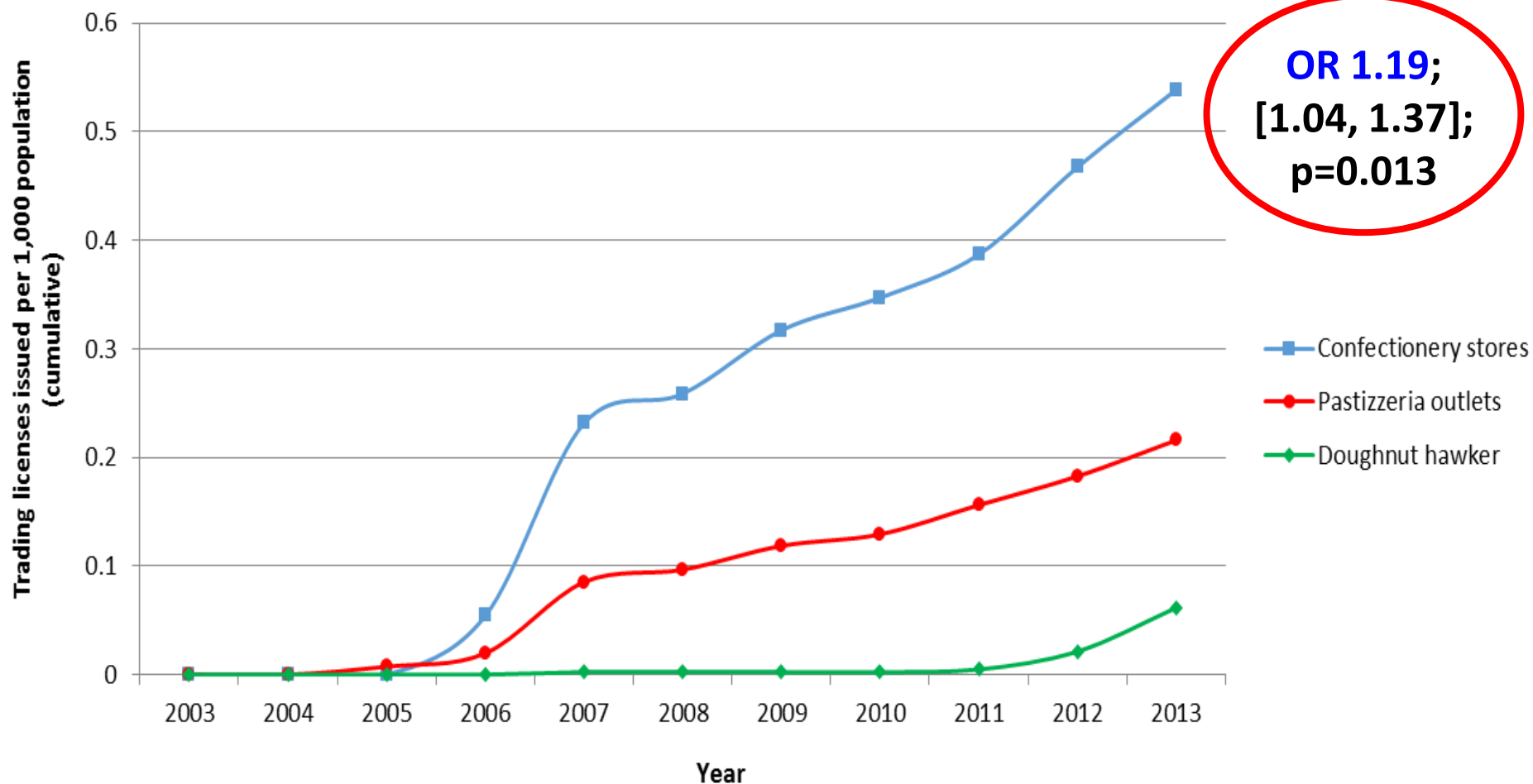
