

Weighing up the options

Clarifying the cost-benefit equation in weight loss surgery
for Australians who are clinically obese



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Report on a panel discussion featuring:

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Lynne Pezzullo – Director of Deloitte Access Economics and Lead Partner of Deloitte's Health Economics and Social Policy group.

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1. Introduction: A panel discussion on the personal financial costs and benefits of weight loss surgery for Australians who are clinically obese

Despite the growing popularity of weight loss surgery and its expanding evidence base, many clinically obese Australians continue to put barriers between themselves and a serious contemplation of surgery as an option.

Surgeons and other healthcare professionals who provide advice to clinically obese patients are very familiar with these obstacles and the circumstances in which they arise.

Some patients are concerned with the reduced “socialisation” that might result from eating less or are concerned that friends will “treat them differently” if they lose weight using surgery. Some patients are sensitive to the possibility of criticism that, in some perverse way, undergoing surgery will mean they have “failed” – because they didn’t have the “willpower” to lose weight unassisted.

But through 2009 and 2010 – as the impact of the global financial crisis began to affect Australian consumers more directly - another barrier started to infiltrate the early conversations between clinically obese people and the healthcare professionals whose job it was to help them find a solution.



(L-R) Dr Lilian Kow, Lynne Pezzullo, Marg McGill

That barrier was cost.

For what seemed like the first time, Australians were expressing concern about the financial implications of deciding to have weight loss surgery. They began to weigh up the costs associated with out-of-pocket expenses and hospital fees with the potential longer term benefits of a successful outcome.

In late March 2011 an expert panel discussion was convened to explore these issues. A surgeon (Dr Lilian Kow *left*), a health economist (Lynne Pezzullo *centre*) and a diabetes educator (Marg McGill *right*) met in Sydney on Tuesday 29th March 2011 to explore the latest data, reflect on consumer attitudes and crunch the numbers on the cost and benefits of weight loss surgery for people who are clinically obese.

The timing was impeccable. On the same day that the team met for the discussion, the International Diabetes Federation issued a statement advocating gastric banding as a radical first line treatment for diabetes.

So how do we balance the substantial lifestyle and financial benefits with the unarguable out-of-pocket costs?



2. How do we measure obesity via equations like “BMI” and how many Australians are obese?

Discussions about obesity are sometimes complicated by confusion about definitions and classifications. The participants were keen to be clear about this from the start.

Lynne Pezzullo: One of the most important things is for people to be aware of whether they are obese and for this they need to be aware of how obesity is measured. The most commonly used measure is the BMI – Body Mass Index - and it is quite easy to calculate your own BMI. It's your weight in kilograms and you divide that by your height in metres squared (Figure 2). People can calculate their own BMI - that is the first step I think. Unfortunately in Australia we have a lot of people who are in the obese range. This means that their BMI is over 30. We have about three and a half million Australians in that range and that is projected to increase to about seven million Australians by the year 2025.

Figure 2. Body Mass Index

$$\text{Body Mass Index (BMI)} = \frac{\text{Weight (kg)}}{\text{Height}^2 \text{ (m)}}$$

Healthy	18–25
Overweight	25–30
Obese	30–35
Severely obese	35–40
Morbidly obese	40–50
Super obese	50–60
Extremely obese	60+

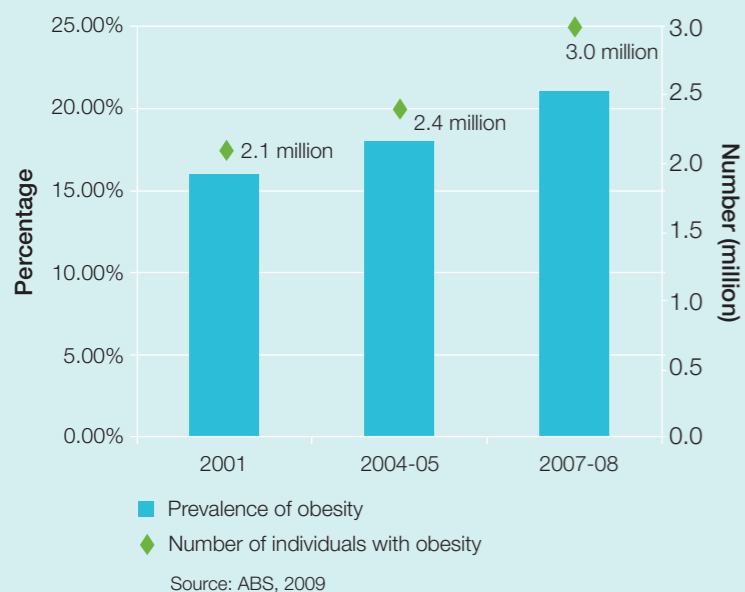
Dr Lilian Kow: So that is a huge problem, how are we going to tackle this? I see them at one end for weight loss surgery, but I can't operate on three million people and neither can my colleagues.

