

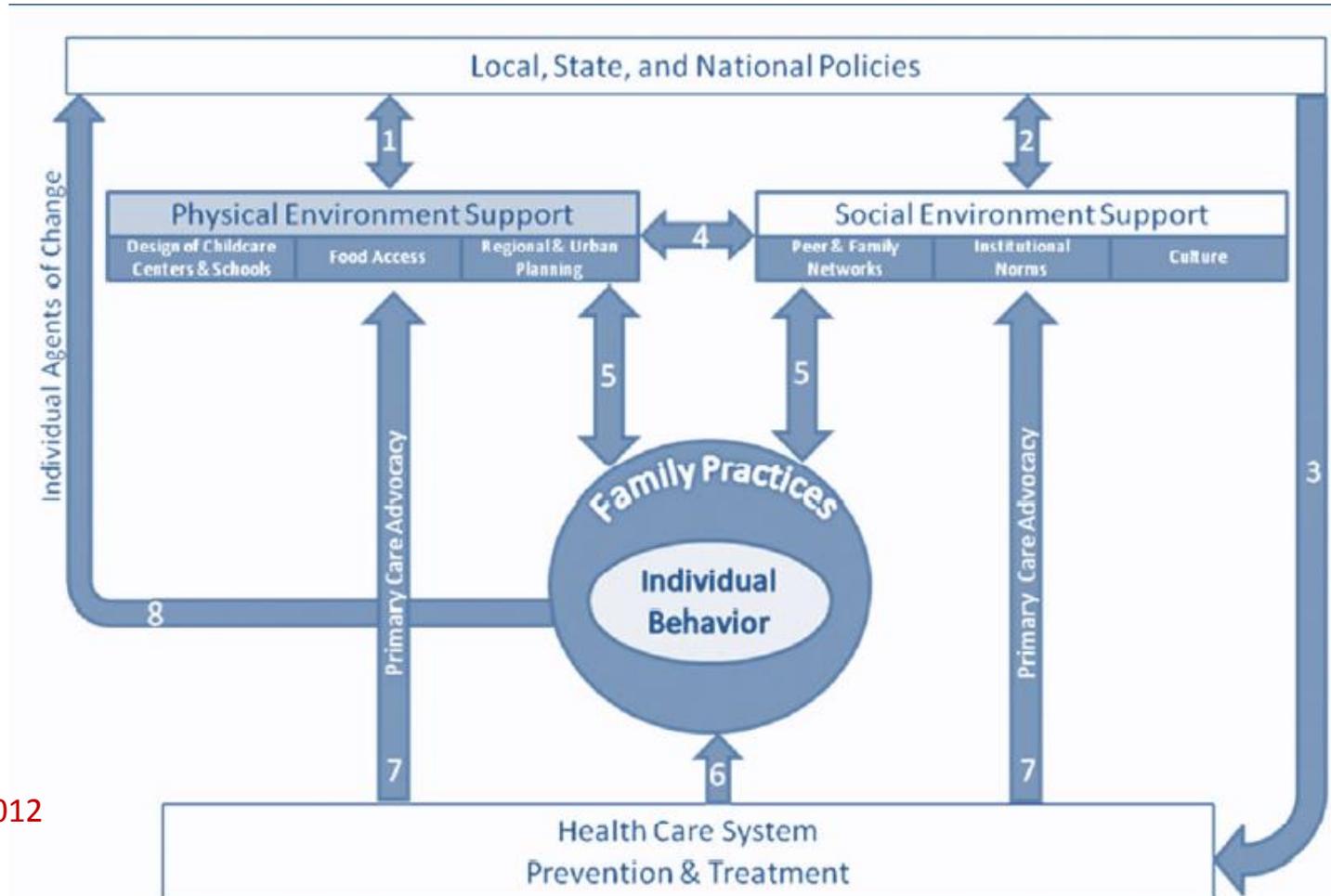
Getting healthy lifestyle behaviours established from birth (and before): a role for primary health care?

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Propositions

1. there is an urgent need for effective, sustainable child obesity prevention strategies
2. prevention of child obesity must encompass pre-conception, pregnancy and early childhood predictors of adiposity (address intergenerational transmission of obesity)
3. Primary Health Care in Australia is a fundamentally integral part of the prevention picture –
one part of the systems framework which may work in concert to promote behaviour and environmental change in our communities

A community systems framework of early intervention of childhood obesity with feedbacks



Why pregnancy and early childhood?

