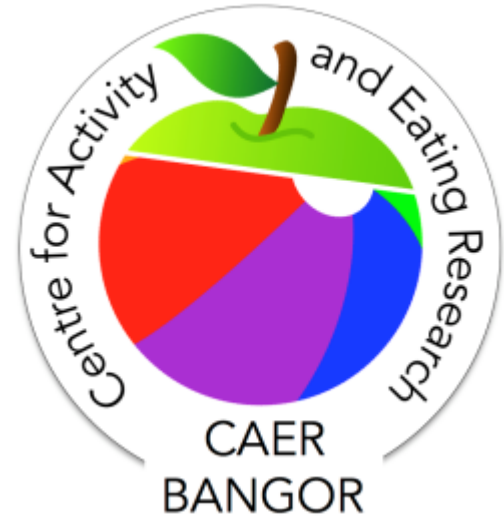




PRIFYSGOL  
**BANGOR**  
UNIVERSITY

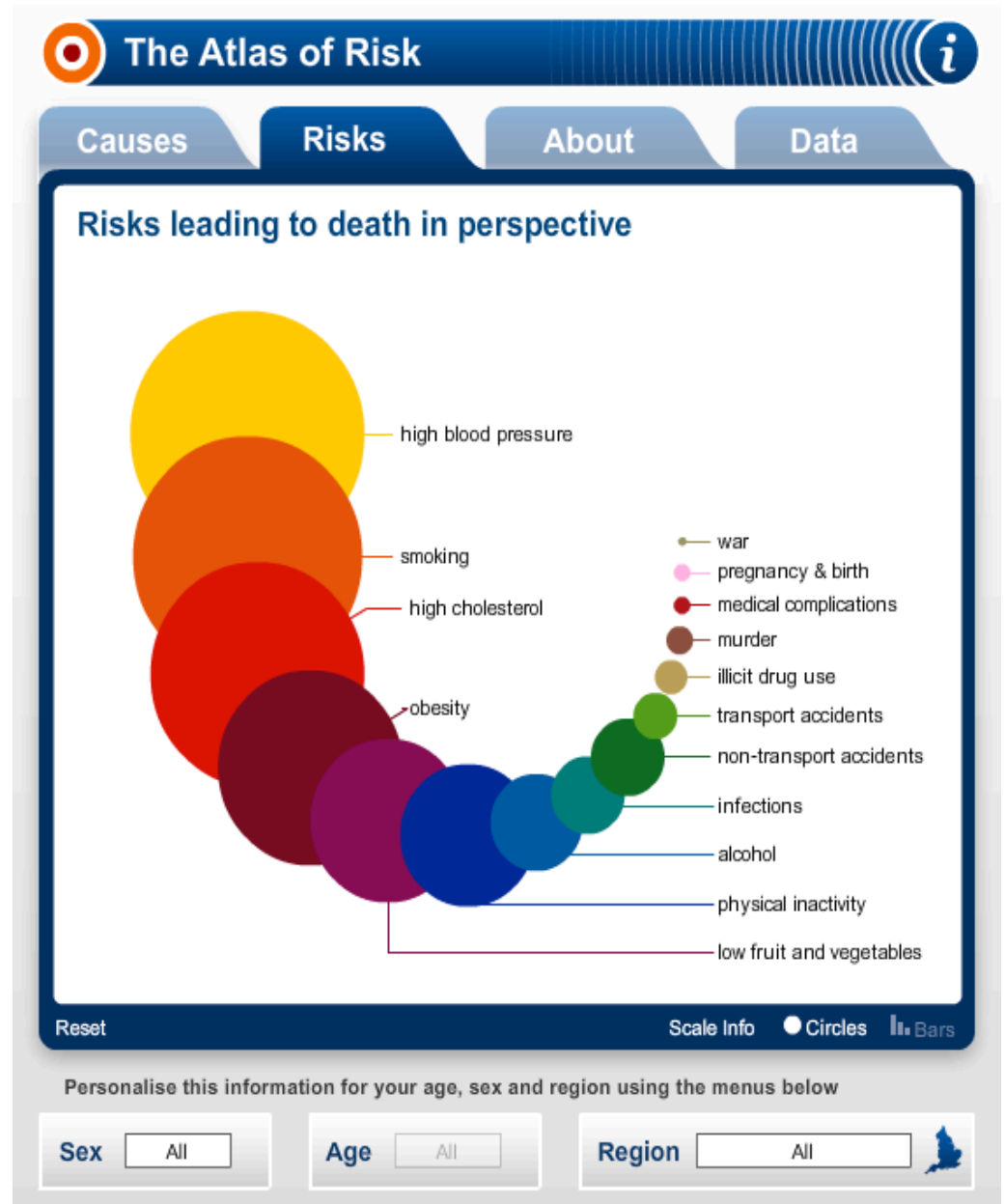


A fruity story of attaining and maintaining  
quality in translational research

Dr. Mihela Erjavec

# Background

- Translational research applies findings from basic science to enhance human health and well-being
- Long tradition in Bangor University



# Attaining and maintaining quality

## 1. Intervention design, protocol, and materials

- Choose the area of work
- Define a problem to be addressed
- Identify determinants of risk behaviour
- Systematically search the existing literature
- No sufficient knowledge: do basic research
- Apply findings to the problem
- Create a basic intervention

# Food Dudes Programmes: Teaching children to enjoy eating fruit and veg

- Founders: Prof Fergus Lowe and Pauline Horne
- Evidence base: 25 years of high quality research
- Child psychology and behaviour change principles
- School-based primary and nursery programmes
- Produce large and long lasting effects
- Trials and rollouts in Ireland, England, Scotland, Wales, Italy (Sicily, Milan) and the US (Utah, California)
- 700 000 children participated so far



