



Government
of South Australia

Southern Adelaide
Health Service



FLINDERS
MEDICAL
CENTRE

Children's Weight Management Service, Flinders Medical Centre

Dr Nicola Spurrier

Children's Weight
Management Clinic
Proudly Supported by
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Flinders Medical Centre

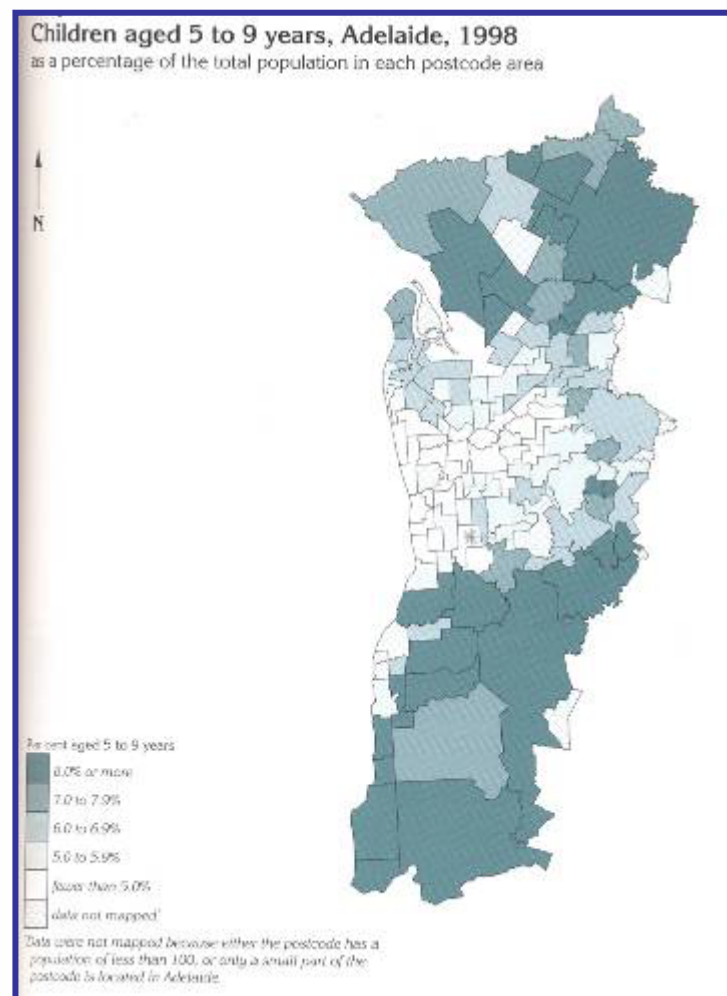
Overview

1. Context and founding principles
2. Structure of the Children's Weight Management Clinic
3. Outcomes
4. Where to next?



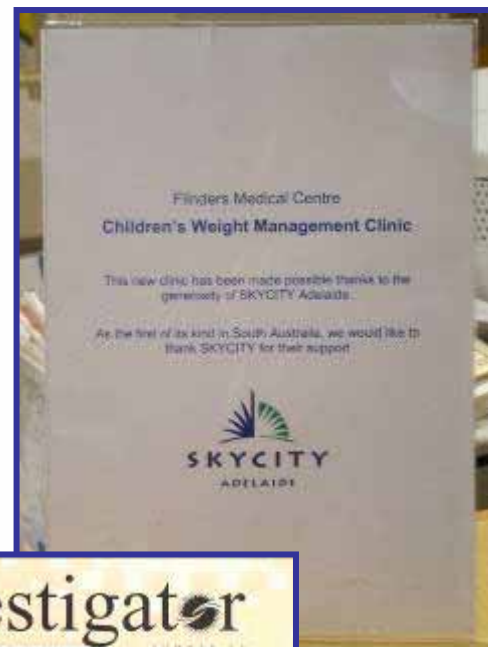
South Australian Context

- Tertiary teaching hospitals
 - Children, Youth and Women's Health Service
 - Flinders Medical Centre
 - Lyell-McEwin Health Service
- No new funding
- Demographics



New opportunity

- Partnership between SkyCity Inc. and Southern Adelaide Health Service
- Planning from July 05
- Commenced July 06
- Official Opening Sept 06