The Mother of prevention opportunity



Potential:

- to impact two or more people across the life course
- to interrupt the intergenerational transmission of obesity

Pregnancy

- Many large epidemiological studies telling us a consistent story about predictors of child adiposity at age three
 - Maternal pre-pregnancy overweight/obesity (50% of Aust women)
 - Excess gestational weight gain (more likely in ow and obese women)
 - Smoking in pregnancy
 - Initiation and maintenance of breastfeeding

What's happening in pregnancy?

- Diets do not meet recommendations and this is socioeconomically patterned (*McLeod E, JADA 2010*)
 - Poor gestational diet is associated with excess gestational weight gain (*Lagiou P, Eur J Clin Nutr. 2004, Olafsdottir AS, Int J Obes 2006*)
- Many women heavier at the end of first pregnancy and will retain post partum weight between pregnancies – increasing health risks for them and for subsequent infants
 - e.g 25% of US women still retain >4.5kg of weight one year postpartum (*Tequeanes et al 2009*)

What's happening in pregnancy?

- Diets do not meet recommendations for pregnancy, especially for women of lower socioeconomic status. The better the diet, the better the pregnancy outcomes.
 - Poor gestational weight gain is associated with increased risk of low birth weight and stillbirth (Lagiou P, European Journal of Clinical Nutrition 2007)
 - Many women who are overweight or obese during pregnancy will retain post-pregnancy weight gain and will have associated risks for mother and subsequent children
 - Maternal overweight and obesity increases during the childbearing years
 - Associated risks for mother and subsequent children
- increasing health care costs and for subsequent infants



The Royal Australian
and New Zealand
College of
Obstetricians and
Gynaecologists

NEW College Statement

C-Obs 49

1st Endorsed: March 2013

Current: March 2013

Review: March 2016

C-Obs 49

Management of Obesity in Pregnancy

Background

Obesity in pregnancy is now one of the most important challenges in obstetric care. Approximately 50 per cent of women who become pregnant are either overweight (BMI > 25 – 30) or obese

Why a focus from birth?

- High and increasing prevalence of overweight in very young, particularly in developed countries (*de Onis 2010*)
 - *43 million aged 0-5 ow or ob, a relative increase of 60% since 1990*
- 21% Australian 2-3yr olds already overweight (*DoHA 2007*)
- Body size at 5–6 mths of age, and wt gain from 0–2 yrs of age consistently positively associated with high subsequent body size (*Stocks 2010*)
- Most excess weight gained before puberty is gained by 5 years – 91% girls, 70% boys (*Gardner 2009*)

Why a focus from birth?

- Evidence supports the role of lifestyle behaviours in early life as predictive of later adiposity
 - Early feeding – breastfed or formula; timing of introduction of solids
 - Types and amounts of foods provided
 - Development of parental norms around screen time and play
 - Development of parental norms around where, what and how to feed

This is a receptive time for parents – they actively seek information and support regarding these behaviours

Why a focus from birth?

- Evidence supports the obesity risk associated with lifestyle behaviours in early life
 - Early feeding practices, such as introduction of solids
 - Types and amounts of play
 - Development of eating behaviours, such as how to feed

Risk for child overweight and obesity begins in utero and carries on into early life

This is a reality for parents – they actively seek information and support regarding these behaviours

Socioeconomic disparity in overweight and obesity and the predictors of these conditions

Socioeconomic patterning of parent risk behaviours -The Melbourne INFANT Program

	Mean by Maternal Education		
	All other	Uni Degree	p
CONTROL GROUP (n= 241)			
Birth weight (kg)	3.39	3.36	0.6
Smoking during pregnancy (%)	6.2	1.9	0.015
Maternal BMI (pre-pregnancy)	25.5	23.6	0.0001
Proportion ow and obese (%) pre-pregnancy	44.2	28.4	<0.005
Proportion ow and obese (%) 20 m post-partum	54.5	43.4	<0.005
Paternal BMI (by dad's education)	28.0	27.5	0.4
Months breastfed	6.65	9.76	<0.0001
Child sleep (hours)	14.0	14.1	0.5
Introduction of solids <4 months (%)	25.1	14.1	0.003
Gestational weight gain (kg)	14.2	14.4	0.8