Lynne Pezzullo: There are a lot of interventions. Of course it is very important to adapt your lifestyle and use pharmacological interventions, but as you pointed out for some people they have tried those things and that is when bariatric surgery becomes relevant and appropriate. Most people who are obese are not young people, there is a lot of talk of adolescent obese people and that is an issue, but most of the obese people are middle aged. The age group 45 – 59 is where we have one million obese Australians. In that age group people could have tried other forms of intervention like lifestyle modification and so on and just are at the stage where bariatric surgery becomes appropriate and clinically indicated.

Dr Lilian Kow: Why is obesity so prevalent in that particular group?

Lynne Pezzullo: There are a lot of risk factors for obesity. One important factor is genetics, so it could just be 'in your genes'. Other major problems are physical inactivity and diet. Diet and exercise play a key role. The risk factors for obese people in that age group is that you can double your chance of a heart attack and double your chance of cardiovascular disease, triple your risk of type 2 diabetes and double your risk of conditions like osteoarthritis. You also increase your risk for bowel cancer, breast cancer, kidney and uterine cancers. These health problems have quite substantial costs.

Figure 1. Prevalence and number of individuals with obesity in Australia



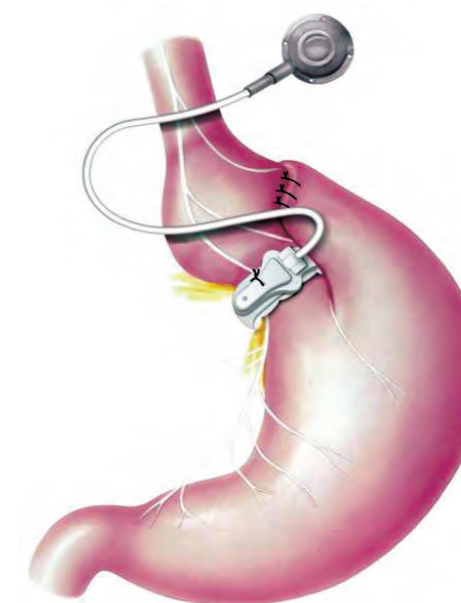
3. What is weight loss surgery and what benefits does it deliver?

Dr Lilian Kow is a surgeon with many years experience in weight loss surgery. She provided an overview of surgical options.

Dr Lilian Kow: Many patients that come and see me realise that diets and drugs are not effective in the long term. Through looking at their friends and colleagues who have had weight loss surgery they realise that surgery is an effective long term solution. Not only is it effective in helping them lose weight, but it also improves their co-morbidities. The benefits of having weight loss surgery compared to staying obese one can consider weight loss surgery as a life saving surgery. Weight loss surgery is definitely a medical not cosmetic procedure.

There are three main approaches to weight loss surgery. The first type is a restrictive procedure where we limit the amount of food one can eat, and then there are malabsorptive procedures where a portion of the intestine is bypassed so that it reduces caloric absorption. There are also procedures which are a combination of the two approaches. Gastric banding (Figure 3) is the most popular procedure. It has been in Australia for about fifteen years and it comprises ninety per cent of the operations we do in this country. It is a laparoscopic procedure. We put a band around stomach which then makes a restrictive stomach, which results in patients eating a lot less. The band puts pressure on the stomach and controls the rate of movement of food through the two pouches of the stomach. The advantage of this procedure is that it can be done through laparoscopic surgery, it is reversible and it is adjustable depending on the needs of the patient. That is why this operation is very popular. A more conventional operation is the gastric bypass, (Figure 6) which has been around for about thirty years. It is a combination of restrictive and malabsorptive.

Figure 3. Adjustable gastric banding



It works very well, but it is irreversible and patients need to take supplements for the rest of their life because the malabsorption can result in deficiencies. A more recent operation is the sleeve gastrectomy (Figure 4). In this operation ninety percent of the stomach is removed. It is a restrictive procedure and this is why patients lose weight. They need to understand that there are no long term results from this surgery and it is totally irreversible.