Founding principles

- Evidence based practice
- Prospective evaluation
- Dual emphasis
 - assessment and management of co-morbidities
 - support for lifestyle change
- Multidisciplinary
 - “a harmonious solution to a complex problem”
- Accessible and flexible
 - BMI criteria
 - child’s age
- Aim to enhance attendance rate
 - meet parents’ and children’s needs
- Accommodate students
- Capitalize on available resources, expertise and interest



Evidence-based

- Exercise and dietary prescription
 - consistent information across professionals
 - use of national guidelines
- Family focused
- Use of professional guidelines
 - NHMRC *Clinical Practice Guidelines for the Management of Overweight and Obesity in Children and Adolescents* 2003
- Involvement of psychology to provide behavioural interventions to support lifestyle change:
 - specifying behaviours to change
 - breaking down behaviours into smaller units
 - assessing antecedent factors
 - goal setting and self re-evaluation
 - tackling psychosocial concerns
 - supporting self management/developing partnerships
- Adequate Intensity

Atlantis et al. *International Journal of Obesity* 2006; 30(7):1027

Collins et al. *Arch Pediatr Adolesc Med* 2006; 160(9):906-22

McLean et al., *International Journal of Obesity* 2003; 27:987-1005

Flodmark. *Acta Paediatrica* 2005; 94(S448); 14-22

Whitlock et al. Screening and interventions for childhood overweight: evidence synthesis. Agency for Healthcare Research and Quality, July 2005



Referral

- GP or paediatrician referral
- >95% BMI for age and gender

CHILDREN'S WEIGHT MANAGEMENT CLINIC
A multidisciplinary clinic for children with significant obesity

Referral criteria: children (2-18 yrs) with a BMI in >95th percentile for age & gender (ref: www.cdc.gov/growthcharts/)

Clinic Contacts: Ms. Li Lowe, CMMC coordinator, Dept Paediatrics & Child Health,
 li.lowe@flinders.edu.au ☎ 8284 8911 fax 8204 3945

Have you discussed this referral with the child's parent(s)? Yes No

Patient Details: Female
 Male

First name _____ Last name _____

Date of Birth:	GP Number (MCC)	Medicare Number:

Patient's Contact Details:

Address: _____

W: (H) _____ Tel: _____ : (mob): _____

Email: _____

Please include sufficient information to allow prioritisation of requests.

Height (m): _____ BMI (kg/m²): _____ Blood pressure (mmHg): _____

Weight (kg): _____ BMI percentile: _____

Known co-morbidities (please indicate):

