

# REAL-WORLD FINANCIAL INCENTIVE PROGRAMMES FOR PROMOTING SMOKING CESSATION:

## RESULTS AND LESSONS LEARNT FROM THE TOBACCO FREE COMMUNITY TRIALS

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# Overview

- What are financial incentive programmes?
- Tobacco Free Community Trials
  - *Glamorgan Spring Bay*
  - *George Town*
  - *Waratah-Wynyard*
- Learnings
- Acknowledgements

# The numbers

- Largest preventable contributor to morbidity and mortality
- 8 million deaths globally per year
- \$136.9 billion economic burden annually in Australia alone
  - *Yet 1.1 billion people smoke worldwide*
  - *~12% | ~2.8 million Australians*

# What are financial incentive (FI) programmes?

- Rewarding a desired/target behaviour change
  - *Cash, vouchers, desired items*
- Structured program offering behavioural support and autonomy of treatments
- Verified using biochemical tests
  - *CO, saliva, urine*
- Found to be one of the most effective strategies for promoting smoking cessation (...in controlled settings)
  - Notley, C., Gentry, S., Livingstone-Banks, J., Bauld, L., Perera, R., & Hartmann-Boyce, J. (2019). Incentives for smoking cessation. *Cochrane Database of Systematic Reviews*, 7. CD004307. DOI: [10.1002/14651858.CD004307.pub6](https://doi.org/10.1002/14651858.CD004307.pub6).

# Why do FIs work?

- Positive reinforcement
- Immediate reward | smaller sooner vs. larger later
- Autonomy to choose quit strategy
- Novelty factor

*But would they work in the real world?*



# How can we use FIs in the real world?

- Some real-world implementation in antenatal services, veteran affairs centres, workplaces
- Most FI programmes have been research trials
  - *Controlled settings*
  - *Facilitated by research assistants/nurses*
- What about in the communities?
  - *Existing health services*

# Tobacco Free Communities Trials

- Check-in schedule
- Carbon monoxide (CO) monitoring
- Partnerships
- Community engagement

# Tobacco Free Communities Trials

- Trial 1 - Glamorgan Spring Bay (2019)
  - *Orford*
  - *Swansea*
  - *Bicheno*
- Trial 2 - George Town (2020)
- Trial 3 - Waratah-Wynyard (2021)
  - *Smithton*



# Check-in Schedule

Visit	Day	Amount	Condition of Receiving Voucher
<b>Enrolment</b>	1	\$10	Enrol in program
<b>Check-in 1</b>	7	\$50	CO $\leq$ 4 ppm
<b>Check-in 2</b>	14	\$50	CO $\leq$ 4 ppm
<b>Check-in 3</b>	21	\$50	CO $\leq$ 4 ppm
<b>Check-in 4</b>	28	\$50	CO $\leq$ 4 ppm
<b>Check-in 5</b>	60	\$50	CO $\leq$ 4 ppm
<b>Check-in 6</b>	90	\$50	CO $\leq$ 4 ppm

# CARBON MONOXIDE VERIFICATION

(CO  $\leq$  4PPM)



Swansea pharmacist Suzanne Hickey and  
trial participant Olivia Ford.

*Image credit: Liam Mitchell C*

# Partnerships and Community Engagement



# Results (Trial 1 and 2)

- 19.4% abstinent at the end of the programme
- Exceeded recruitment targets (90/76 intended)
- Retention decreased over time – 21% retained throughout
- Qualitative data overwhelmingly positive

**Table 2: Smoking behaviour and retention across the programme**

Characteristic	Enrolment	Check-in 1	Check-in 2	Check-in 3	Check-in 4	Check-in 5	Check-in 6
Cigarettes per day	17.46 (8.27)	2.60 (4.41)	1.14 (2.13)	1.10 (2.21)	1.03 (2.24)	1.11 (2.08)	0.11 (0.40)
CO (ppm)	17.13 (11.89)	6.24 (12.12)	3.90 (5.00)	3.32 (3.73)	3.02 (2.51)	3.32 (3.93)	1.36 (0.48)
Abstinent (self-reported and CO verified) <i>n</i> (%)	-	20 (32.25%)	21 (33.87%)	22 (35.48%)	17 (27.42%)	13 (20.97%)	12 (19.35%)
Retention <i>n</i> (%)	62 (-)	44 (70.96%)	35 (56.45%)	36 (58.06%)	29 (46.77%)	21 (33.87%)	13 (20.97%)

*Note:* Values represent means (standard deviations) unless otherwise specified. Cigarettes per day and CO data represent participants still engaged (presenting at check-ins) in programme. Abstinence data represents proportions based on entire sample (*N* = 62) wherein those lost to follow-up were considered to be currently smoking.

