

# Creating new epidemics: Healthy eating and physical activity

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## Overview

- Medical, public health, social approaches to epidemics
- Advocacy to create epidemics
- Creating epidemics in communities
- Evidence to make the case
  - **Modelling impacts and cost-effectiveness**



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# A medical approach

- Analyse the burden, the causes, the mechanisms
  - ‘We need to understand the determinants and mechanisms before we intervene’
  - See Robinson & Sirard Am J Prev Med 2005 28 194-201
- Test interventions
  - Medical, educational approaches
  - Randomised controlled trials

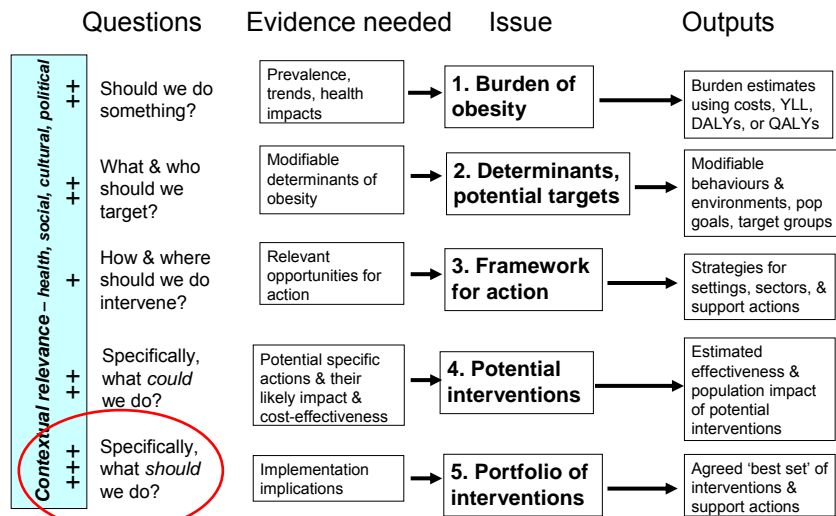


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# IOTF Evidence Framework



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Swinburn, Gill, Kumanyika. Obesity Rev 2005

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## Cochrane Review on Interventions for Preventing Obesity in Children

- 22 studies selected
  - Most less than 1 year in duration
  - Most in schools (primary)
- Conclusions unchanged from previous reviews
  - Diet and exercise interventions are NOT effective in preventing unhealthy weight gain but can be effective in promoting a healthy diet and increased PA levels



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Summerbell et al 2005

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## A public health approach

- Public health = politics
- Need for advocacy and public constituency
- Wider definitions of evidence needed
- Different research needed
- Role of champions
- Role of policy
  - Leads environmental change
  - Accelerates public opinion

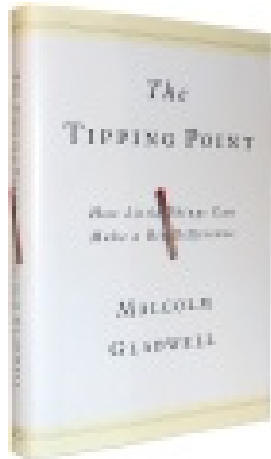


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# Reaching a 'Tipping Point'



- Social epidemics (popular/normal)
  - Small input, wide effects
- Champions
  - 'Mavens', 'connectors', 'salesmen'
- Memes
  - Ideas that 'infect'
- Messages
  - 'Sticky' in nature
  - 'Viral' in delivery
- Environments
  - Matching the contexts

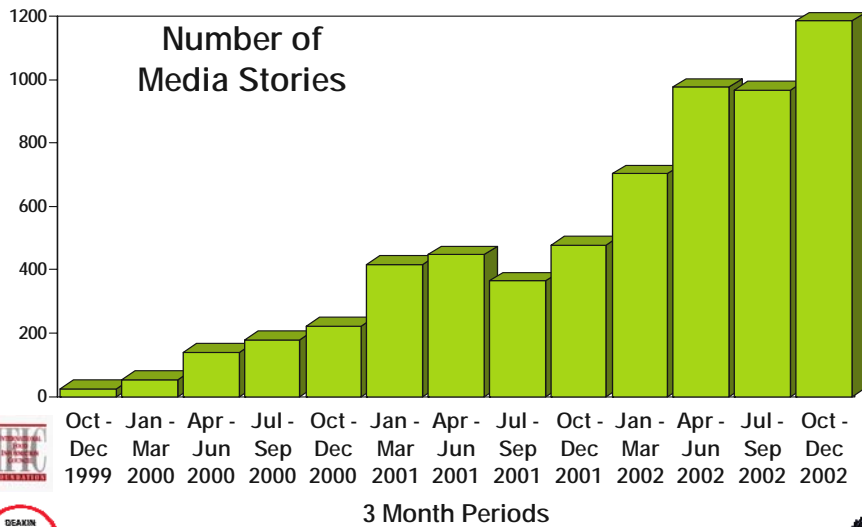


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# Trends in Obesity-Related Media Coverage