# Meet the Food Dudes



CHARLIE

ROCCO



RAZZ

TOM



# Meet the Junk Punks

GENERAL  
JUNK



MISS DE MEENA

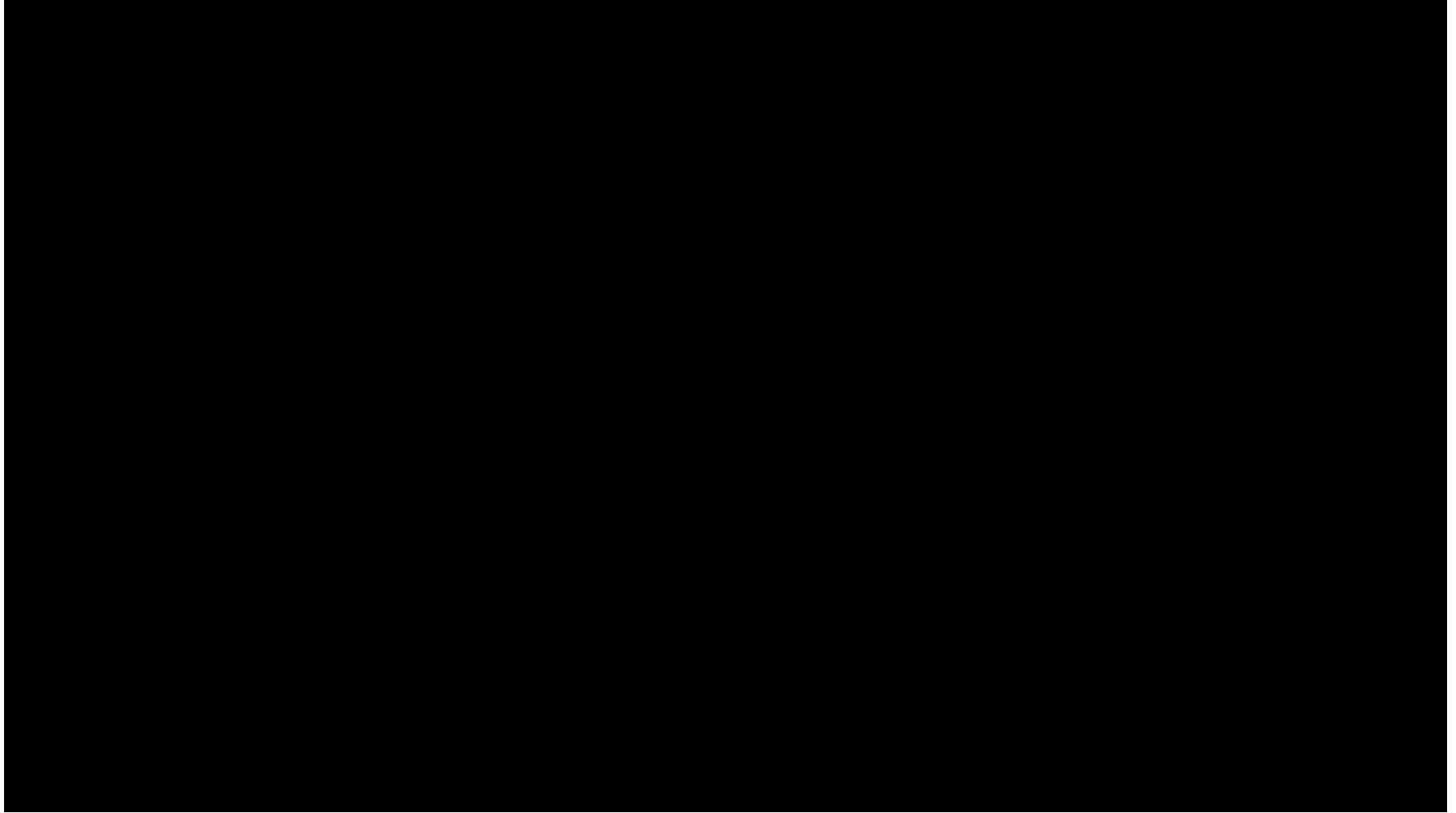


GRUESOME  
TWOsome

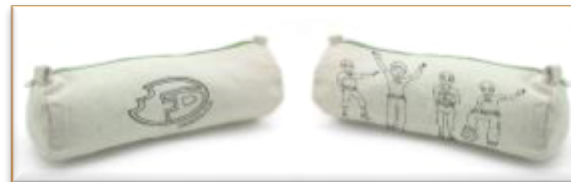
# Meet the Diddy Dudes (nursery version)



# Meet the Diddy Dudes (nursery version)



# Some examples of prizes





# Some examples of fruit and veg



# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
  - Effective training of research staff, programme coordinators, school teachers, caterers (protocols)
  - Randomised controlled studies (control group)
  - Direct measurement of target behaviour – not secondary indices (e.g., verbal reports)
  - Accurate, valid, and reliable measurement of target food consumption – also practical