Respiratory eg. asthma / OSA _____

Cardiovascular eg. HT / dyslipidaemia _____

Endocrine eg. acromegaly, hypoparathyroidism, family history of DM _____

Gastrointestinal eg. elevated LFTs / GORD _____

Reproductive _____

Excessive sweating/odour _____

Psychological eg. teasing, disordered eating pattern _____

Recent pathology / diagnostic reports (please attach if available): _____

Allergies: _____

Current medications/ allergies: _____

Social history/ support: _____

Yours sincerely,

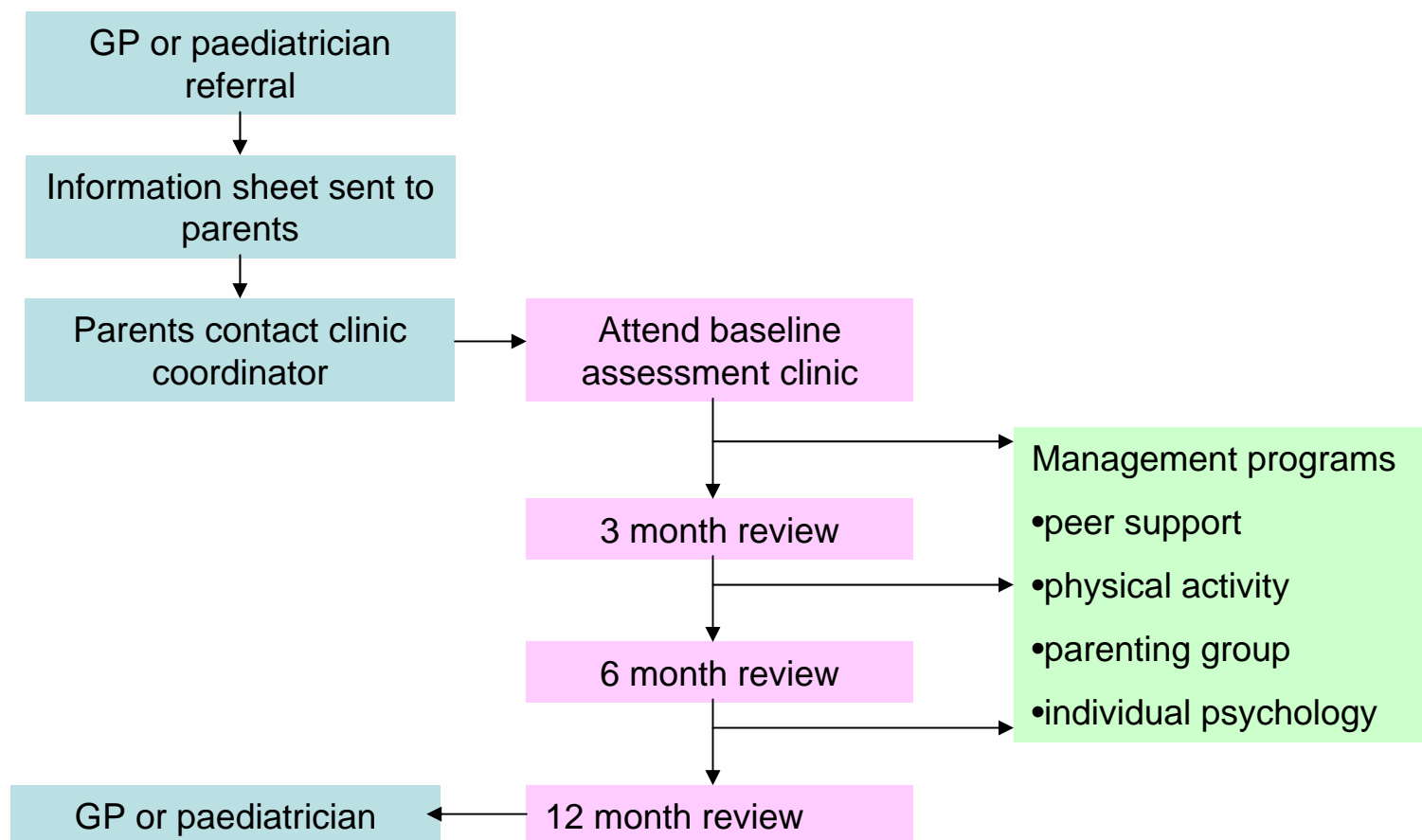
Doctor's Name _____ Provider for: _____

Doctor's address _____

Doctor's W: _____ fax: _____ Date: _____



Overview of Children's Weight Management Clinic



Medical Assessment

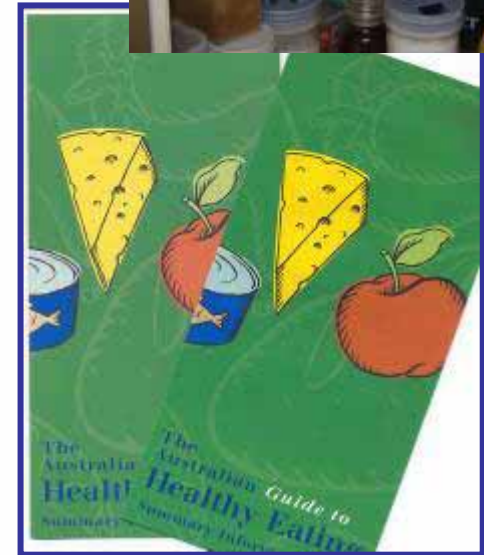
Farooqi and O'Rahilly *Annual Rev Med* 2005; 56:443-58