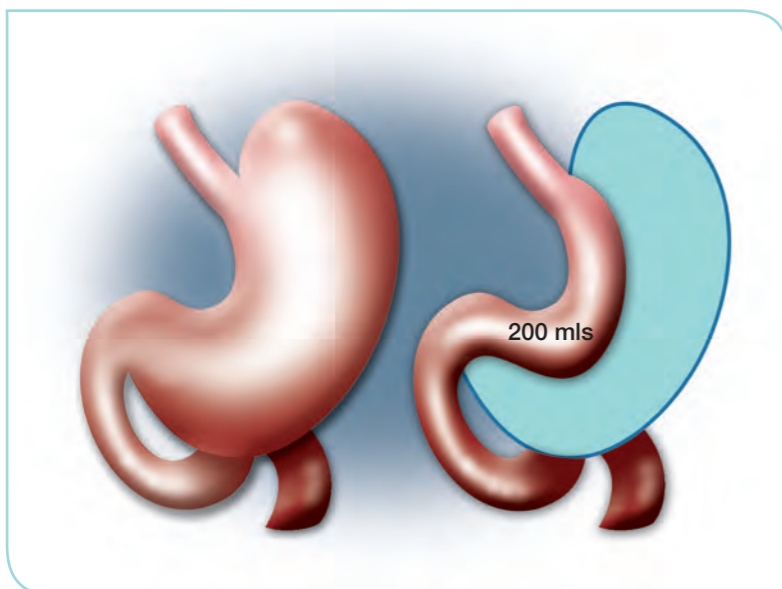
Bilio pancreatic diversion (Figure 5) operation is not common in Australia; it is more common in Europe. It is a very malabsorptive procedure and patients have very severe nutritional deficiencies which is why it is not recommended as a mainline surgery in Australia.



3. What is weight loss surgery and what benefits does it deliver? *Continued.*

Lynne Pezzullo: Our research shows that there are different rates of effectiveness of the different surgeries. Gastric banding is very effective, but the weight loss achieved by gastric banding can be slightly less on average than the weight loss achieved through sleeve gastrectomy for example. Unfortunately there may be a few more health risks on average with sleeve gastrectomy. Is that your experience?

Figure 4. Sleeve gastrectomy



Dr Lilian Kow: What people don't understand is that the gastric band is adjustable based on the patients needs. We adjust it so that they lose weight gradually. They lose about one kilogram per week. People with gastric bands lose their weight slower but in the long term it is probably more effective with less risk of complications. People who have had a sleeve gastrectomy have ninety per cent of their stomach removed so they have no choice they just have to eat a lot less from the beginning. When you remove part of their stomach, there is a risk of bleeding and leaks in the postoperative period purely due to the nature of surgery. In surgery we talk about operative mortality, which is the risk of dying due to complications within 30 days of a surgery.

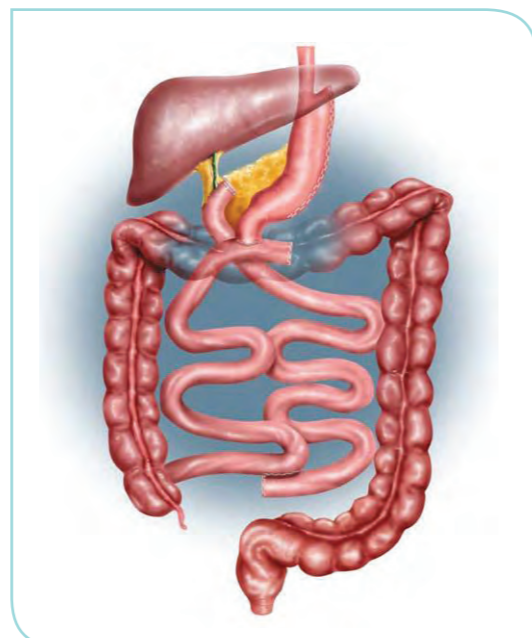
The gastric band is the safest and the risk of dying is 0.05% which is very low. The sleeve gastrectomy is slightly higher risk it has a 0.1% risk of dying. The more stomach you re-sect increases the risk so for a gastric bypass it is a 0.5 per cent increase which is a ten times increase compared to the gastric band. This is worldwide data from very good centres that do high volume surgery.

Lynne Pezzullo: The risks of these surgeries are in some cases lower than the risks of dying from obesity related heart attack.

Dr Lilian Kow: Marg, what is your view about the middle age group that obesity is so prevalent in? Do you see weight loss surgery as effective in that group?

Marg McGill: I think when people have tried really hard with behavioural change and they have tried every diet that every magazine has offered and they really want to lose weight then weight loss surgery is a very effective treatment. It is also a very effective form of treating their diabetes. It also has benefits on a personal level. The benefits are psychological and emotional because once people lose weight there are a lot of things they can do.

Figure 5. Biliopancreatic diversion



I had a patient the other day who lost a lot of weight as a result of weight loss surgery. She's excited now because her knees don't hurt so much anymore so she can walk to the bus stop and catch a bus to the hospital instead of a taxi. That's a very good example of the cost benefits we've mentioned. As they start to lose weight their confidence increases and so they can fit behind the steering wheel of the car and drive themselves places. They can go to the movies again because they don't feel embarrassed that they won't be able to fit in the seat. There are lots of personal things so once people start to build up their confidence then they start to feel that they want to do a little more activity and then they become more healthy.

Dr Lilian Kow: I see that a lot in my patients as well. As the weight loss progresses you can see a change; their outlook changes and they become more positive and they become more confident. I find it really exciting to see these changes in my patients.