# The use of digital photography

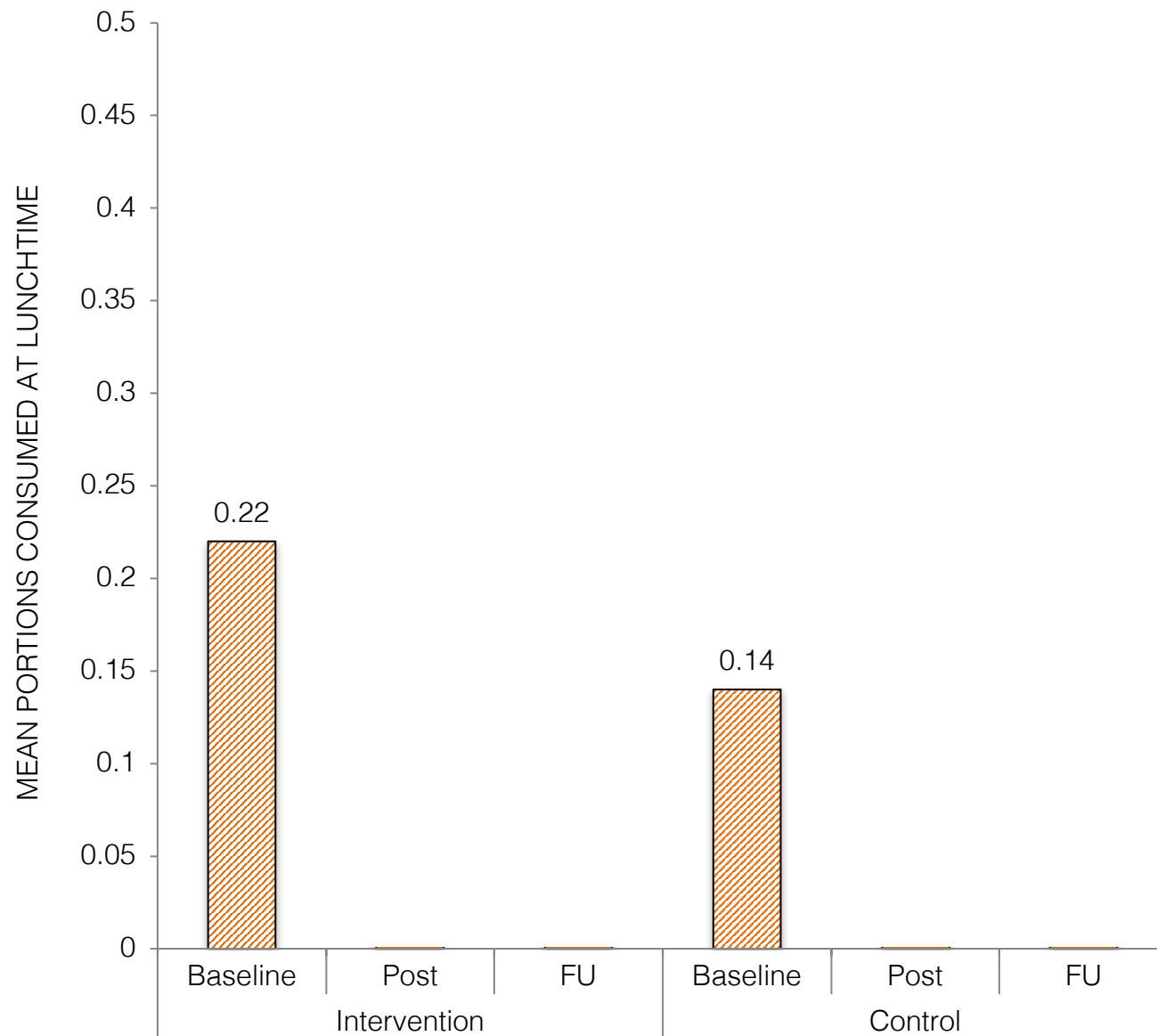




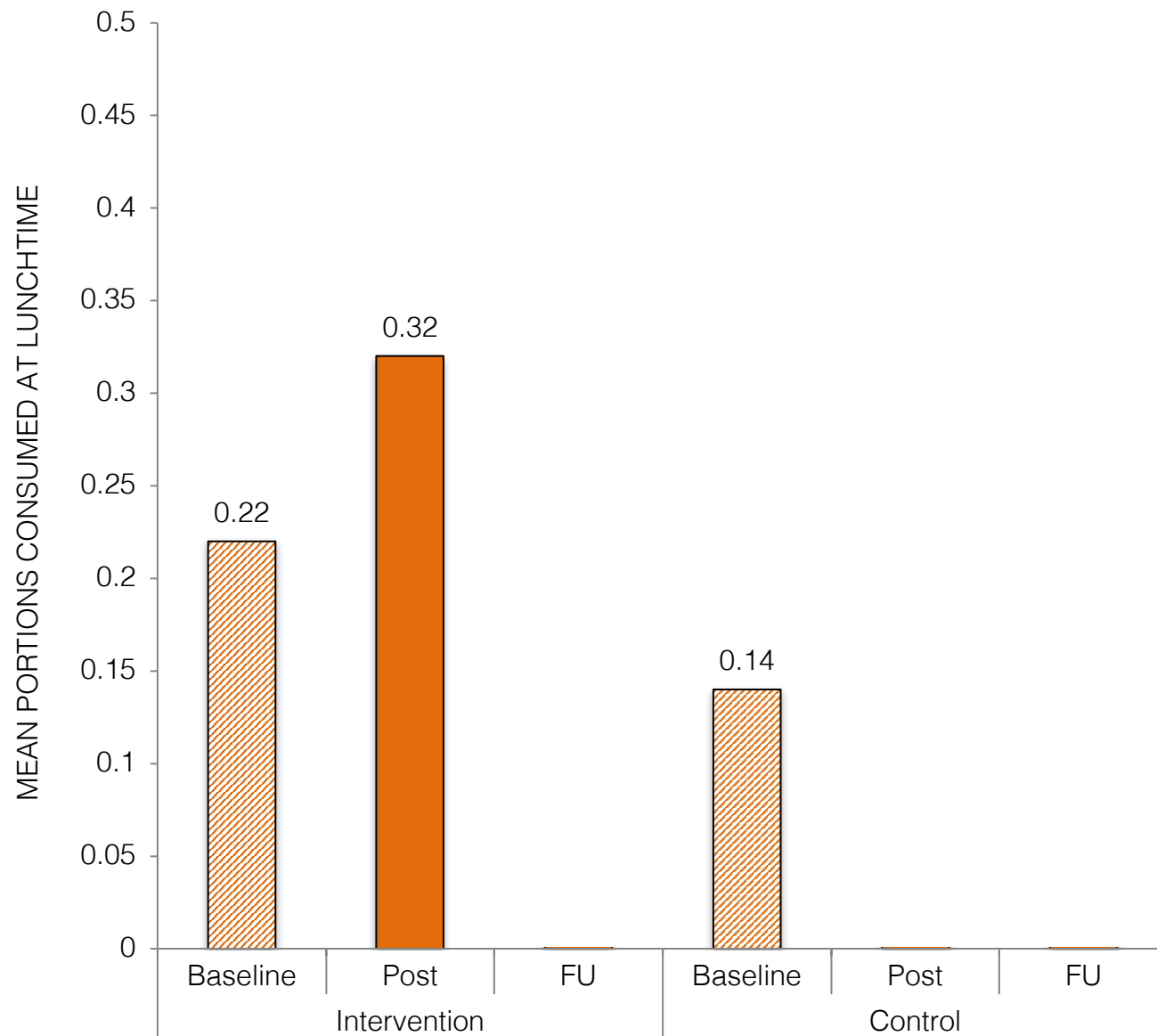
# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
3. Evaluating the results and dissemination
  - Correct, appropriate statistics and good visual presentation of data suitable for target audiences
  - Non-specialist reports (for schools, commissioners, caterers, parents, children)
  - Conferences (psychology, public health, prevention)
  - Peer-reviewed journals and practitioner literature

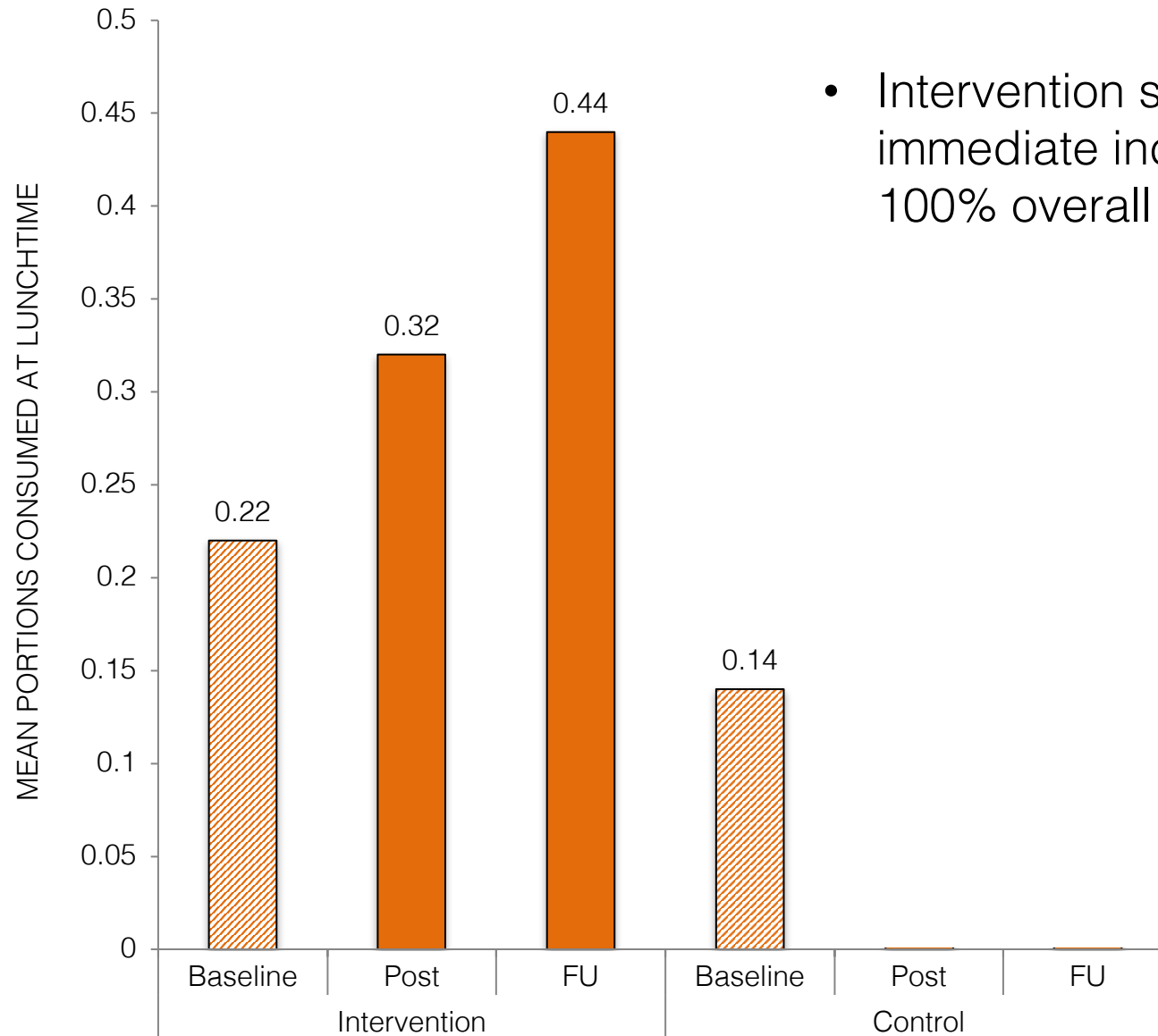
# Denbighshire special schools lunchtime FRUIT