- **Medical causes of obesity**
 - syndromes
 - endocrine abnormalities
- **Co-morbidities**
 - Hypertension:
 - 1% of obese children age 5-18 years, and increase risk of adulthood hypertension
 - Dyslipidemia:
 - High cholesterol, LDL and triglycerides and low HDL
 - Orthopaedic:
 - Blount's disease and slipped capital femoral epiphysis
 - Endocrine:
 - DM II, hyperinsulinaemia, polycystic ovary syndrome
 - Gastroenterology:
 - Steatohepatitis, gallstones, gastroesophageal reflux
 - Respiratory:
 - Obstructive sleep apnoea, mild obstructive defects
 - Neurological:
 - Benign intracranial hypertension, nerve entrapments
 - Psychological problems:
 - 'Discontent not depression'



Dietetic assessment

- **Current dietary patterns of family**
 - types of foods
 - quantities of food
 - meal-times
 - food at school
 - situations associated with over-eating
- **Behaviours and rules associated with food**
 - eating in front of TV
 - family meals together
 - child involved in meal preparation
 - family use of pre-prepared foods
 - cooking skills
 - approaches to grocery shopping
- **Comparison with AGHE**



Physiotherapy assessment

- **Musculoskeletal assessment**
 - posture
 - joint range of motion
 - pain
 - flexibility
 - strength
- **Amount of daily physical activity and screen time**
- **Behaviours and family context associated with PA and sedentary behaviour**
 - parental physical activity and screen time
 - equipment available
 - use of pedometer
 - distance from school
 - rules about TV viewing



II. Management Programs

1. Peer support group
 - Adolescents > 11-12 years
 - Psychologist and dietician/nurse
 - 8 weekly 1 hour sessions

2. Parenting program
 - Parents of pre-pubertal children
 - Based on the PEACH program (Magarey et al.)
 - Dietician and psychologist
 - modified Triple-P approach
 - 6 weekly 2 hour sessions



3. Physical activity group
- Physiotherapist and attendant
 - Goals
 - Improve posture & flexibility
 - Begin to improve C-V fitness
 - Increase enjoyment of PA
 - Increase habitual PA at home
 - paediatric gym, EFM gym equipment, hydrotherapy pool, HR monitors, pedometers
 - 8-10 weeks