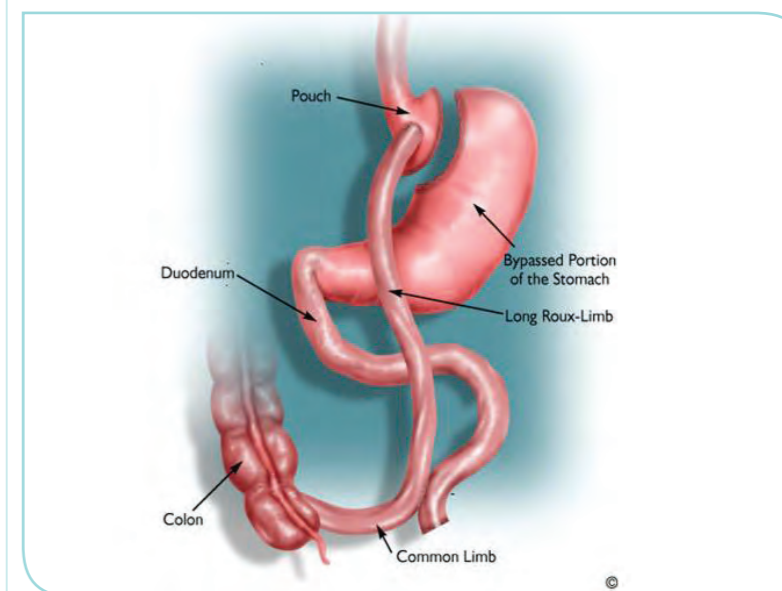
Marg McGill: It can be very rewarding to go on that journey with them as their lives unfold. They go from being embarrassed to go out and unable to buy clothes that fit them in the shops, and having to get their clothes custom made, to being able to go to the shop and they say to me they have bought a pair of pants in the shops for the first time in fifteen years.

Dr Lilian Kow: Marg, Do you think particularly in young adults bariatric surgery would be effective and helpful?

Marg McGill: There is not doubt that bariatric surgery has been helpful in people who are clinically obese and who have tried and tried behaviour change. We talk about primary prevention with statements like people need to walk more and eat less, but behaviour change is very hard for many people.

Dr Lilian Kow: How do you educate a person who for example comes to me and says the bariatric surgery is good, I eat a lot less, but my

Figure 6. Gastric bypass



sugar levels go up or my insulin goes up so I have to feed my insulin?

Marg McGill: What we have to do is before people even contemplate bariatric surgery is to get inside their heads and see what they are thinking. Why are they obese? Is it because they are big eaters and absolutely love food? Or is it because they are emotional eaters and they eat to satisfy some pain inside them.

We need to address that before we move onto bariatric surgery. Then with the bariatric surgery we have to advise patients that it is a very good option for someone who is clinically obese. It's only a tool it is not a magic wand we need to help people work through the reasons why they are eating so much.

Dr Lilian Kow: Is there evidence that obese young adults become obese middle aged adults?

Lynne Pezzullo: A lot of evidence suggests that adolescent obesity increases the risk for adult obesity and then of course we've got the issues that occur with the 'middle aged spread' with people who weren't obese as young people, but then develop obesity in their mid forties or early fifties.



4.

What are some of the barriers to weight loss surgery?

The panellists talked a lot about different personal barriers to weight loss surgery - the ways in which people exempted themselves from the possible benefits.

Some of the barriers identified by the panellists included:

- Reduced socialisation from less eating
- Loss of a coping mechanism –i.e. eating
- Perception that “people may treat me differently”
- Social stigma – the view that “you’ve failed – you don’t have the willpower to lose weight

Dr Lilian Kow: Clearly there are barriers other than the cost of that stop people going for weight loss surgery.

Marg McGill: That’s why it is important to have a team of allied health professionals around the surgeon to help the person find out why it is that they want the surgery or why it is that they are nervous about having surgery. People often don’t jump at the chance to have weight loss surgery, because they are frightened. For some patients going out for dinner with their friends is one of the great pleasures in their life and they are scared that if they can’t eat very much anymore they will lose that pleasure. It would be interesting to find out how you deal with that with your patients?

Dr Lilian Kow: I tell them that enjoying food is not just about quantity, it is about quality, but it is very difficult because a lot of these patients are very used to having a large meal. They need that feeling of fullness to know that they have had a good meal.

Lynne Pezzullo: Coming from an Italian family I completely understand that it can be a cultural thing.

Marg McGill: That’s true and for many people food is also a form of support, it’s a coping mechanism and so people think if I can’t eat to make myself

feel better what will happen? This is where the allied health professionals come in to help people find new ways other than eating to deal with difficulties in their lives.

Dr Lilian Kow: People also bring up family pressures. Their family believe that weight loss surgery was them taking the easy way out. When they have to attend family gatherings they cannot enjoy themselves. How do you deal with this?