# Denbighshire special schools lunchtime FRUIT



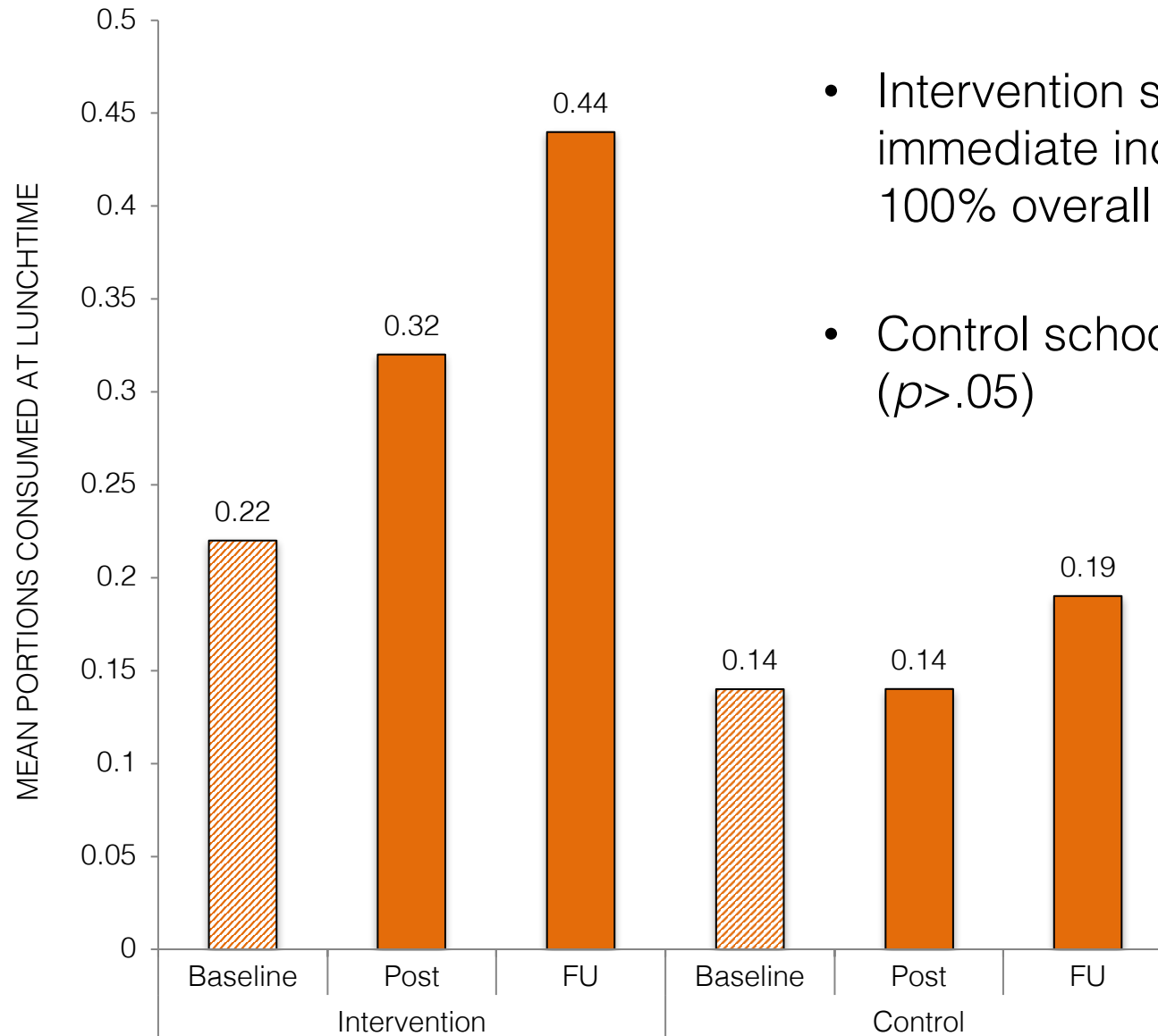
# Denbighshire special schools lunchtime FRUIT



- Intervention schools ( $N=147$ ): 45% immediate increase ( $p<.05$ ) and 100% overall increase ( $p<.0001$ )



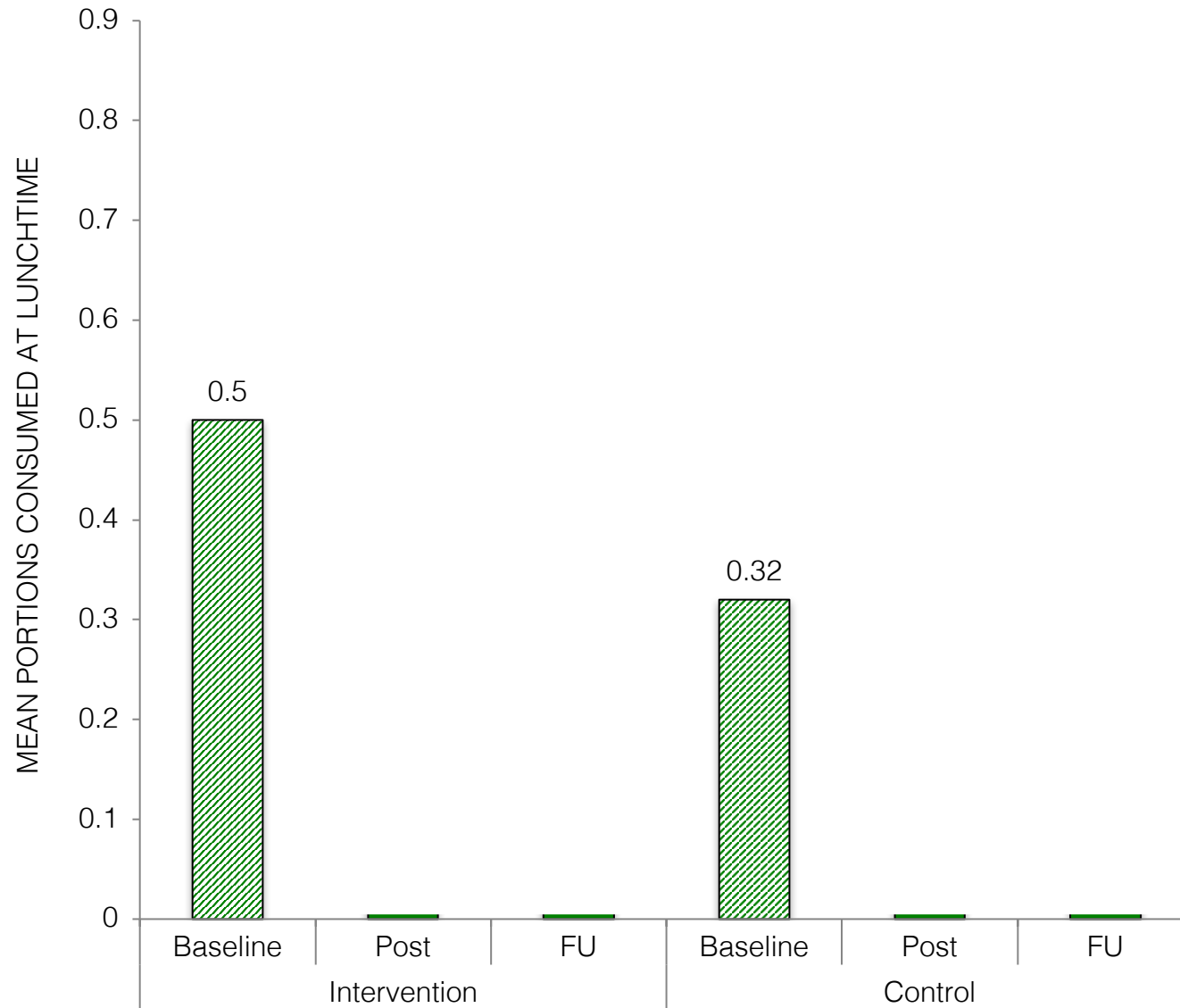
# Denbighshire special schools lunchtime FRUIT



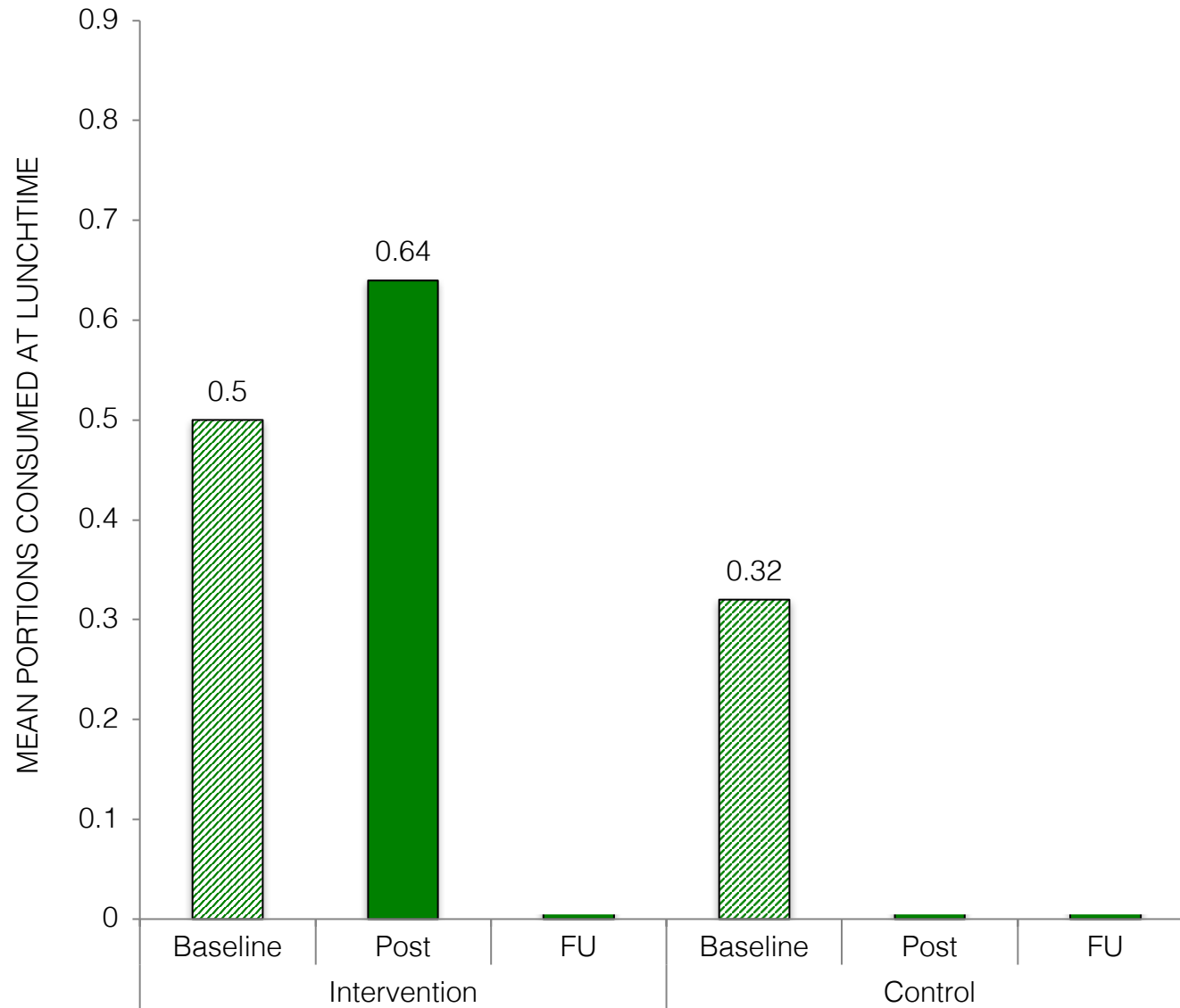
- Intervention schools ( $N=147$ ): 45% immediate increase ( $p<.05$ ) and 100% overall increase ( $p<.0001$ )
- Control school ( $N=141$ ): no change ( $p>.05$ )