4. Individual counseling

- Psychologist
- 1:1
- Parents, family or adolescent
- Pre-existing service

5. Motor-skills program

- Physiotherapist
- Pre-existing service

6. Hydrotherapy

- Physiotherapist
- Pre-existing service
- Children who can't manage PA group

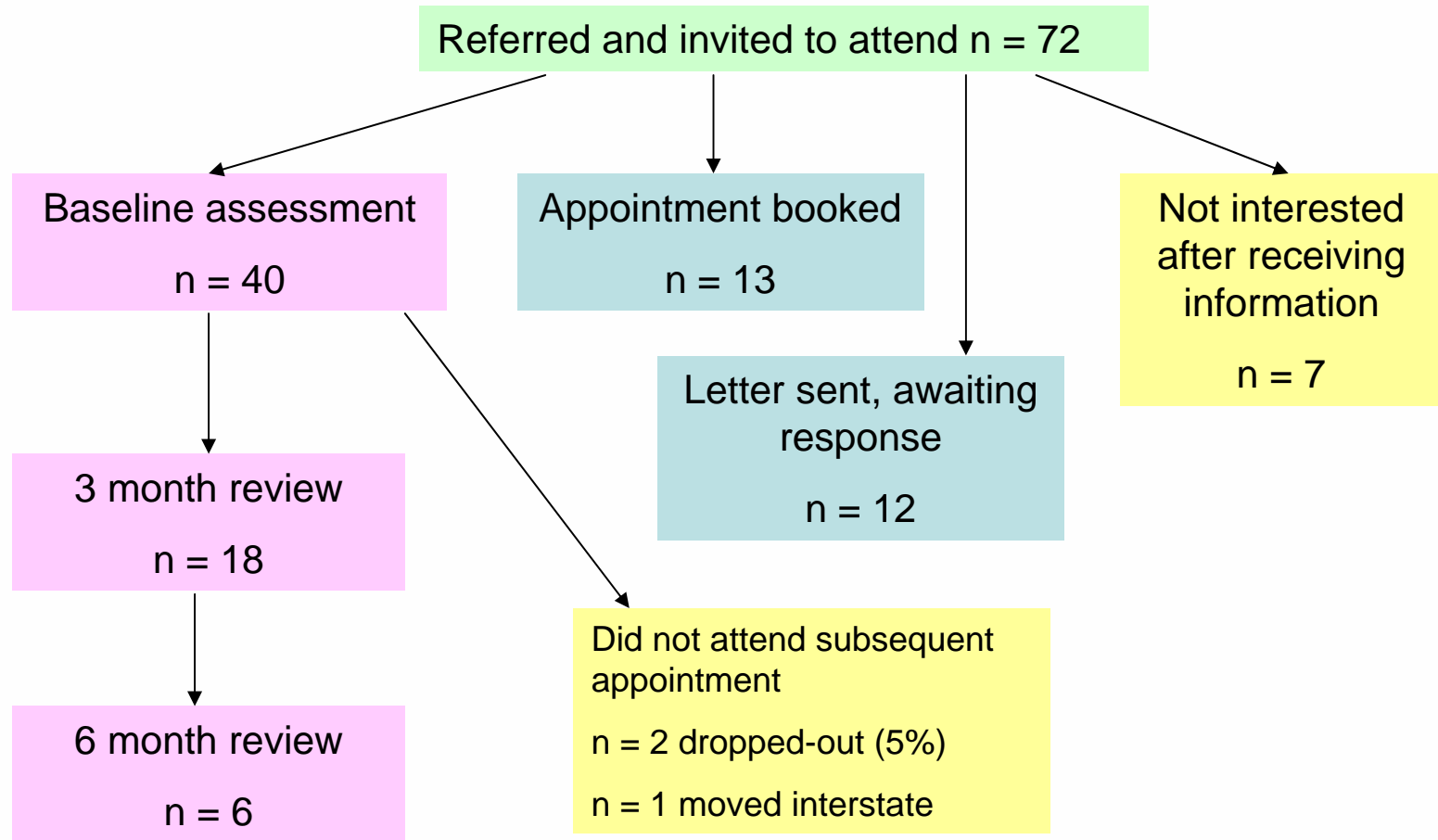


Outcomes

1. Attendance rates
2. Co-morbidities
3. Change in BMIz score
4. Parents' feedback



Attendance rates (as of May 07)



Participants

- Patients from July 06 – April 06
- 40 children
 - 40 baseline assessments
 - 20 (50%) 3-month assessments

	Range	Mean \pm SD
BMI -z score	2.10 - 5.17	3.3 \pm 0.59
Waist circumference – z score	1.84 - 4.72	3.2 \pm 0.65
Age (years)	4.5 – 16.5	11.3 \pm 3.01
Boys:Girls	17:23	