Marg McGill: There is an enormous amount of social stigma. People say things like, “You’re weak, you didn’t have the willpower to lose weight because you had to resort to surgery.” This is a big barrier for people.

Lynne Pezzullo: The reality is though that a lot of obesity is genetic. About forty per cent of obesity is genetic and this makes it very hard for people to lose weight and bariatric surgery shouldn’t be seen as a failure. There can be a lot of courage for a person to go and have a surgery.

Marg McGill: People are worried about being treated differently. They think “I’ve always presented as this fat happy person and if I change will people treat me differently?”

Lynne Pezzullo: There is the fear of loss of identity - another reason why having surgery should really be seen as a courageous step.

Dr Lilian Kow: Peer pressure is a problem for a lot of my patients they say to me I feel great, I have lost twenty or thirty kilograms, but my friends say I am getting too thin, but in reality they haven’t even reached a healthy BMI yet.

Marg McGill: Sabotage in this area is a major concern. It’s something we need to talk to our patients about; it can be their close friends, family or work colleagues and that is crazy. What we’re saying is that there is an emotional and psychological component that is also enormous just like the physical component.

Dr Lilian Kow: Sometimes even when patients have lost a lot of weight they do not think they are slim; they still think they are very fat. How do you help those people?

Marg McGill: Then there is a need for long term positive cognitive therapy discussion with people if they are still feeling sad and unhappy despite the weight loss.

Lynne Pezzullo: In health economics we have the terms ‘primary prevention’ and ‘secondary prevention’ for conditions like diabetes. So you can completely avoid diabetes by not getting it in the first place and certainly maintaining a healthy weight is a very positive part of that. If you’ve got diabetes already it cannot be cured, but you can prevent a lot of complications from happening. I had an aunt and an uncle who both went blind from diabetes and it is a terrible thing to watch. You can prevent the things like retinal complications through good management like weight loss surgery.

Marg McGill: Lynne raised the issue of the long term complications of conditions like diabetes. I think it is important that people with diabetes who have diabetes for more than five years recognise that they still need to have their diabetes assessed regularly. It may be that they are having very few medicines or not taking any medicines, but once you have had diabetes for a very long time you are at risk of the long term complications and it is still important that you are in contact with a diabetes health professional who knows how to assess you for the long term complications.

Dr Lilian Kow: How do we help patients overcome these barriers so that they can achieve weight loss?

Marg McGill: We need to focus on the individual and find out whose aims they are? Are they the doctor’s aim? The partner’s aims? Or truly the individual’s aims?

We need to find out what the person really wants to achieve and what steps they want to take. I normally give my patients a pen and paper and ask them to write down what they want. This often illustrates their readiness to change. We ask them what they want to achieve in the next month and maybe the next three months. We use these principles called the smart principles. Any goal we ask people to set needs to be very specific.

It needs to be measurable, relevant, attainable and time bound. Once people achieve realistic small goals it improves their confidence.

We are also not too negative if someone for some reason fails to achieve their goal for the week. We need to encourage people all the time and find out why they failed so that we can help them achieve their goals next time. We also need to be careful to not talk too much as health professionals because information does not necessarily equal behavioural change. Just because you know something doesn’t mean you’re going to do it. The other important thing is that when we talk too much patients may not remember. Patients only remember 25% of a 20 minute consultation.

What we need to do is limit the amount of information and repeat it throughout the conversation. It is also important that we don’t follow a tick box approach. We need to listen to the person if we are trying to educate someone. The person needs to guide the conversation and you will still be able to get through all the information you need to.

Lynne Pezzullo: People have very specific thoughts on what their problems are and why they want to change. I had a friend who had very specific concerns because she didn’t have running shoes so how could she go for a walk? Once she got the proper shoes it helped her to start exercising. So I think that some barriers are unique to the individual.

Marg McGill: We mustn’t go on our agenda we need to go via the person’s agenda. It’s about listening and you can’t talk and listen at the same time.

Dr Lilian Kow: Time is often a barrier for people. They have families and jobs that they need to organise and exercise is often their last priority. How do we push exercise to these patients?

Marg McGill: I think it is very difficult and maybe once they have had the weight loss surgery and they have started to lose weight and they are feeling good about themselves it’s almost a natural progression to them becoming more active.



5. What does the health economic cost/benefit equation look like for weight loss surgery?

Dr Lilian Kow: I'm really staggered by some of the figures about how much it actually costs our country.

Lynne Pezzullo: We've estimated the cost of obesity in a previous report by Access Economics which showed in 2008 the financial costs were around \$8.5 billion per annum across the country. So that is comprised of about two billion dollars per year in health system expenditures on doctors and allied health professionals and pharmaceuticals, pathology and imaging. That is, about 2% of our nation's entire health system expenditure is on obesity related conditions like diabetes and cardiovascular disease. About 21% of diabetes is due to obesity and 25% is due to cardiovascular disease 24% of osteoarthritis is due to obesity and about 20% of bowel and breast cancer, two of the most common forms of cancer, are due to obesity and that is why the health system expenditure is so great.