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## Hopeful signs of the new epidemics on the horizon

- Still on the front pages
- Advocacy for action is increasing
- Positive results from community-based approaches
- New types of evidence to influence policy
- “First they ignore you, then they laugh at you, then they fight you, then you win”

– Mahatma Gandhi



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# Parents Jury

- Need for advocacy group on **children's food and activity environments**
- Established by ASSO, DAV, CCV
- Online and free
- Awards, research, media comments etc



**JOIN NOW!**

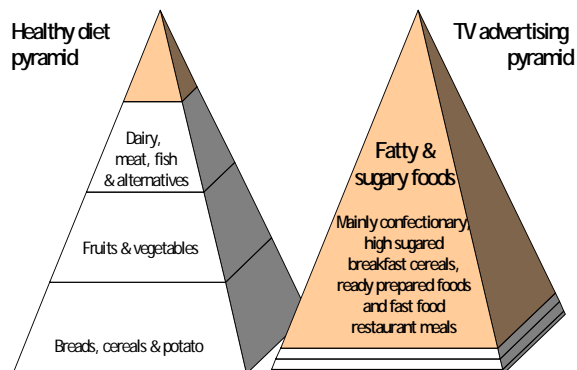


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# Marketing to children



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# Global Prevention Alliance



Call to Action on marketing to children  
NGO advocacy coalitions in each country



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## 'Sydney Principles' to reduce marketing to children

1. Support the rights of children
2. Afford substantial protection for children
3. Be statutory in nature
4. Take a wide definition of commercial promotions
5. Guarantee commercial-free childhood settings
6. Include cross-border media
7. Be evaluated, monitored and enforced



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# Whole-of-community action

- Capacity building approach
  - Creating the skills, organisational relationships & ownership, champions, resources, and evidence needed to prevent overweight and obesity
  - Allows context to be taken into account
  - Funding to communities and support & evaluation (50:50)
- Demonstration projects → widespread uptake
  - Rapid gains and spread in expertise and evidence
  - Need to collaboratively link the sites and evaluate



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# Be Active Eat Well

- Whole-of-community demonstration program in Colac, Vic (pop 11,000)
- Funded for 4 years
  - 1 planning, 3 intervention
  - Support & evaluation
- Capacity-building approach



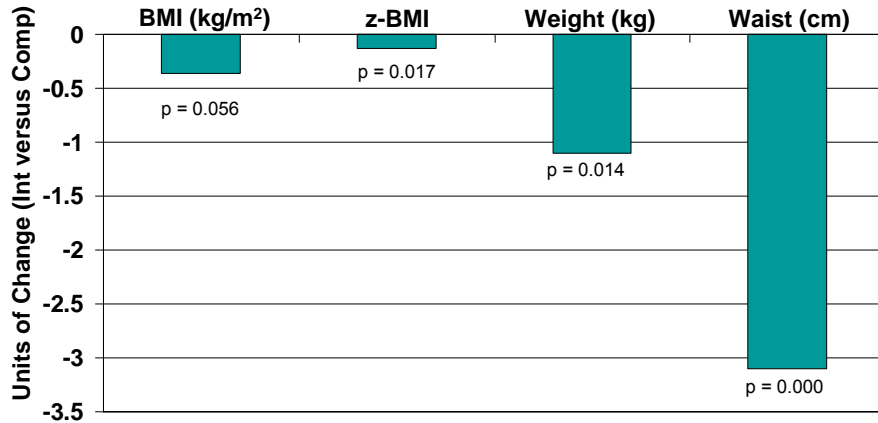
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## Less BMI, z-BMI, weight and waist gain in intervention



