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Background

Behavioural support—often delivered via static self help booklets—has become a mainstay of comprehensive cessation interventions and has been found to consistently, if modestly, promote cessation.

A number of recent studies have found that behavioural support delivered via text messages can significantly improve outcomes—RR 1.71, 95% CI 1.47 to 1.99

In addition to standard behaviour support content, text messages used in these studies involved messages to promote use of pharmacotherapy and/or guidance on adherence to treatment regimes

However, exactly how such programs work – and hence how they can be improved – is currently unknown.

A complication is that such programs have so far been evaluated in samples co-using pharmacotherapy, and/or in the absence of a control group using a non-text message based behavioural support program.

Our aim was to explore the effectiveness of a text message-based behavioural support program in the absence of pharmacotherapy.

Baseline Demographics and Smoking History			
	All (n=284)	TG (n=142)	CG (n=142)
Age (SD)	42.1 (13.2)	40.9 (12.9)	43.3 (13.5)
Female	51.1%	52.9%	49.3%
Caucasian	93.7%	93.2%	94.2%
Household income <AUS\$45,000	66.7%	67.2%	66.2%
Past quit attempts (SD)	4.3 (6.5)	4.5 (8.7)	4.1 (3.4)
Cigarettes/day (SD)	18.5 (7.7)	18.3 (7.5)	18.6 (7.9)
Fagerström Test for Nicotine Dependence (SD)	4.8 (2.0)	4.8 (2.0)	4.8 (2.1)
Time To First Cigarette <30mins from waking	79.9%	77.5%	82.2%
Urine Cotinine ng/ml (SD)	1936.0 (1404.1)	2111.5 (1517.0)	1767.9 (1269.5)



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Methods

Study location: 2 major population centres in Tasmania, Australia.

Recruitment: advertisements in newspapers/radio/poster and on social media site Facebook. Participants received up to \$100, staged during study to completion at 6 months.

Participants: daily cigarette smokers >10 cigarettes per day for past 3 years, with high motivation to quit (≥ 75 on 100-point scale)

Exclusion: intention to use pharmacotherapy/nicotine replacement therapy in next 6 months; past 3 months smoking cessation trial.

Data collection: Baseline questionnaires- demographics, smoking history, quit attempts, nicotine dependence

Follow up data: Daily data recorded in real time via study mobile phone for cigarettes smoked & smoking lapses;