For each individual those health system expenditures are about \$600 per person per year. It is a huge cost and on top of that we have productivity losses - when people who are sick from these conditions are absent from the work force. Unfortunately there is a high mortality rate and if you have died from any of these conditions that is also a productivity loss to the economy and that contributes another three and a half billion dollars a year in costs.



6. Summarising the personal economics of battling clinical obesity

A lot has been written about the “macro-economic” cost to community of obesity. There’s been less focus on these costs at an “individual” level. The panellists took up the challenge.

Dr Lilian Kow: Recent market research shows that one of the problems is that patients are not coming to have their weight addressed. This is sometimes because of the perceived cost particularly of surgery. They do not see the health benefits of surgery or the health benefits of weight loss. What is your view of that?

Lynne Pezzullo: Well I think it is a case of doing some cost benefit analysis. A lot of people who are already obese may have a related condition like diabetes or high blood pressure. That means that their personal costs are already beginning to impact on their lives. They might be spending on average \$600 per year in health system expenditures and there is probably a loss of income of on average \$1000 a year. There is the cost of their carers, their family taking time off to accompany them to visits to hospitals so there is a productivity cost there. There is also the cost of loss of healthy life (because we can value healthy life using health economics techniques), which is around \$19,000 per annum. In contrast there is the cost of having the surgery. By having the surgery one can reduce one's weight. A lot of weight loss surgery is highly efficacious. That means that excess weight can potentially be reduced by 50% or more. So it's very important to weigh up the benefits from reducing all those costs of obesity itself and obesity related conditions against the costs of surgery. If you compare the costs, the cost benefit analysis can be very positive.

Dr Lilian Kow: How long do you think it takes after surgery for the cost benefit to become evident?

Personal economics figures

According to Access Economics:

- The annual costs related to obesity which affect the Australian population is approximately \$8.5 billion
- For an individual, these costs are approximately \$19,000 per annum
- A large proportion of out-of-pocket costs incurred as a result of obesity are related to clinical condition associated with being obese, such as diabetes, cardiovascular disease, osteoarthritis and ongoing medication

Lynne Pezzullo: The cost effectiveness analysis that we've reviewed in the literature show that bariatric surgery is highly cost effective across all types of bariatric surgery. That means that the surgery eventually pays for itself. For different people that time period can vary. Overall it's probably about three and a half years before the bariatric surgery has paid for itself.

Dr Lilian Kow: So Lynne, why should a suitable, clinically obese person spend the money on weight loss surgery?

Lynne Pezzullo: A lot of people look at the up front costs and decide that it needs a lot of thought. They need to think about the financial costs that weight loss surgery can help them avoid by reducing the medical costs associated with the complications of obesity.

Marg was talking about the osteoarthritis that people can often get in their knee. Weight loss will reduce the pain from this condition, but it also reduces trips to the GP to get medication to manage the pain so with weight loss there are reduced out of pocket costs of going to the doctor, getting the pain medication and a reduction of the costs stemming from allied health professionals. Then there is also the ability to work and be more productive and this can result in improved income. We have found that people's ability to gain promotion at work often improves when weight is reduced.



6. Summarising the personal economics of battling clinical obesity *continued.*

Dr Lilian Kow: One of the examples I can give is that in a number of my patients are on waiting lists for knee replacements and once they start losing weight from the surgery they no longer need a knee replacement. That is a huge saving not just for the individual, but also for the government and the health fund.

Lynne Pezzullo: There are also the costs that people may not even consider when thinking about the cost of weight loss surgery. We know that risk of cancer is doubled if you are obese and people may not take into account all the complications that they could get if they remain obese.

Marg McGill: There is also the issue of sleep apnoea. Sleep apnoea is when we stop breathing when we are sleeping and often it means that people will drop off to sleep really easily when they shouldn't like when they are driving or when they are supposed to be productive at work.

Lynne Pezzullo: A lot of them are hidden benefits. We know that obesity occurs most in middle age and the reason why there is not a lot of obesity in people in their sixties and seventies is because once people get to that stage they have either lost the weight, or they have died, which is a very sad consequence, but the data supports that mortality from obesity related complications is very high in that age group.

Marg McGill: I think the general public is perhaps not as aware of the link between obesity and cancer as they should be.

Dr Lilian Kow: Another thing I have also noticed in the population is that people are not aware that obesity shortens their life expectancy.

Lynne Pezzullo: Yes, unfortunately one of the major complications and increased risks for obese individuals is risk of bowel cancer, breast cancer, uterine cancer and kidney cancer and these forms of cancers come with substantial mortality rates. Obesity can shorten your life.