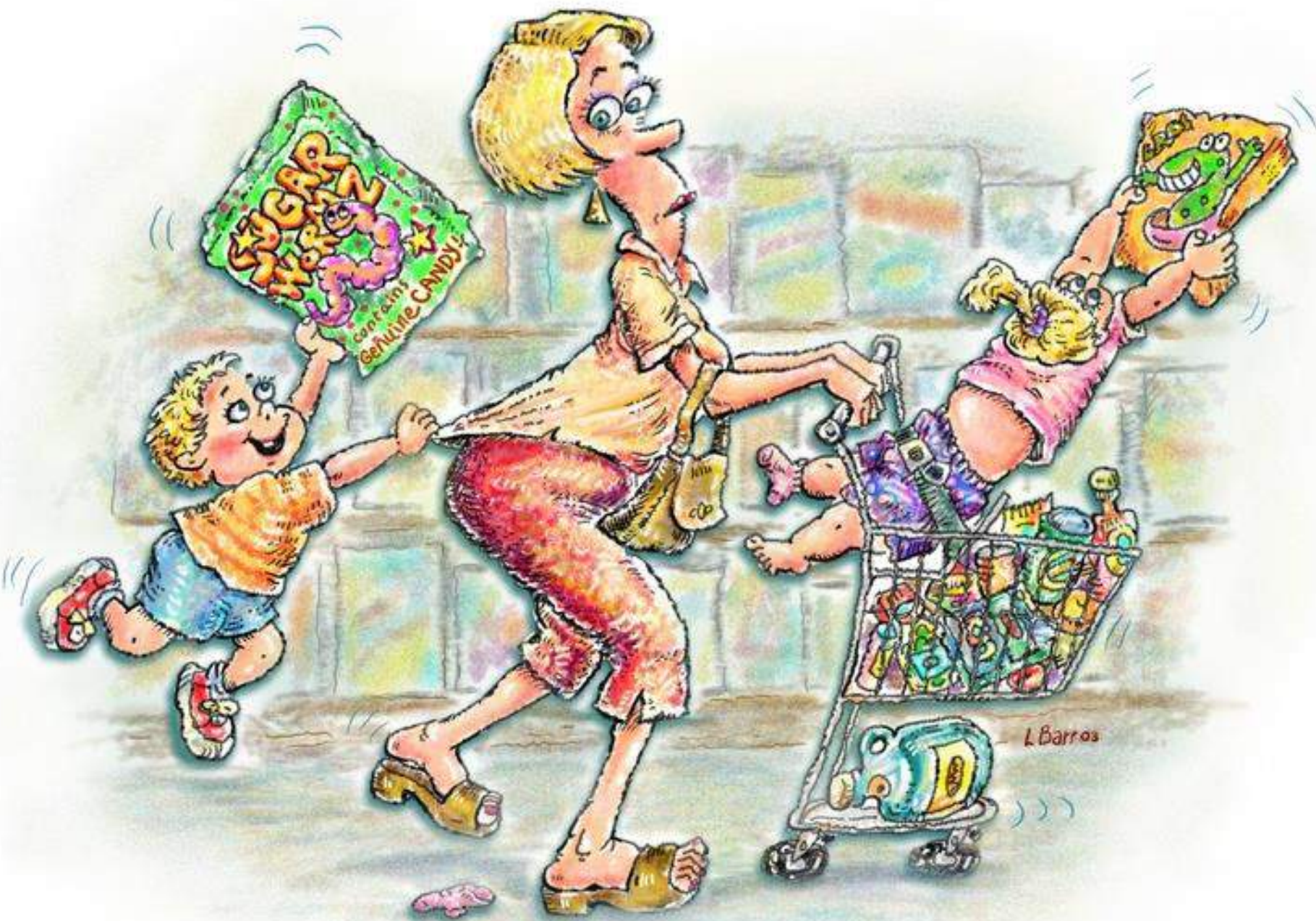