Adjusted for confounders: age, gender, height, duration of follow up

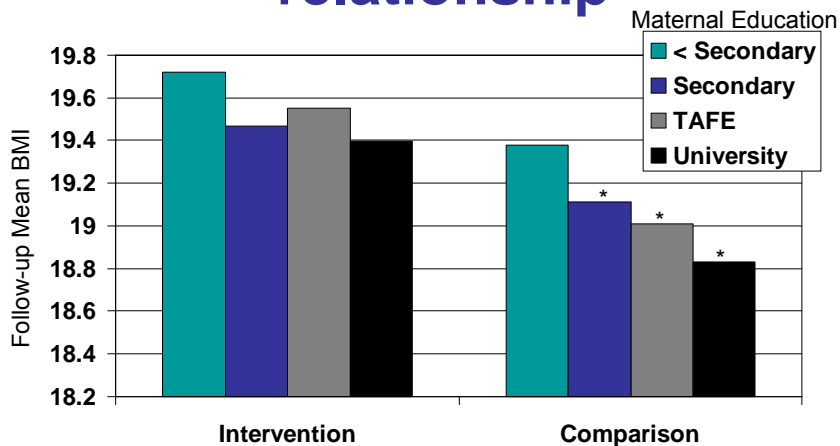


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## Flattening of SES - BMI relationship



\* p < 0.05 adjusted for follow up age, follow up height, gender and baseline BMI



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## Use of modelling evidence

- Policy changes often lead social attitudes
  - Smokefree environments, seat belts, helmets
- Policy decisions should, but often don't, take account of the evidence
  - For obesity prevention, the evidence is thin
- Use modelling techniques to predict the where the 'best buys' are
  - Assessing Cost Effectiveness (ACE Obesity)
  - Funded by Victorian Govt



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## ACE process

(Haby et al Int J Obesity 2006, 30 1463-1475)

- Establish technical group & stakeholder working group
- Define interventions
  - From literature, current activities, possible actions
  - Very specifically defined
- Technical analyses (modelling)
  - Population health gain, costs, cost-effectiveness, uncertainty estimates
- '2<sup>nd</sup> stage filters'
  - Strength of evidence, feasibility, sustainability, equity, other + or – effects, acceptability to stakeholders



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## Interventions selected for analysis by Healthy Weight 2008 setting

### Child care

1. Active After School Communities program

### Schools

2. Multi-faceted school-based program (- PE)

3. Multi-faceted school-based program (+ PE)

4. Multi-faceted school-based program targeted at overweight and obese children

5. Education program to reduce soft drink consumption

6. Education program to reduce TV viewing

### Neighbourhood and community organisations

7. TravelSMART Schools

8. Walking School Bus



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## Interventions selected for analysis

### Media and marketing

9. Reduction of TV advertising of high fat and/or high sugar foods and drinks to children (up to 14 yrs)

### Primary care

10. Family-based GP program for overweight and mildly obese children

11. Family-based targeted program for obese children

12. Orlistat therapy for obese adolescents

### Hospital

13. Gastric banding for morbidly obese adolescents



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	BMI per person	Target pop'n	DALYs	Gross cost	Net cost
TV advertising	0.17	2,400,000	37,000	\$0.13M	-\$300M
Family-based targeted program	1.7	5,800	2,700	\$11M	-\$4.1M
Targeted multi-faceted school-based	0.52	4,300	370	\$0.56M	-\$0.08
Fizzy drinks	0.13	119,000	1,060	\$3.3M	-\$5.2M
TV viewing	0.45	227,000	6,700	\$54.6M	-\$2.1M
Multi-faceted school-based +PE	1.1	115,000	8,000	\$40.4M	-\$28.7M
Gastric banding	13.9	4,100	12,300	\$130.0M	\$55.0M
GP intervention	0.25	9,700	511	\$6.3M	\$3.0M
Orlistat in adolescents	0.86	3,300	450	\$6.4M	\$4.0M
Multi-faceted school-based -PE	0.31	115,000	1,600	\$24.3M	\$11.2M
Active After-School	0.07	99,000	449	\$40.3M	\$36.6M
TravelSMART	0.07	268,000	50	\$13.1M	\$12.5M
Walking School Bus	0.03	16,000	30	\$22.8M	\$22.6M

## Other considerations

- 'Second stage filters'
  - Acceptability (eg TV ad ban, gastric banding)
  - Sustainability (eg active transport, AASC)
  - Equity (eg gastric banding, implementation)
- Scenario modelling
  - What would it take for an intervention to be CE
- Role of 'icon' actions
  - Eg school canteens, Active Transport



## Creating new epidemics

- Advocacy & politics (local, national, global)
- Communities taking action (eg EPODE)
- Champions (be aware of other agendas)
- Evidence to make the case (esp economic)
- Policies
  - Food labels, standards, marketing
  - Urban planning, transport, recreation
- Cultural change → new norms



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