Across society the financial costs are about \$8.5 billion but for an individual they incur costs of about \$19,000 per annum. A large chunk of that costs is actually the value of their loss of healthy life but a substantial proportion is also the out-of-pocket costs that come from being obese and having the various clinical conditions associated with [obesity]. The treatment for diabetes, the treatment for cardiovascular disease, the trips to the doctor, the osteoarthritis medication; all those out-of-pocket costs can really add up for the person that is obese. When they are thinking about bariatric surgery they also need to think about how they can save on the other side of the equation.

You have to take a long term view because weight loss surgery doesn't pay for itself immediately but it does pay for itself further down the track. A lot of people don't take into account the risks they think they're aren't going to happen to them; they don't take into account the risk of cancer for example. They are thinking about having the surgery but indeed it's exactly those sorts of costs that are prevented by having weight loss surgery. On average it takes only about 4 years for the surgery to pay for itself.

They don't think about lost income. If you are unfortunately diagnosed with bowel cancer or breast cancer which are partly attributable to being obese, the costs of being off work for many weeks and having the therapies associated with cancer can really hit people's hip pockets.

There's a range of evidence that losing weight enhances productivity. What we see is people who have lost weight feel better, they often participate more in physical activity, they're in less pain, their presenteeism and absenteeism is reduced and interestingly, their income level tends to be enhanced by about \$1,000 per year per person on average.

7. How do we go about educating consumers on the personal financial equations for weight loss surgery?

Dr Lilian Kow: Given that some patients look upon the cost of surgery as a barrier how do we help patients address that?

Marg McGill: The cost of surgery can be a barrier especially if they are thinking in the short term. In this case I often tell them it is not just about now, it is about the future and what they will be able to achieve in the future. Economically, as Lynne has said, after the surgery they are able to go back to work and maintain a job because their health has improved.



Lynne Pezzullo: Quality of life also has value that people quite often don't think of, but in health economics it is quite often the increased quality of life that is the most valuable benefit from weight loss.

Marg McGill: One of the great benefits of weight loss surgery is that it can improve their quality of life. For this reason it is important to talk to patients and find out what their interests are and what is important to them. If someone is family orientated you can talk to them about how the health benefits may help them to be more active with their family. The person could also maybe love going to the theatre or to musicals and they may have been embarrassed to go because they found it hard to walk up and down stairs or they were scared that they couldn't fit into the seats. You need to find some positives to help them visualise what life would be like as a slimmer person.

Lynne Pezzullo: When people start to envisage all those possibilities then they can see the benefits and then the long term view emerges and it is not just about the immediate financial costs of the surgery or the fear of change it's actually about all the benefits that flow from having the procedure.



8. Lifestyle and financial implications of weight loss surgery – a personal perspective



Kimberlea McMahon's obesity had a significant impact on her and her family's quality of life. Not only was Kimberlea's weight affecting her psychological and emotional state, it also affected her children's lives.

"My son got suspended from school for fighting with children who were calling his mum fat. My kids did not have a good role model that they could look up to. I had low self esteem, no self respect or any confidence. I was always cranky and sad and the only shops you could find me in were fast food shops."

In an attempt to control her weight, Kimberlea tried various weight loss methods, including some unconventional approaches.

"I had tried what I believed was everything possible, I tried weight loss drugs, an anti-depressant that was also found to be successful with weight loss, supermarket slimming pills and herbal remedies. At one point I even resorted to drinking a shot of apple cider a day, plus a cycle of anabolic steroid. I was desperate to keep my weight down, and if I lost the weight short term I piled it all back on plus more."

The final straw for Kimberlea was a comment made to her by her grandfather, "he came to visit when I was at my heaviest, tipping the scales at 100 kilos. He looked at me and said *what are you doing to yourself, you're a beautiful girl and you have let yourself go, you have to do something about it.*"

From that point, Kimberlea decided to explore weight loss surgery as a viable option. Although she was initially surprised to learn of the out-of-pocket costs, Kimberlea was firmly looking at the longer term benefits of weight loss surgery.

"When I first heard the amount it would cost for weight loss surgery I was initially shocked. But soon realised that although I was a low income

Kimberlea 30 January 2006



earner with two young children, the cost was nothing compared to what my weight has already cost me in endless weight loss attempts that failed and would continue to fail."

"My new life started the day I underwent weight loss surgery on the 30th January 2006. Since that day I now live a very fun and fulfilled life. I am the life of the party and take pride in the way I present myself to the world.

It has now been five years since Kimberlea underwent weight loss surgery and the benefits as a result of her weight loss have by far outweighed the initial cost she had to pay for the procedure.

"My only wish is that I had weight loss surgery sooner, it was completely worth it. I can sleep knowing my kids will not go through what I did and I will live to see them grow up and live their lives."