Key Behaviour Intervention Targets (Nadar 2012)

Table 1. Early Life Systems: Key Behavior Intervention Targets
Pregnancy
• Engage in early prenatal, post-natal, and inter-conceptual care
• Achieve healthy gestational weight gain
• Post-partum return towards a healthy weight
• Prepare to breast feed
Infancy
• Initiate and maintain breast feeding
• Appropriate introduction of other beverages and foods
• Support for healthy sleep patterns
• Support for appropriate soothing, not always using food
• Support for motor development
• Avoid excessive weight gain in infancy
• Avoid screen time
Toddler Years
• Active play at least one hour per day, limitation of screen time
• Consumption of healthy foods, snacks, and un-sweetened beverages in appropriate portion sizes
• Healthy nutrition and activity standards in childcare settings
• Limit screen time

A focus on what's happening in early diet

Dietary intakes and tracking data from the Melbourne InFANT Study Control Group (n=177)



3 days 24 hour recall data for 92% and 97% of sample at 9 and 20 months

Dietary data – The InFANT Study

Between 9 and 18 months (Lioret et al 2012)

- Consumption rates of less healthy foods more than doubled (sweet beverages, meat products, sweet and savoury energy-dense snacks)
- Energy density increased by 68% (while energy intake increased 30%)
- 12% dietary energy provided by non-core foods
- Vegetable consumption decreased
- Sodium intakes increased the most – by 114%
- Moderate tracking of many foods – both nutrient dense and nutrient poor. Diet at 9 months was telling us about diet at 18 months

In summary

- Many early risk factors for child overweight at age 3 occurring in utero and in first year of life
- Evidence suggests that risk is likely cumulative
- Many of these risk factors are socioeconomically patterned
- Most are potentially modifiable
- Lots of opportunity to support parents in a timely way – a role for primary health care?

A Role for Primary Health Care

- What's happening in this space?
- Challenges?
- Opportunities?

What's happening in pregnancy?

General Practitioners

- Qualitative interviews with shared care GPs in Geelong and Sydney found:
 - high recognition that overweight and obesity were important
 - low engagement around these issues
 - strong desire for support by allied health (trusted referrals)

Van der Pligt P, Campbell KJ, Willcox J, Opie J, Denney-Wilson E. *BMC Fam Prac* 2011, **12**:124 doi:10.1186/1471-2296-12-124

Midwives

- Qualitative interviews with Midwives in Melbourne and country maternity hospital found three dominant themes
 - GWG a low priority for midwives
 - Saw themselves as central providers of lifestyle advice
 - Concern re negative impacts of discussions regarding weight

Willcox J, Campbell KJ, van der Pligt P, Hoban E, Pidd D, Wilkinson S. Excess gestational weight gain: An exploration of midwives' views and practice. BMC Maternal and Child Health October 2012.

What's happening in early life?

- Anecdotally in Victoria great call for support from MCH nurses
- Limited engagement around child weight by GPs
 - GPs in a Queensland study reported less than a third routinely raised excess weight and rarely used BMI-for-age charts (McMenimum 2011)
 - Lack of confidence in raising the issue of weight (Redsell et al 2013)

Barriers to engagement - Training

- Identification of overweight and obesity
- Knowledge re importance of preg and early life for ob prev
- Bias (fat people need to get onto their weight)
- Skills (how best to engage)

Barriers to engagement – Models of Care

- Time (to engage) – relates to funding/current systems
- Futility (perception that nothing works) – models of care
- Role (disparity – not my job) – current systems of care

Futility - nothing works

Obesity prevention in PHC

- Intervention promoting settling strategies other than feeding and delayed introduction of solids-significantly lower wt for length at 12 months (Paul et al 2011)
- Melbourne InFANT trial in MCH centres with first time mothers' groups: significant differences in screen time and dietary behaviours at 18 months (Campbell et al 2013)
- Healthy Beginnings trial : significant difference in BMI, median duration of BF, later introduction of solids and 'tummy time' at 2 years (Li Ming Wen et al 2011 & 2012)

Time to engage

Children are regular users of PHC services

- 7.5 million Medicare registered PC visits by kids (Freed 2012), 1.3 million kids aged 0-4 (ABS) , thus 5 to 6 visits per child per year for all kids aged 0-4
- 35 visits to health care providers in the first year of life (focus on wellness not illness)
 - 10 to GP, 14 to MCH nurse – most likely in first 6 months of life (Goldfield 2003) for vulnerable families: up to 20 visits in first 2 years (NSW)

