 66-75. doi: 10.1016/j.eatbeh.2015.12.004

Nicholls, D., Fogarty, S., Hay, P., & Ramjan, L. M. (2016). Participatory action research for women with anorexia nervosa. *Nurse Researcher*, 23(5), 26-30. doi: 10.7748/nr.23.5.26.s6.

Project Team: Dr. Lucie Ramjan (School of Nursing and Midwifery, WSU), Dr. Sarah Fogarty (School of Medicine, WSU), Prof. Phillipa Hay (School of Medicine, WSU). <http://www.abc.net.au/news/2015-10-07/anorexia-recovery-project-partners-women-with/6834140>

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