## Trading licenses per 1,000 population for selected food outlet types, issued between 2003 - 2013\*, Malta (cumulative)





# Food Pricing ( $p = < 0.01$ )

Median price of healthy  
option

Median price of less healthy  
option

€7.74/kg (unsweetened)



€8.85/kg (sugared cereal)

€1.29/L (100% juice)



€1.30/L (juice drink)

€0.81/L (skimmed)



€0.86/L (whole)

# Food Pricing ( $p = < 0.01$ )

€2.37/kg (wholemeal)



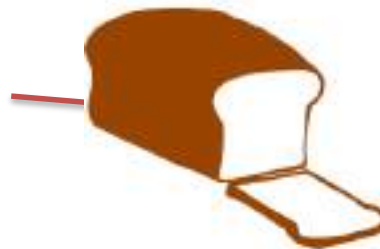
€1.67/kg (white pasta)

€7.95/kg (lean)



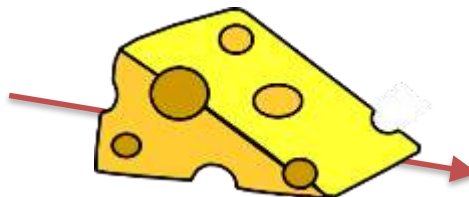
€7.1/kg (regular)

€0.95/400g loaf  
(wholemeal)



€0.85/400g loaf (white)

€10.9/kg (low-fat)



€7.23/kg (regular)