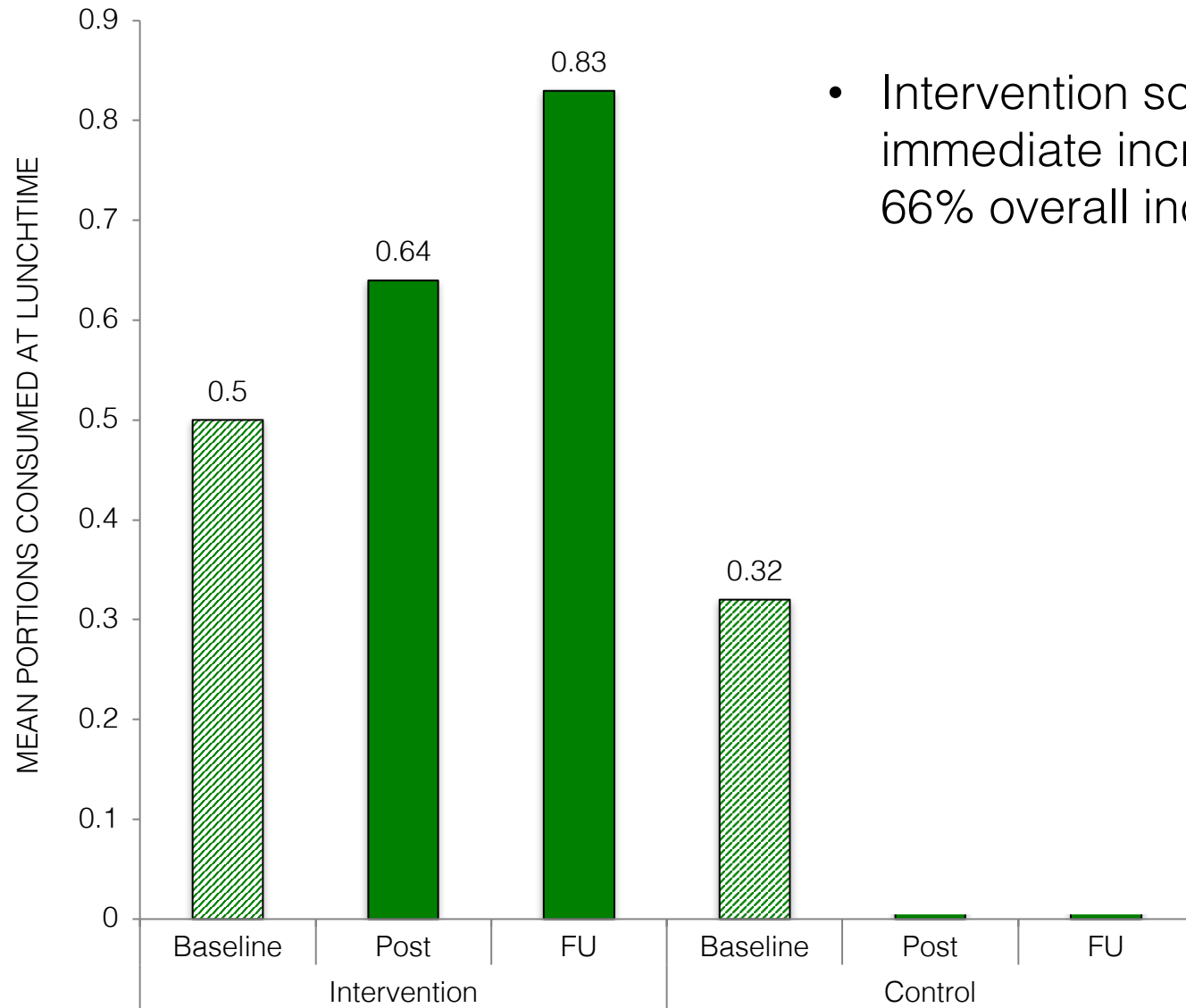
# Denbighshire special schools lunchtime VEG