Breen, R. J., Frandsen, M., & Ferguson, S. G. (*in press*). Incentives for smoking cessation in a rural pharmacy setting: The Tobacco Free Communities programme. *Australian Journal of Rural Health*.

# Preliminary Results (Trial 3)

- Halfway through program (March – Sept)
- N = 15 (50% of target)
- 4 quit (26.6%)
- \$700 worth of local business vouchers



## *What did you like about the program?*

The gift card incentive was a good goal. There was no pressure to any of it, compared to experience of going to doctors who ask “are you still smoking!?” There’s another nail in the coffin!

## *Would you recommend the program to someone else?*

Yes, because they were friendly and helpful. There was no pressure – no negatives. Make you want to try harder.

## *What did you think about the incentives/vouchers?*

The incentives were something to strive for initially but as you go through the program you discover that it’s more than just money – although it’s still a nice bonus.

# Learnings



George Town resident Sarah Napier talking to her pharmacist about quitting smoking.

*Image credit: Laura Beavis, ABC News*

- Weekly visits
- Longer programme
- Higher incentive
- Community champions are key
- Word of mouth

# Take home message

- Financial incentives are:
  - *Effective*
  - *Cost effective*
  - *Safe*
  - *Workable in the 'real-world'*
  - *Easy to implement*
  - *More and more accepted*

**\$48,000.00**

BUT WAIT!

THERE'S MORE!







ELSEVIER

## Addictive Behaviors

journal homepage: [www.elsevier.com/locate/addictbeh](http://www.elsevier.com/locate/addictbeh)



### Short communication

## Higher incentive amounts do not appear to be associated with greater quit rates in financial incentive programmes for smoking cessation



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### HIGHLIGHTS

- Higher incentive amounts may produce greater quitting in incentive programmes for smoking cessation.
- This review found no evidence for this, due to variations in populations and programme designs.
- More research is needed to guide which amounts should be offered.
- Laboratory studies could provide future insight, and inform trials comparing different amounts.

### ARTICLE INFO

#### Keywords:

Smoking cessation  
Financial incentives  
Contingency management

### ABSTRACT

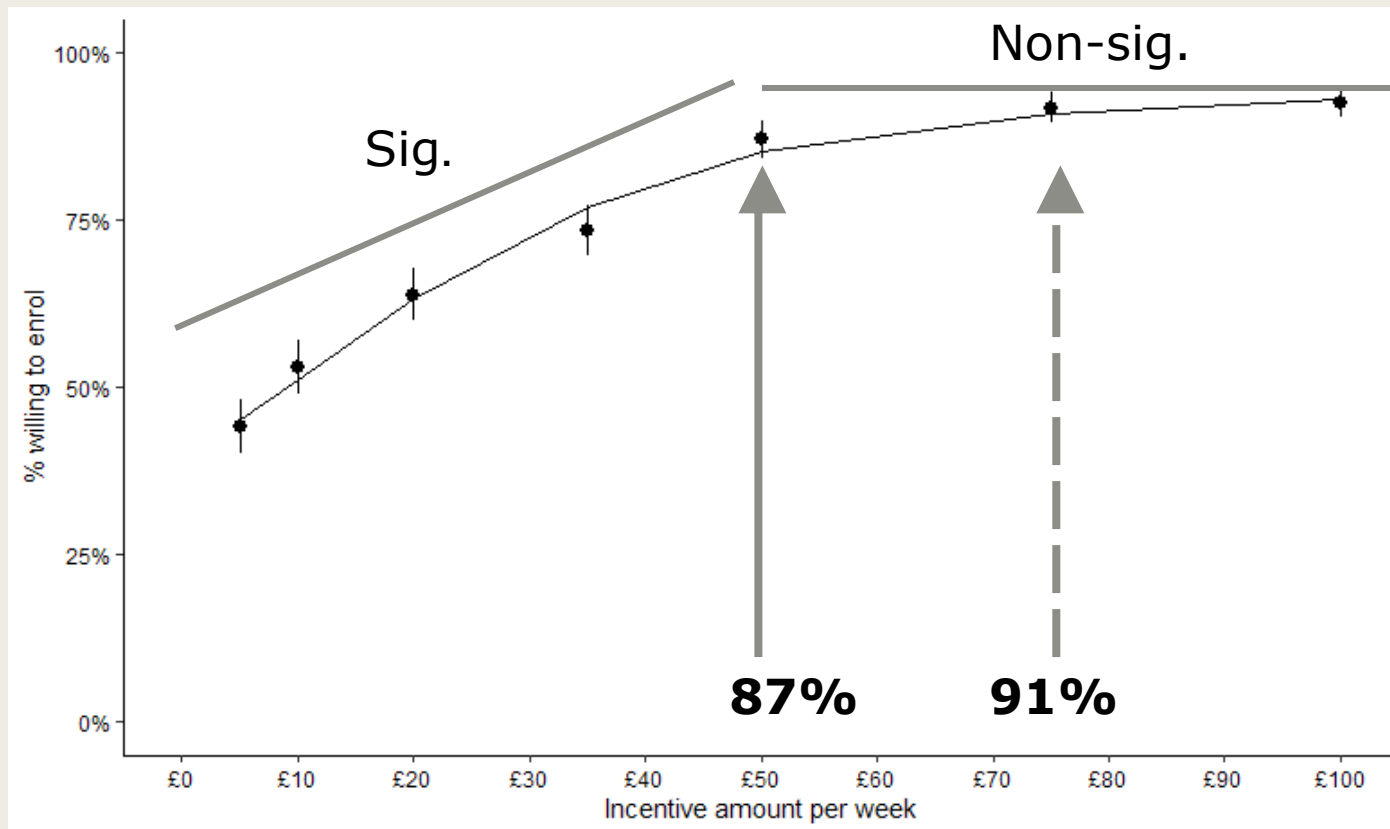
**Introduction:** Financial incentive (FI) programmes can promote smoking cessation. While foundational research suggests higher FI amounts may better produce outcomes, confirmation is needed. Further, the optimal amount (s) needed to cost-effectively promote change is unclear. Our objective was to reconfirm whether higher amounts are associated with greater quitting through review of previous programmes, before assessing whether non-linear trends and obvious inflections in this relationship exist which may highlight optimal amounts.