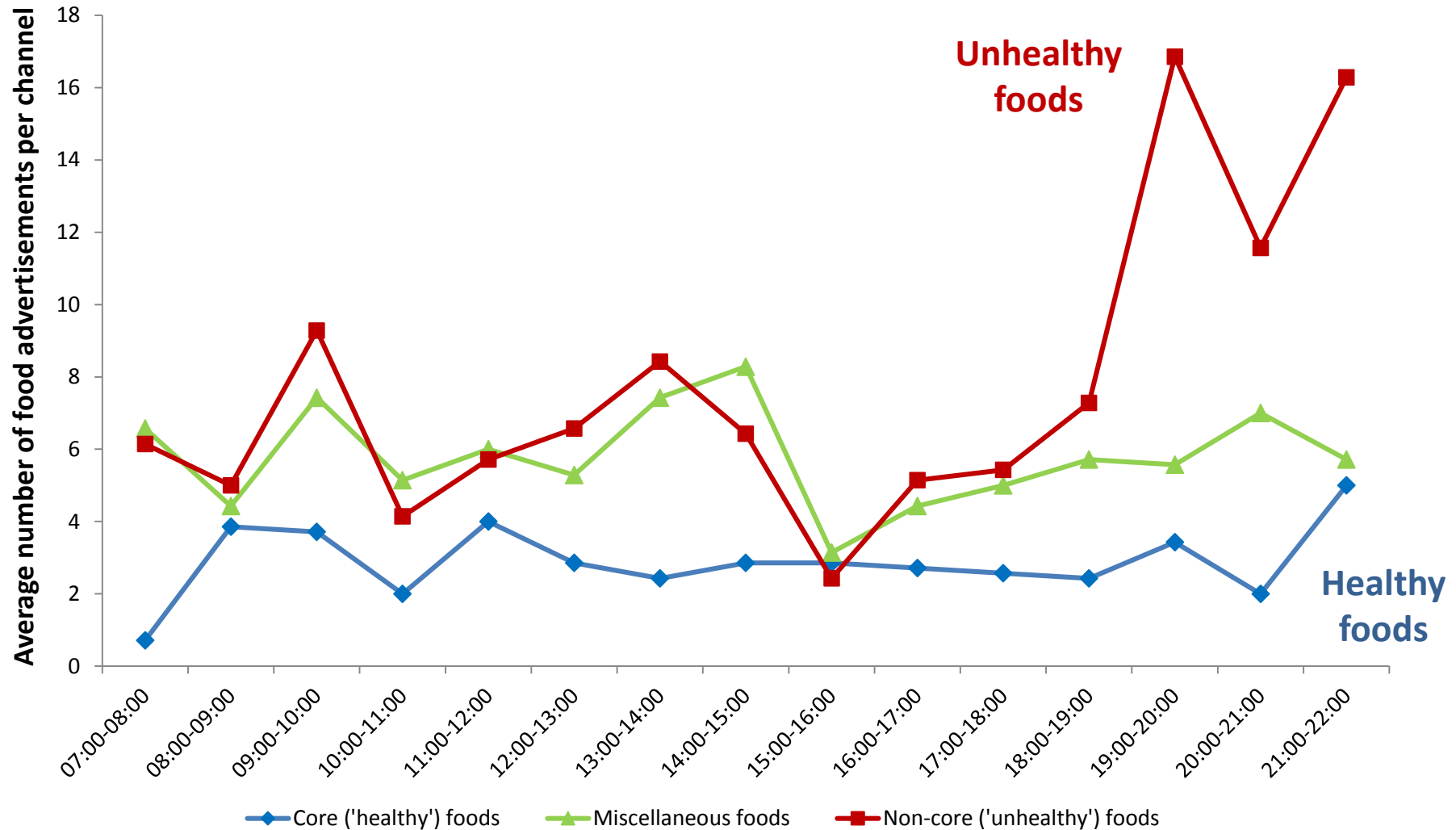
# TV advertising - main findings

- Food and drinks heavily advertised (26.9% of all adverts)
- Non-core > core\* food & beverage advertisements during peak viewing hours (52% vs 44.6%;  $p < 0.001$ )
- Non-core adverts:
  - 95% of child-focused adverts, usually @ prime time
  - 71.4% of all food adverts during children's programmes

\*Source: Kelly B, Halford JCG, Boyland EJ, Chapman K, Bautista-Castaño I, Berg C *et al.* Television food advertising to children: a global perspective. *Am J Public Health* 2010; **100**: 1730–1736



# % food adverts aired across all local TV channels (weekdays)



# Environmental barriers to healthy eating

## Physical

- Portion sizes
- Consumer food environment
- Community food environment
- School canteen/tuck shops
- Home food environment
- Informational food environment

## Sociocultural

- Historical context
- Lifestyle/Culture change (re. PA)
- Academic pressure (private lessons)

## Political

- EU trade regulations
- [lack of] policies in public institutions (e.g. Hospital)
- School nutrition standards

## Economic

- Price of 'healthy' vs 'unhealthy' food

# Environmental barriers to PA

## Physical

- Urbanization
- Transport onfrastructure
- Neighbourhood environment
- School space

## Sociocultural

- Lack of knowledge and awareness
- Lifestyle/Culture change (re. PA)
- Car culture vs cycling
- Technology
- Parental overprotection and safety/crime concerns
- Lack of opportunities to be active
- Academic pressure

## Political

- Policies in public places
- School policies re. use of facilities
- School break policy
- PE lessons
- School ethos
- Politics (motorist lobby)

## Economic

- Car affordability
- Societal expectations
- Maintenance (playing fields)
- Cost of extracurricular activities



# Conclusion

Many aspects of the physical, social, economic and cultural environment in Malta favour a **positive energy balance**, characterised by *limited infrastructure for active living combined with an energy-dense food supply*