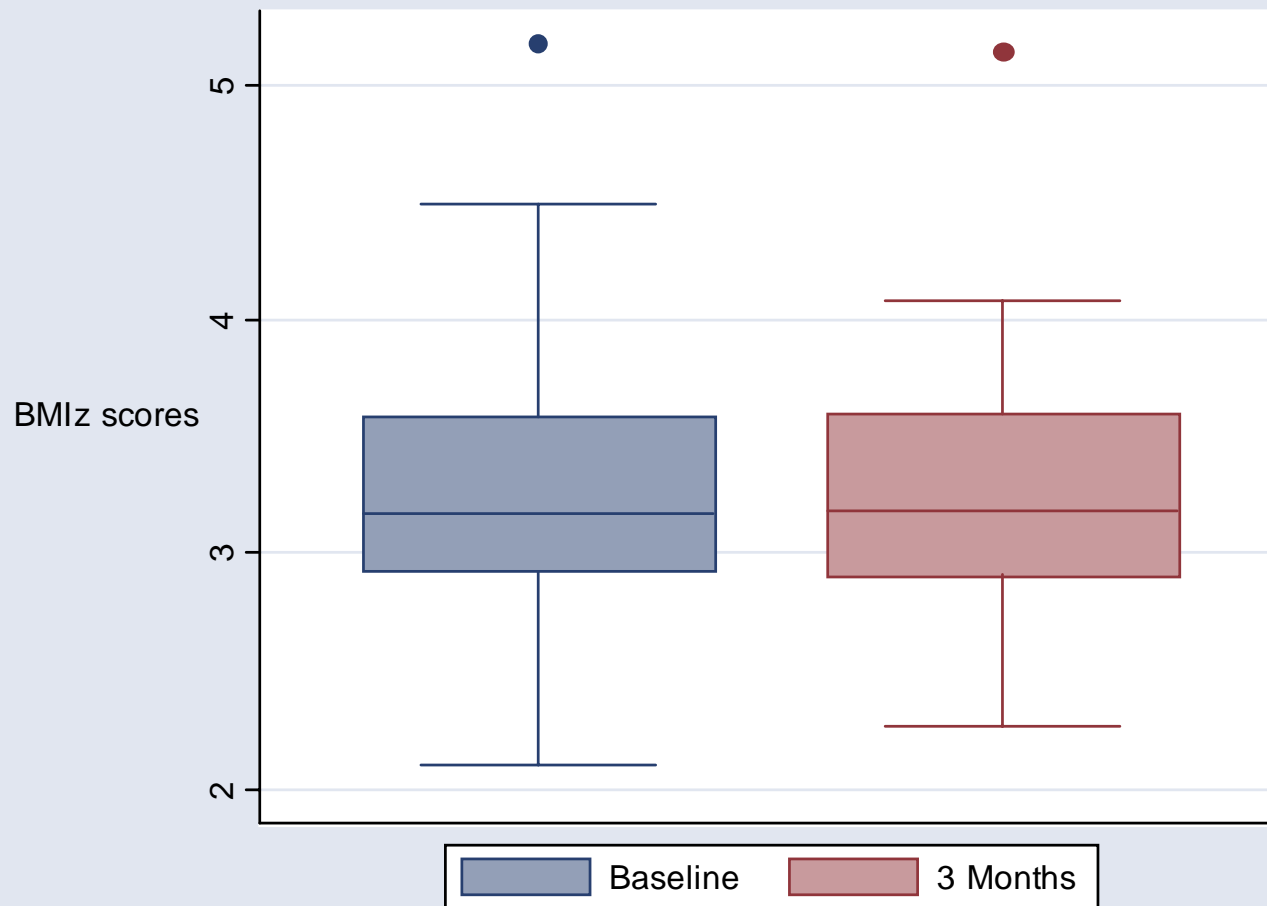


Detection and management of comorbidities

- Slipped capital femoral epiphysis – 1 child
- Benign intracranial hypertension – 1 child
- Significant learning difficulties including auditory processing disorder – 3 children
- Significant psychological problems – 5 children
- Attention deficit hyperactivity disorder – 3 child
- Abnormal liver function – 1 child
- Asthma – 15 children
- Obstructive sleep apnoea – 1 child
- Mild hypertension – 2 children
- Hyperinsulinism – 14/27 children