Many contextually appropriate ‘times’ to discuss parent and child weight and lifestyle behaviours

Patterns of GP engagement have changed 1996-2010

- Relative proportion of children seen by GPs decreasing (Freed 2012)
 - changes in the demography of general practice reflecting national demography
 - 27% relative increase in visits made by those aged >65 years
 - 16% relative decrease for those aged 0-4 years
 - 29% relative decrease for those aged 5-14 years
- Longer consultations with children decreasing (Freed 2013)
 - absolute number of longer consultations for children has decreased
 - proportion of all longer consultations provided to children has diminished.

Facilitating Engagement

- Via more sustainable models of primary care
 - Increased numbers of PNs
 - Shift to block funding (away from fee for service)
 - Acknowledgement as core part of the preventive care workforce
- Via well supported Practice Guidelines (NHMRC)
- Via trusted high quality community based referral and resource

Obesity prevention as routine care – promising

- PHC providers can implement obesity prevention with appropriate training, clinical infrastructure and community-based referral options (Vine 2013 – sys review of how PHC int tx and prevent CO)
- High level of interest in further training in obesity prevention (Robinson 2013; van der Pligt 2012) – InFANT experience
- Mercy Hospital for Women – change in clinic practices re weighing
- Brief training workshop increased the capacity of PNs to provide obesity prevention intervention as part of a healthy kids check (Denney-Wilson under review)

Building on high levels of interest: training, clinical infrastructure and community-based referral

Three studies underway within C-PAN

- Supporting health gestational weight gain during pregnancy (Willcox PhD)
- Promoting healthy weight in the interpartum period (van der Pligt PhD)
- Primary HELP (COMPARE-PHC)

Primary HELP (Healthy Eating & Lifestyle Program)

- Builds on our understandings that:
 - MCH nurses and Practice Nurses are highly interested in opportunities for prevention
 - there will never be workforce capacity to provide in depth universal care around lifestyle and weight issues
 - PHC workers value their roles as primary contacts with their clients and value the input of reputable and evidenced based programs

Primary HELP (Healthy Eating & Lifestyle Program)

- Builds on our understandings that:
 - Parents are highly engaged during pregnancy and early childhood – want to ‘do well’ by their children
 - Increasingly source their information through electronic media – e.g. the web and smart phones

Primary HELP (Healthy Eating & Lifestyle Program)

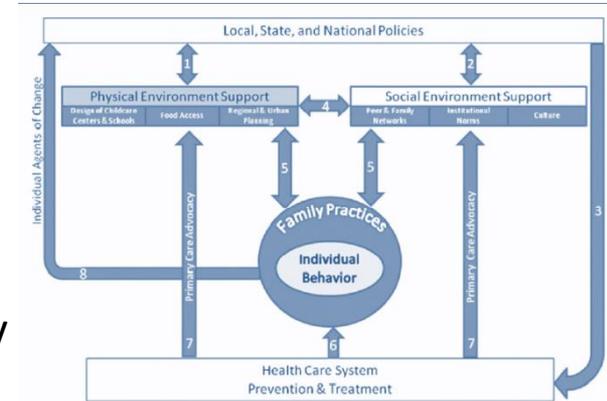
- Will focus on developing an obesity prevention program that :
 - targets low SES and indigenous families
 - can be feasibly and sustainably implemented in a range of primary care settings (PN, MCH nurses, indigenous health service)

Primary HELP (Healthy Eating & Lifestyle Program)

- Will involve:
 - Systematic reviews; pre and post intervention qualitative studies with parents and practitioners (to inform and then assess feasibility)
 - design and trial of a multicomponent intervention
 - economic analysis

A role for Primary Health Care?

- Primary care is a key player in a systems view of opportunities for obesity prevention
- What alternative? No role = passive support for the status quo
- We must work with this sector to better understand how to engage and support them to maximise the many opportunities for prevention afforded them
- and to support them to advocate for health promoting environments for their clients – if health care practitioners don't advocate for better physical and social environments for health – then who will?!





“We often miss opportunity because it's dressed in overalls and looks like work”

– Thomas A. Edison

Thankyou

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