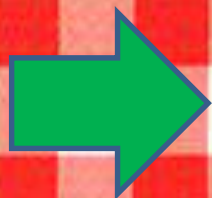






Photo credit: Dr. Jason Attard

















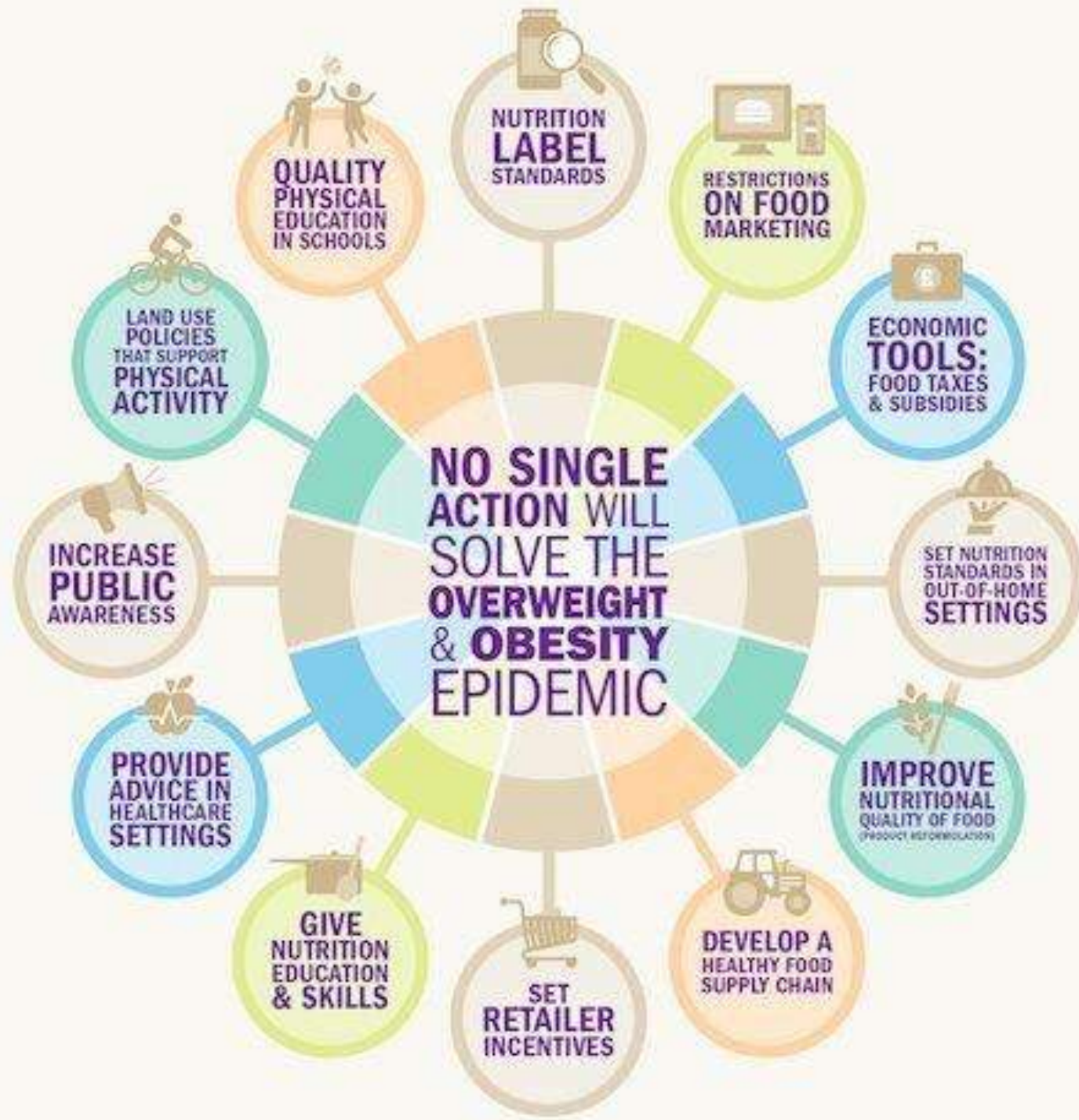




# Effective environmental interventions

1. **Improvement of overall school food environment** (e.g. school nutrition standards)
2. **Purchase of new PE/sports equipment**
3. **Daily formal PA session organized after-school** (90 - 120 mins duration) with MVPA
  - [improvements in BMI ranging from -0.16 [-0.40, 0.07] to - 0.45 [-0.79, -0.12]
4. **Availability of school playgrounds** for structured/unstructured PA after school
5. **Provision of free/low cost water in school** (e.g. water fountains; provision of water bottles)
  - An intervention focusing solely on enhancing water provision in schools reported a small reduction in zBMI (-0.004 [-0.045, 0.036]) and a significant reduction in the risk of overweight (31% reduction,  $p = 0.04$ ) among the intervention group
6. **Provision of a healthy breakfast at school**
  - BMI improvement: -0.11 ( $P < 0.05$ ) in boys; -0.02 ( $P < 0.05$  in girls)
7. **Substitution of SSBs**: replacement with artificially sweetened, zero- calorie substitute
  - BMI improvement: between -0.13 [-0.21, -0.05;  $p = 0.001$ ] and -0.14 [-0.54 to -0.26]
8. **Reduction in screen time** at home through the installation of an electronic television time manager device to limit TV watching
  - BMI improvement: -0.45 [-0.73, -0.17;  $p = 0.002$ ]









# Thank You

Questions?

# HWFL

Of the 79 measures shown in Appendix 1, 47% (n = 37) were classified as being behavioural interventions, 26% (n = 21) as environmental in scope, whereas a further 8% (n = 6) contain both behavioural and environmental components. The remainder (n = 15) could not be easily categorised