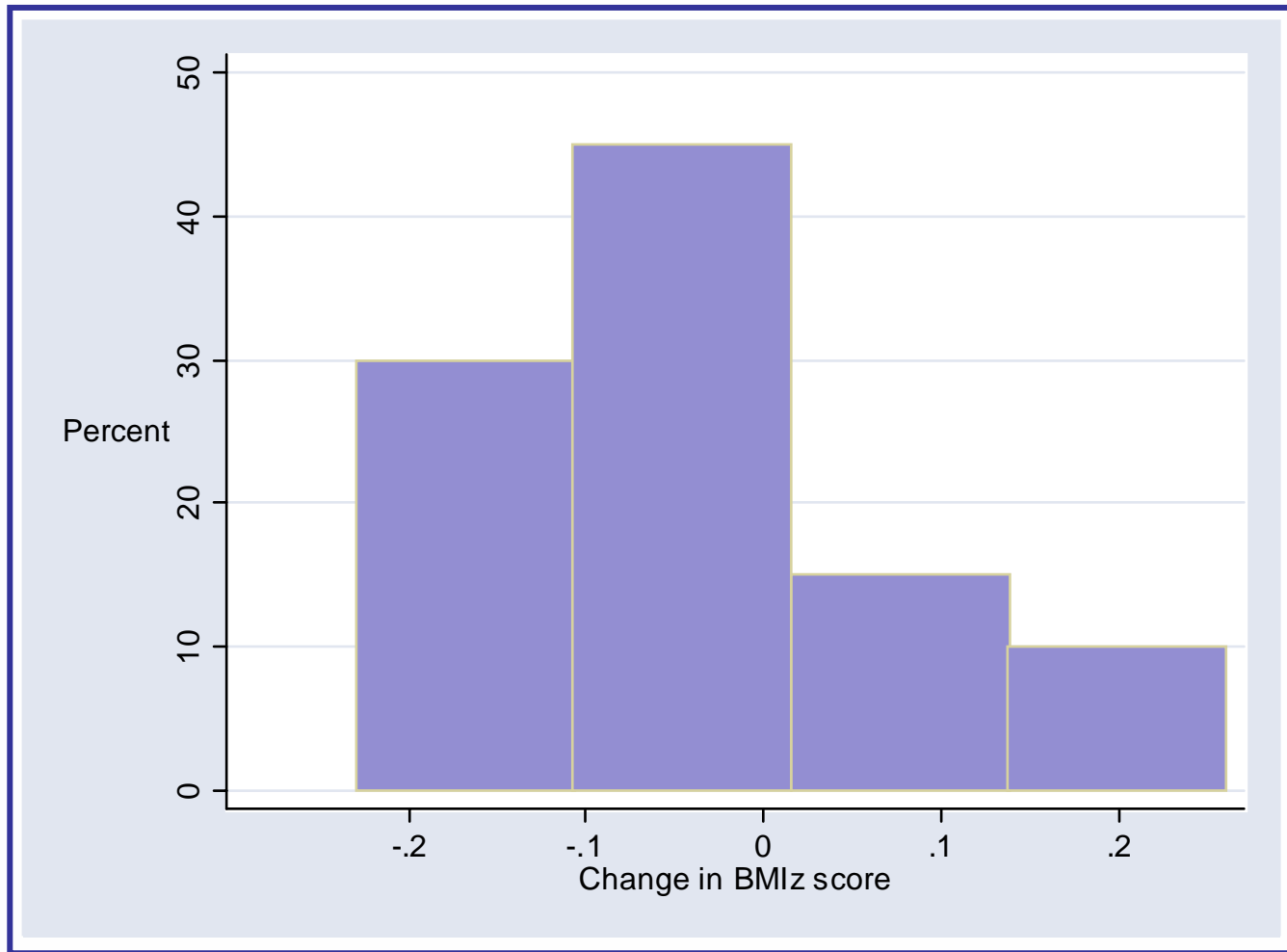
BMiz scores – paired data baseline and 3 months (n = 20)



- Paired t-test
onesided
 $p = 0.06$
- Sign test –
onesided
 $p = 0.05$



Change in BMIz score (3 month – baseline) n = 20



What are parent's saying?

"The Physical Activity Group was terrific...the change in her is incredible. You can tell straight away she is firmer"

"Good points: The clinic is a great idea as it helps me to remember to monitor things that I may forget to do... to be able to talk to people about things that concern you about your child.

There really aren't any bad points as you are always led in the right direction and it keeps you on track for other things of concern. The clinic is a great idea and when you are filling out the survey it makes you stop and think about the foods you are ticking - whether they are good or bad for your child. Thanks to all concerned - it is a great idea"

"...So far we are extremely pleased with the help and advice we have been getting. We would like to see this kind of clinic carry on and be available to more children."



Lessons

- Clinic coordinator
 - crucial role
- Committed, interested and nonjudgmental staff
- Start small
- Use existing resources and contacts



Challenges

- Changing staff attitudes
- Engaging fathers
- Ensuring sustainability of funding



Future?

- On-going funding
 - Proposal for comprehensive Statewide Children's Weight Management Service
 - Comprehensive evaluation
- Enhance links with GPs
 - On-going care of children (chronic disease model)
 - GP professional development
- Conduct management programs in community settings
 - PA program needs re-defining
- Using questionnaire results in clinical context
- Champions for environmental change
 - supporting parents as advocates for change
 - participation in advisory committees



Contacts

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