9. The last word

Lynne Pezzullo: You have to take a long term view because weight loss surgery doesn't pay for itself immediately but it does pay for itself further down the track.

Marg McGill: What I say to patients when they ask me about weight loss surgery is first of all good on you for even asking about this because weight loss is important. You do need to think about this because it is a long term commitment, its not a

magic wand it's a tool and you still will need to have lifestyle changes, but it is a great step forward.

Dr Lilian Kow: Financially patients who have benefited from weight loss surgery feel better in themselves. As they start losing weight they get more confident in themselves and in their professional lives and quite often also change jobs for the better and therefore, their quality of life improves.

The financial benefits of weight loss surgery

The following is an excerpt from a recent literature review conducted by the Health Outcomes Department at Johnson and Johnson Medical in Australia.

Budget impact of bariatric surgery

A total of three costing studies were identified to have calculated the effect of bariatric surgery on the costs of care for overweight and obese people. Because these studies were conducted in North America, the applicability of the findings to other settings might be somewhat limited.

In 2010 Mullen and Marr tracked the annual direct medical costs of obesity before and after laparoscopic RYGB in order to understand the effect of obesity on its ongoing medical costs, from the insurer perspective. The average cost of managing obesity before the surgery was approximately \$10,470 per person. As anticipated, this cost increased to \$35,700 in the year when the individuals undertook the surgery. Following the surgery, the cost however fell and fluctuated around a downward trend to \$7,885 in post-operative Year 1; \$8,046 in post-operative Year 2; \$6,575 in post-operative Year 3; \$5,952 in post-operative Year 4; and \$8,576 in post-operative Year 5. Overall, the annual cost of managing obesity was substantially lower in each of every five years following surgery, compared to the post-operative year. The cost reduction ranged between \$4,500 and \$1,895 per year. The findings suggested that the additional cost of surgery would be completely recouped 3.5 years after the surgery. From the insurer perspective, this study illustrates the financial benefits generated by bariatric surgery.

Similar findings were also reported in Cremieux et al (2008) with the difference being the estimated number of years required to completely offset the additional cost of bariatric surgery. The study estimated the additional cost of surgery for morbidly obese individuals would be recouped in approximately two years for laparoscopic surgery, and four years for open surgery.

Similarly, a Canadian study sought to quantify the financial impact of bariatric surgery on healthcare costs (Sampalis et al, 2004). The healthcare costs for a cohort of morbidly obese patients treated with bariatric surgery were compared to a morbidly obese control group who did not undergo surgery.

The results showed:

- The initial cost of surgery and related hospital care was offset by a reduction in healthcare costs after 3.5 years.
- After 5 years, the hospitalisation cost in the control group was 29% higher than the bariatric surgery cohort.
- These three budget impact analyses show that whilst weight loss surgery has necessary up-front costs, this initial investment will be relatively quickly offset by avoidance of the ongoing costs of managing obesity and related co-morbidities, such as diabetes.

About the participants



Dr Lillian Kow (Facilitator)

Dr Lillian Kow is a senior consultant surgeon at the Flinders Medical Centre and President of the Obesity Surgery Society of Australia and New Zealand.

Dr Kow has trained surgeons in Australia and internationally in bariatric surgery. Dr Kow and her team at Flinders Medical Centre introduced the Swedish Adjustable Gastric Band to Australia and is one of the founders of the national "Circle of Care" clinics.



Lynne Pezzullo

Lynne Pezzullo is a Director of Deloitte Access Economics and Lead Partner of Deloitte's Health Economics and Social Policy group. Her special interests include cost benefit and cost effectiveness analysis, workforce issues, occupational health and safety, health research, rural health, mental health, women's health and intergenerational financing. Her work encompasses a broad range of therapeutic areas.

Ms Pezzullo is an ABC (Australian Broadcasting Commission) spokesperson on health economics matters and a reviewer for the *Medical Journal of Australia*.

She resides in Canberra with her husband and four children and was a 2020 Summit participant in the Healthstream. Lynne is also the winner of the 2008 ACT Telstra Business Woman of the Year award.



Marg McGill

Marg McGill is an Adjunct Associate Professor Sydney Medical School, Sydney Nursing Hospital, and the manager of the Diabetes Centre at Royal Prince Alfred Hospital in Sydney and is a former Senior Vice-President of the International Diabetes Federation (IDF).

With over 24 years of professional involvement in diabetes care, Ms McGill has developed a deep understanding of the psychological and social issues that impact on the daily lives of people with diabetes, their families and carers.

Ms McGill has a Master of Science in Medicine and was Australia's first paediatric diabetes educator. Her clinical and research interest is in the detection and management of diabetes complications and has a strong expertise in developing models of care for chronic disease in developed and developing countries. She was recently awarded a Medal of Australia (AM) in the 2011 Australia Day Honours List for her services to diabetes education nationally and internationally.