# Denbighshire special schools lunchtime VEG



# Denbighshire special schools lunchtime VEG

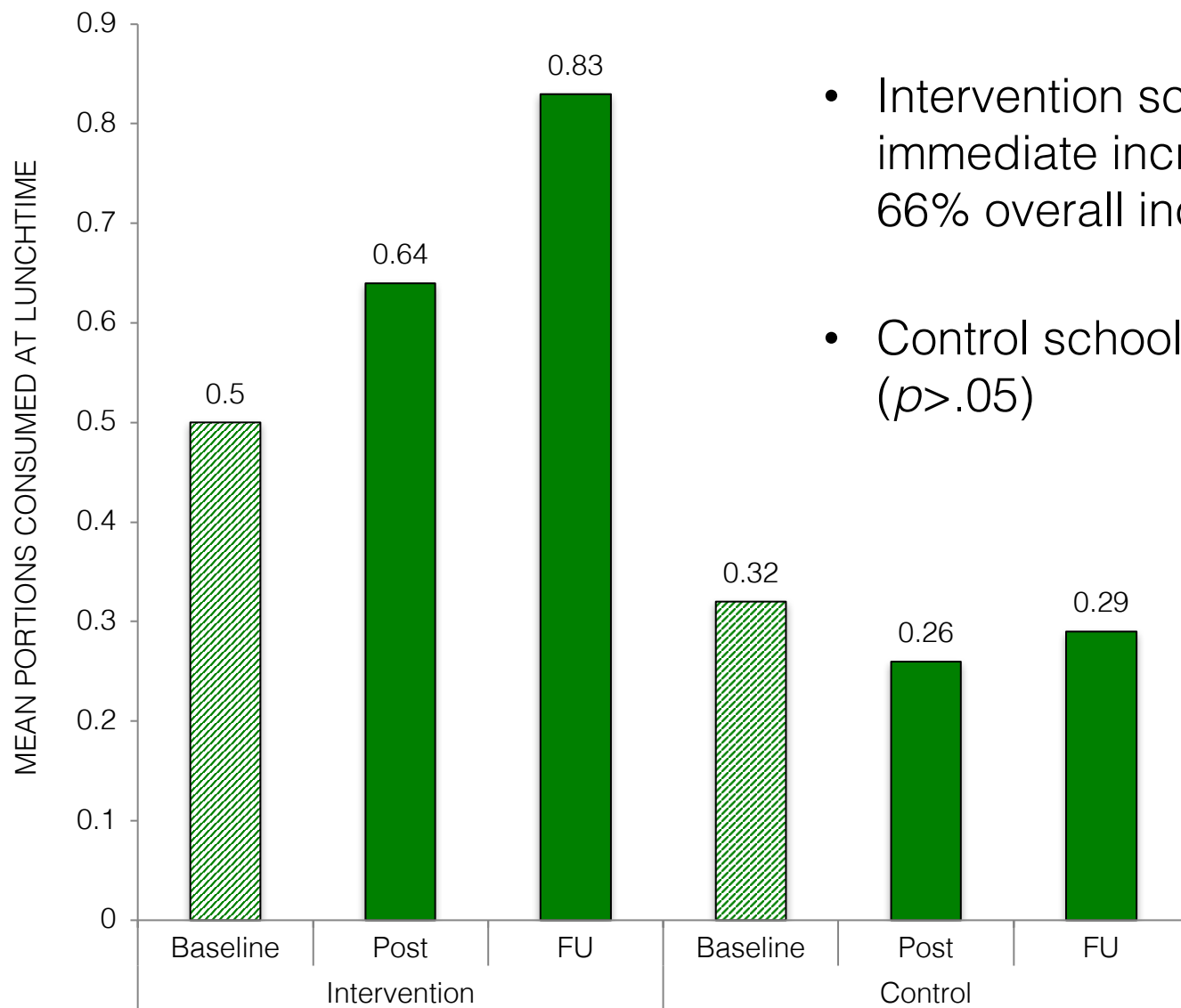


- Intervention schools ( $N=147$ ): 28% immediate increase ( $p=.07$ ) and 66% overall increase ( $p<.0001$ )





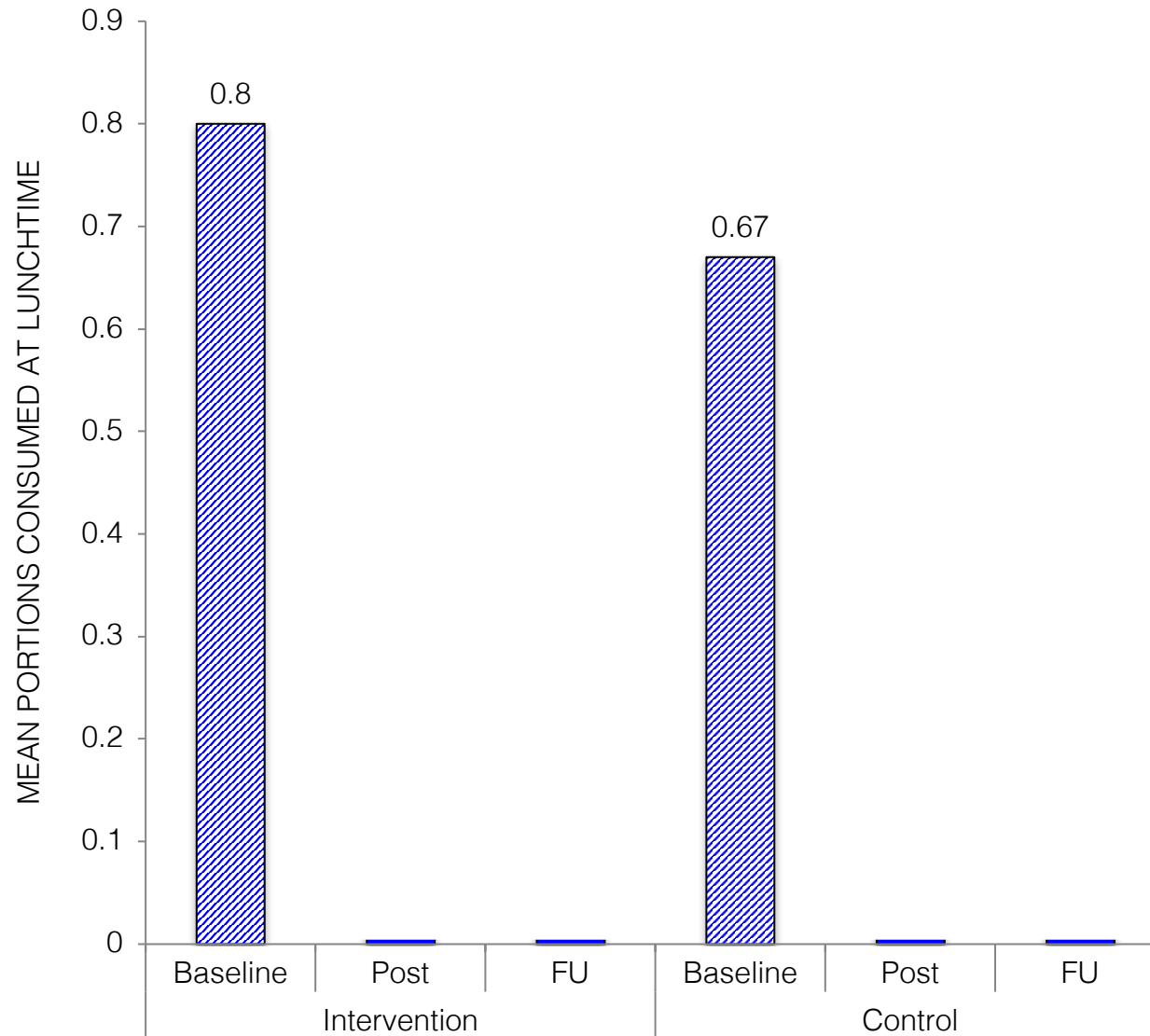
# Denbighshire special schools lunchtime VEG



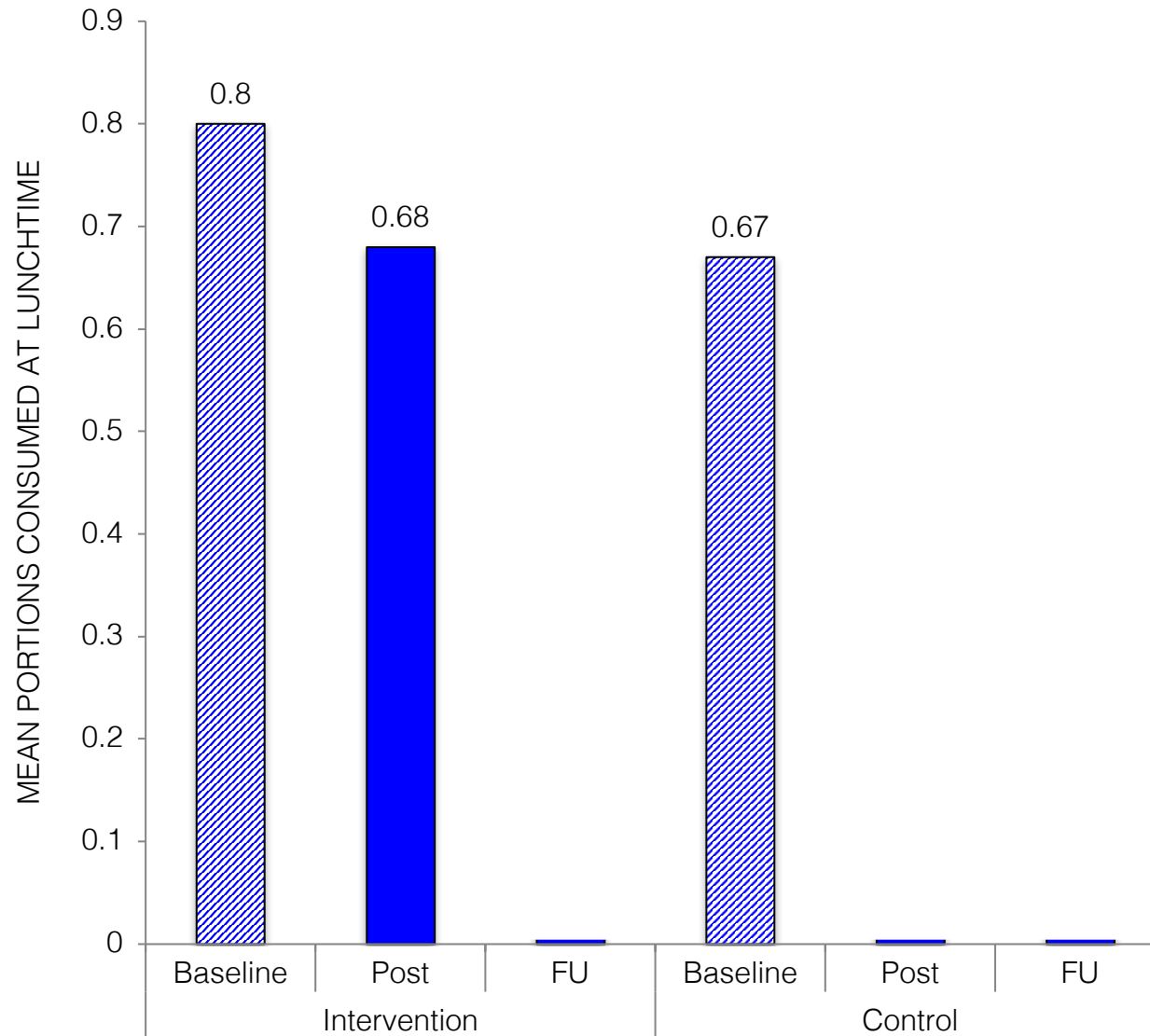
- Intervention schools ( $N=147$ ): 28% immediate increase ( $p=.07$ ) and 66% overall increase ( $p<.0001$ )
- Control school ( $N=141$ ): no change ( $p>.05$ )