**Methods:** Four databases were searched for controlled or randomised controlled studies which detailed FI programmes for smoking cessation in adults.

**Results:** Twenty-six studies were included. Programmes varied in length (3.0–52.0 weeks, median = 12.0), FI provision timing, and longest follow-up (5.5–24.0 months, median = 6.0). The odds ratio of quitting at longest follow-up ranged from 0.32 to 5.89. Maximum FI amounts were between US\$106.19 and \$4,027.92. Quit rates and amounts were not significantly correlated. Subsequent comparisons to reduce between-study variations were non-significant. Further analyses revealed no evidence of non-linear fits, changes in inflection, or cut-points.

**Conclusions:** While higher FI amounts were not associated with greater quitting within this review, the limited data available and variations in target populations and programme designs unrelated to the amount have undoubtedly influenced results. Findings suggest information on this relationship and optimal FI amounts are not determinable through current evidence. As this information is important for cost-effectiveness evaluations and real-world viability, further investigation is necessary. Laboratory research could provide valuable initial insight. Trials comparing programme efficacy under the identified amounts could then be implemented.

SO HOW  
MUCH  
SHOULD  
WE PAY?



Breen, R. J., Ferguson, S. G., & Palmer, M. A. (2021). Smokers' perceptions of incentivised smoking cessation programmes: Examining how payment thresholds change with income, *Nicotine & Tobacco Research*, <https://doi.org/10.1093/ntr/ntab031>



# WHAT'S THE BEST TYPE OF PROGRAMME?

- Designs influence smokers' perceptions of programmes and willingness to enrol
- Most preferred:
  - *Cash*
  - *Higher amounts*
  - *1 session/week*
  - *Healthcare settings*
  - *Fixed reward schedules*

Breen, R. J., Palmer, M. A., Frandsen, M., & Ferguson, S. G. Design of financial incentive programmes for smoking cessation: A discrete choice experiment. *Under review.*

# Thank you



Follow the projects here:

<https://www.den.org.au/projects/tobacco-free-communities/>

Read our latest research here:

- Breen, R. J., Ferguson, S. G., & Palmer, M. A. (2020). Higher incentive amounts do not appear to be associated with greater quit rates in financial incentive programmes for smoking cessation. *Addict Behav.*, 110:106513. doi: 10.1016/j.addbeh.2020.106513
- Breen, R. J., Ferguson, S. G., & Palmer, M. A. (2021). Smokers' perceptions of incentivised smoking cessation programmes: Examining how payment thresholds change with income, *Nicotine & Tobacco Research*, <https://doi.org/10.1093/ntr/ntab031>
- Breen, R. J., Frandsen, M., & Ferguson, S. G. (*in press*). Incentives for smoking cessation in a rural pharmacy setting: The Tobacco Free Communities programme. *Australian Journal of Rural Health*
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