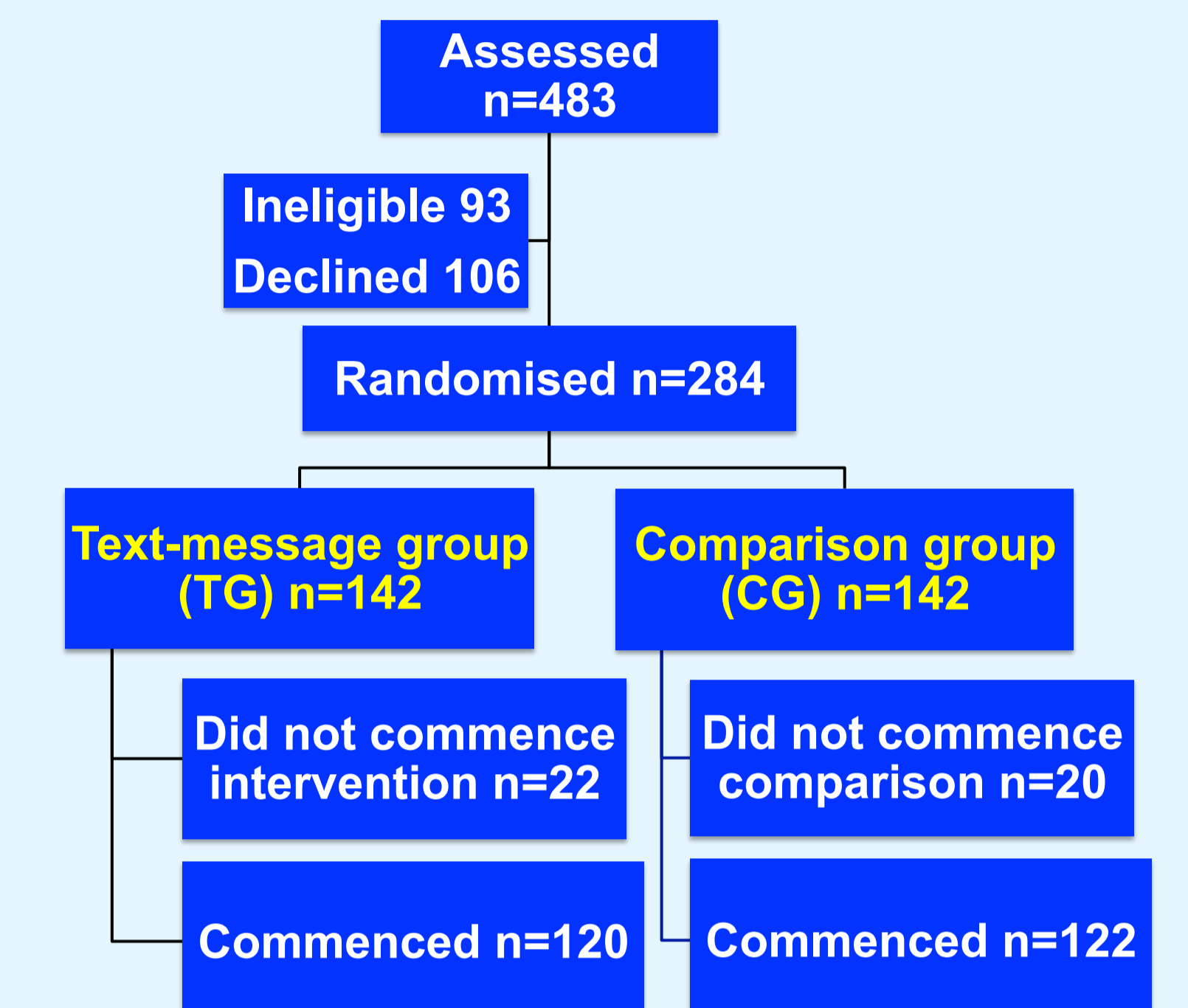
Study visit days: -11 (enrollment/randomisation) -7 (commence study group), 0 (quit day), day 7, day 28, day 180 post quit.

Assessments: cigarette consumption by time-line follow back, self-report smoking status, expired air CO analysis.

Active intervention: Text message group (TG) participants received Self-help Quit booklet plus 4-5 randomly timed text messages/day containing quit smoking advice and encouragement tailored to participants' current quit status (preparing to quit, first week of the quit attempt, second week of attempt etc). Participants could request additional text messages.

Comparison (CG): Self-help Quit booklet containing tips for quitting and cognitive and behavioural coping mechanisms.

Recruitment and follow up



Primary Outcome

Verified Abstinence	Population	TG n (%)	CG n (%)	OR (95%CI)
7-day PP 1 month	Randomised n=284	5 (3.52)	9 (6.34)	0.54 (0.16 to 1.60)
7-day PP 6 months	Randomised n=284	13 (9.16)	15 (10.56)	0.85 (0.69 to 1.87)

Time to first lapse

Initial 24-hour abstinence achieved

Overall n=151/284 participants (53.2%)

Text group n=75 (52.8%) Comparison Group n=76 (53.5%)

Mean time to first lapse, days (range)

Text group **3.45** (0-23) Comparison Group **2.88** (0-22) P>0.5

Conclusions

- ❖ We found no benefit of delivering behavioural support via text messages compared to traditional paper-based advice
- ❖ The intervention did not significantly delay the time to first lapse after initial abstinence and there was no effect on short or longer term quitting.
- ❖ The quit rate was similar to studies where smokers interested in quitting only receive minimal behavioural support
- ❖ The lower quit rate in this text-message study without use of pharmacotherapy suggests that the benefit of providing support via text messages may—at least in part—be due to improving use of quit medications, or that medications are needed to facilitate the beneficial effects of the behavioural support provided.
- ❖ Future studies should assess the effect of text messages on compliance and adherence to pharmacotherapy