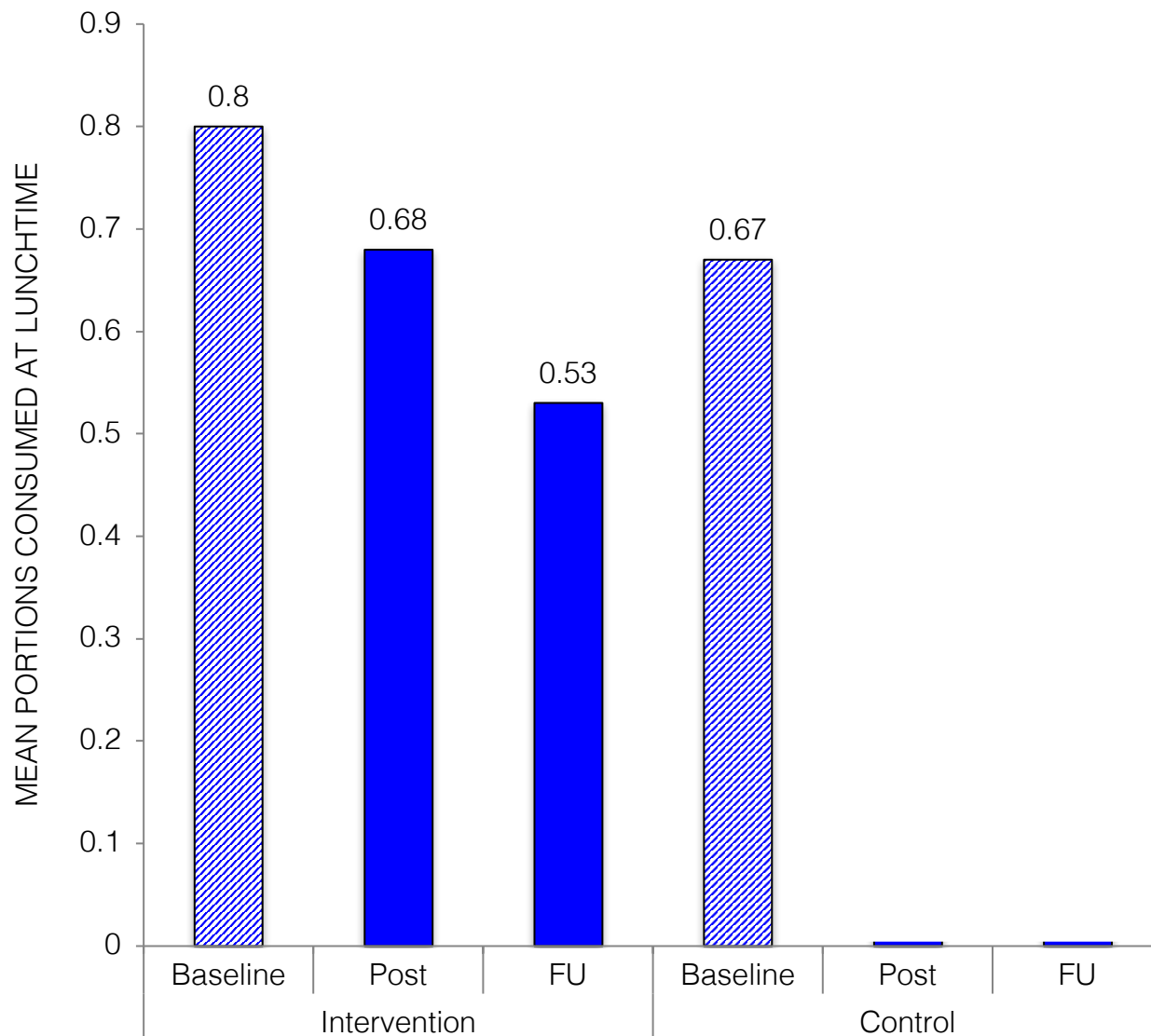
# Denbighshire special schools lunchtime JUNK



# Denbighshire special schools lunchtime JUNK



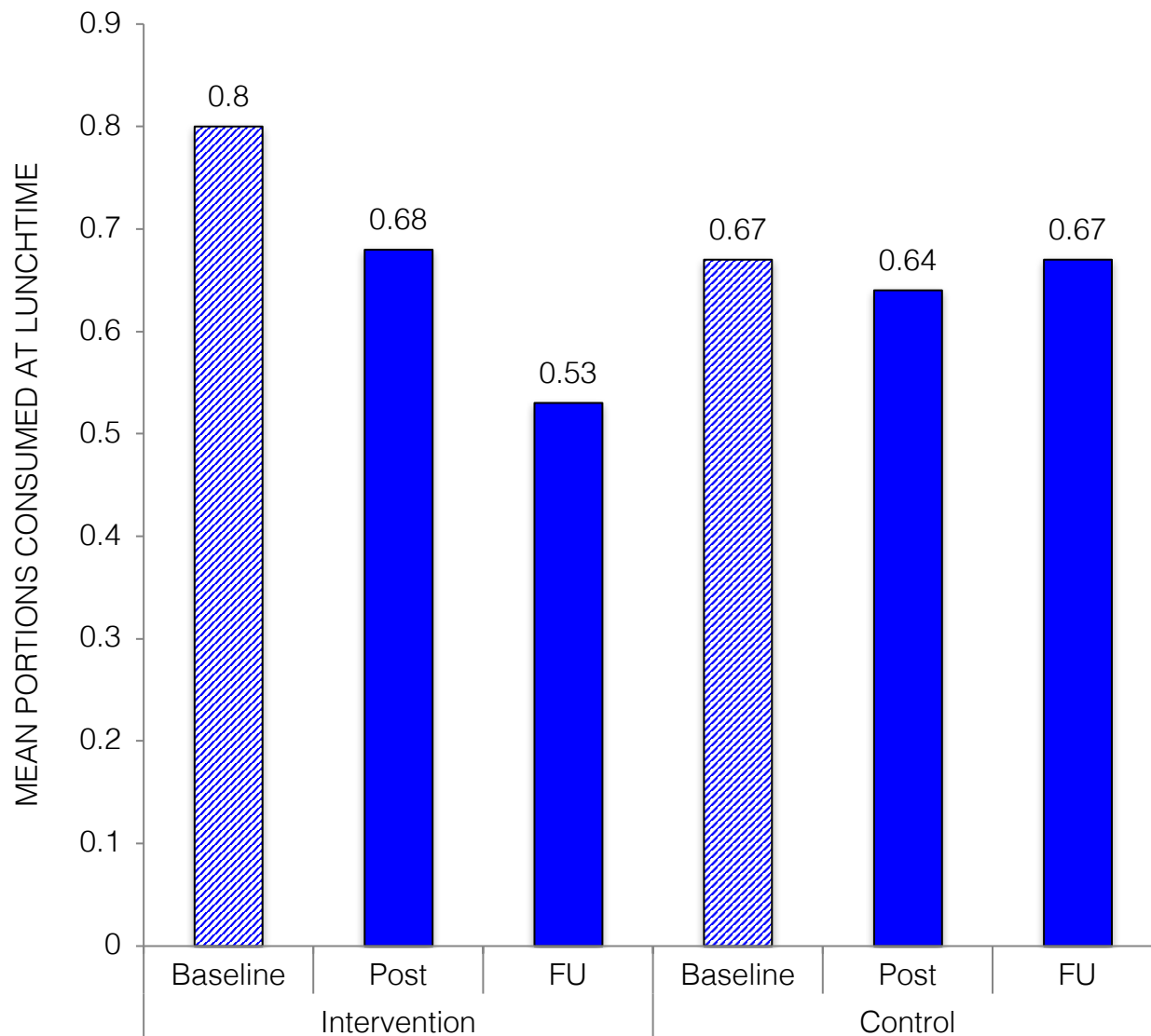
# Denbighshire special schools lunchtime JUNK



- Intervention schools ( $N=147$ ): 38% decrease ( $p<.0001$ )



# Denbighshire special schools lunchtime JUNK



- Intervention schools ( $N=147$ ): 38% decrease ( $p<.0001$ )
- Control school ( $N=141$ ): no change ( $p>.05$ )



# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
3. Evaluating the results and dissemination
4. Ensuring programme fidelity
  - Online training materials – not very effective (as yet)
  - A contracted delivery company (Ireland)
  - Own delivery company (not unless you want to suffer)
  - Train the trainer model

# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
3. Evaluating the results and dissemination
4. Ensuring programme fidelity
5. Roll-out monitoring and evaluation
  - Keeping an eye on things – always a good idea!
  - Advantages of collecting independent evidence (e.g., Government commissioned reports in Ireland)
  - Continuous: balance between thorough and practical

# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
3. Evaluating the results and dissemination
4. Ensuring programme fidelity
5. Roll-out monitoring and evaluation
6. Ongoing adjustments and innovation
  - E.g., changing the choice architecture of school dining environments to support healthy eating



# School dining environment in the UK



# Jamie's school dinners



# Rawmarsh school in Rotherham, Yorkshire





# Food branding (cueing F&V consumption)



# Improved presentation and positioning





# Verbal prompts

- *“Do you want green beans, carrots or both?”*
- *“Why not have a portion of fruit with that?”*
- *“Here, have a small taste, see what you think.”*
- *“Try Charlie’s Country Stew – it gives extra energy to help with dancing.”*



# Example of Food Dudes Menu in Denbighshire

 <b>Week 1</b>		 <b>Week 2</b>	
<b>Monday</b>	Turkey Meatballs in Tomato Sauce Food Dudes' Sweetcorn & Peas Pasta Shells/ Garlic Bread Cheese Biscuits with Apple Wedges	<b>Monday</b>	Southern Style Chicken Goujons Razz's Ready to Rumble Sweetcorn Relish Cajun Wedges Chocolate Milky Pudding & Fresh Peaches
<b>Special Energy Tuesday</b>	Special Energy Savoury Mince Powerful Pasta Italienne Rocco's Broccoli & Cauliflower Creamed Potatoes Razz's Energy Bursting Berries & Yoghurt	<b>Special Energy Tuesday</b>	Charlie's Creamy Chicken Curry Tom's Tasty Vegetable Curry Special Energy Sweetcorn & Peas Boiled Rice Food Dudes' Fruity Jelly
<b>Wednesday</b>	Spanish Chicken Special Sweetcorn & Peas Boiled Rice Chocolate Cake	<b>Wednesday</b>	Brain Boosting Bolognese Rocco's Broccoli Pasta Tomato & Herb Bread Apple Pie & Custard
<b>Special Energy Thursday</b>	Razz's Roast Pork, Apple Sauce & Gravy Charlie's Carrots & Green Beans Roast Potatoes Dudes' Fruity Pirate Ships (Melon Boats)	<b>Special Energy Thursday</b>	Razz's Roast Ham & Pineapple Charlie's Cauliflower Cheese & Carrots Roast Potatoes Food Dudes' Banana Surprise (baked bananas & honey)
<b>Friday</b>	Grilled Chicken in a Bap Tom's Veggie Sticks Chipped Potatoes Fruit Shortbread Fingers	<b>Friday</b>	Chicken Quorn Burger Power Mushy Peas Chipped Potatoes Krispie Cake
Salad, fresh fruit, yoghurt and chilled drinks available daily		Salad, fresh fruit, yoghurt and chilled drinks available daily	



# Caffi Morfa Denbighshire staff and students





# Attaining and maintaining quality

1. Intervention design, protocol, and materials
2. Implementation and measurement
3. Evaluating the results and dissemination
4. Ensuring programme fidelity
5. Roll-out monitoring and evaluation
6. Ongoing adjustments and innovation
7. Keeping everyone on board
  - Children are easy, adults are difficult

And they all Duded happily ever after...



## Pupils get taste for good eating

By SUZANNE JORDAN  
[suzanne.jordan@mwn.co.uk](mailto:suzanne.jordan@mwn.co.uk)

A RHYL school which caters for children with additional learning needs celebrated being part of a successful eating programme.

Members of the Food Dudes programme, which was launched in January at Ysgol Tir Morfa in Rhyl and Ysgol Plas Brondyffryn in Denbigh, met with children who had taken part in the scheme and their experiences. Food Dudes, which is an research initiative conducted by the Bangor Food and Activity Research Unit, has been sponsored by Denbighshire County Council who are the first council in Wales to pilot the healthy eating programme.

The programme was modified for use with children with intellectual disabilities, including Autistic Spectrum Disorder.

"Considerable" increases in children's consumption of fruit and vegetables and decreases in consumption of sweet and fatty foods were recorded by the Food Dudes research team and "significant" changes were noted at a three-month follow up.

Sue Parry, deputy Head teacher of Ysgol Tir Morfa, said: "The ini-

tiative prompts children to try a variety of fruit and vegetables.

"Food Dudes has encouraged our pupils to think about the choices they are making in their diet and we are seeing the impact this is having at home too. It is rewarding to see obvious changes in our pupils' behaviour - one example is that our school canteen has had to significantly increase its order for fruit due to demand from the children."

Food Dudes use rewards based tactics and role-modelling to get across its message and to engage with the children. Their stories are based on four hero cartoon characters, Razz, Tem, Charlie and Rocco, who battle with General Junk.

Amy Roberts-Mitchell, post-graduate researcher from Bangor University, added: "Our results show that Food Dudes Programmes can significantly improve nutrition, reduce health inequalities, and give the children in Special Schools and their families much needed help to establish and sustain healthy lifestyles."



■ ABOVE:  
Robert Ellis from  
Ysgol Plas  
Brondyffryn and  
Rebecca Mitchell  
from Ysgol Tir  
Morfa got a taste  
for healthy eating

■ LEFT: Pupils  
from Ysgol Tir  
Morfa, left to  
right - Rebecca  
Mitchell, 12-  
years-old, Lili  
Allen, nine-years-  
old, Scott Parry,  
nine-years-  
old, and Antonio  
Turner, aged 10

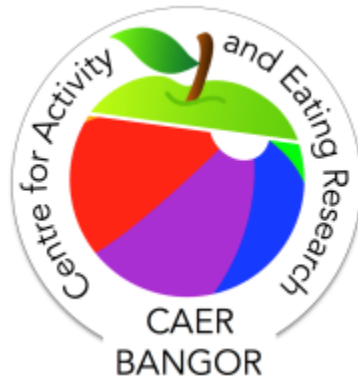
# Caterer training videos – and much more



A take home message?

Attaining and maintaining quality in translational research is a cycle of continuous development, improvement, and change.

Thank you for listening.



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- Web: <http://caer.bangor.ac.uk/>