Switching to e-cigarettes as harm reduction among individuals with pulmonary disease who currently smoke.

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For persons with **pulmonary disease** who currently smoke **switching to e-cigarettes** is achievable, acceptable, and **may reduce pulmonary symptoms**.

RESEARCH QUESTION

Will smokers with Chronic obstructive pulmonary disease (COPD) switch to e-cigarettes and what is the impact on respiratory health?

BACKGROUND

- Smoking causes and exacerbates COPD
- Nearly half people with COPD still smoke
- Switching to e-cigs may be effective harm reduction for those unsuccessful quitting with currently available therapies

METHODS

- Patients with COPD who currently smoke
- Ongoing pilot RCT: Behavioral counselling with (arm 1) e-cig or (arm 2) NRT
- Measures: COPD assessment test (CAT) score, daily cigarette (CPD) and e-cig use collected at baseline, 12-wks, & 6-months

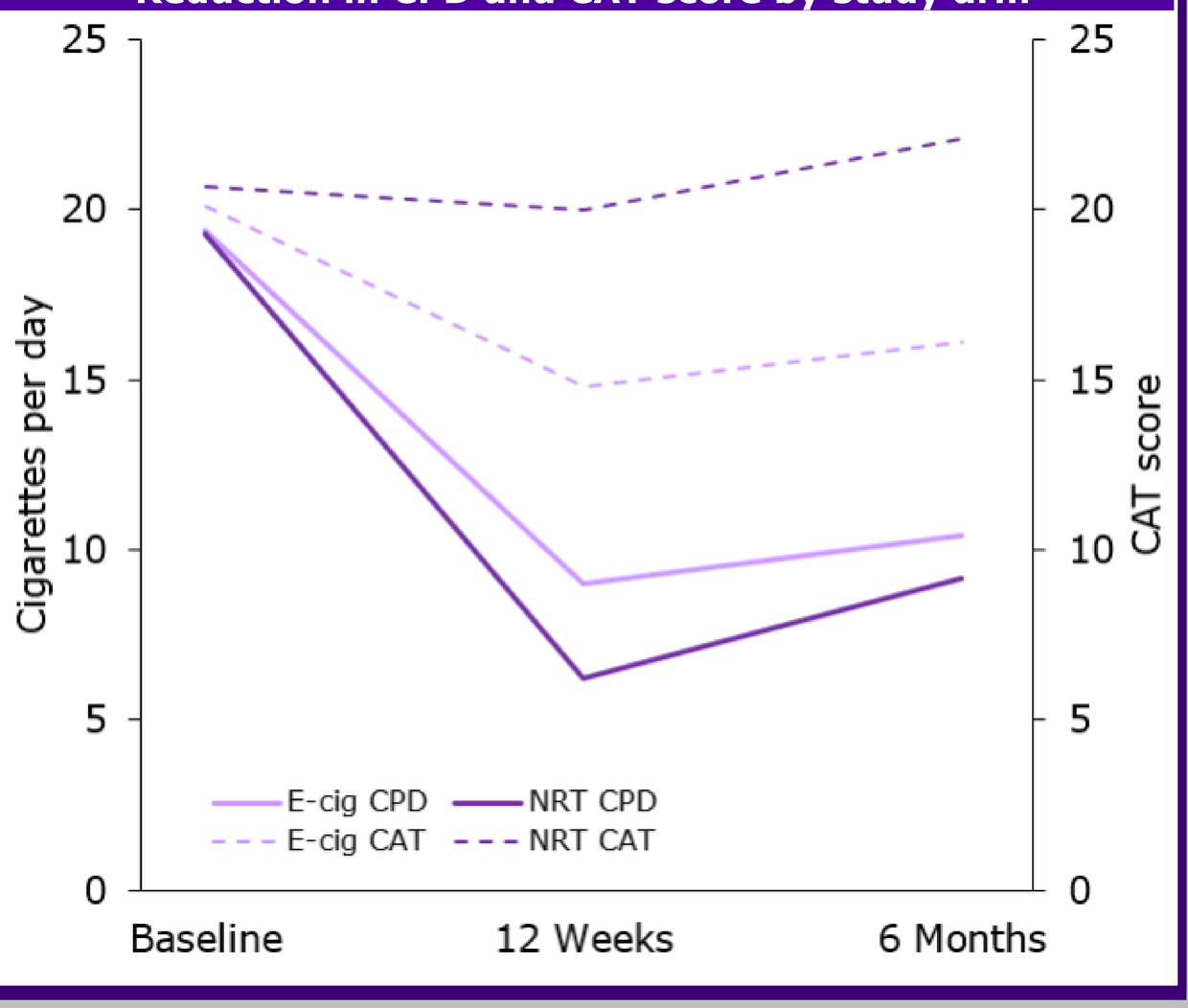
RESULTS

Primary & secondary outcomes: Baseline, 12-wks, 6-mos

	Baseline Mean (SD)		12 Weeks Mean (SD)		6 Months Mean (SD)	
	E-cig (N=38)	NRT (N=33)	E-cig (N=38)[b]	NRT (N=33)[c]	E-cig (N=34)[d]	NRT (N=33)[e]
Cigarettes per day (CPD)	19.4 (8.61)	19.3 (9.22)	9.03 (10.6)	6.22 (6.63)	10.4 (9.01)	9.19 (9.21)
Percent Change in CPD from Baseline	--	--	-54.6 (42.4)	-63.9 (38.8)	-48.6 (36.1)	-54.5 (37.4)
COPD Assessment Test (CAT)	20.1 (6.36)[a]	20.7 (6.64)	14.8 (7.70)	20.0 (9.61)[e]	16.1 (8.35)	22.1 (9.28)[g]
TSQM-9 Effectiveness	--	--	74.7 (24.5)	61.8 (39.5)[f]	--	--
TSQM-9 Convenience	--	--	91.6 (14.4)	91.5 (14.2)[f]	--	--
TSQM-9 Satisfaction	--	--	81.6 (18.4)	72.5 (29.6)[f]	--	--
Counseling Sessions Completed (out of 6)	--	--	3.79 (2.09)	2.73 (2.38)	3.82 (2.15)	2.73 (2.38)
CPD Reduction			N (%)	N (%)	N (%)	N (%)
Under 50%	--	--	9 (23.7)	6 (18.2)	10 (29.4)	6 (18.2)
50% or more	--	--	20 (52.6)	12 (36.4)	13 (38.2)	10 (30.3)
75% or more	--	--	10 (26.3)	10 (30.3)	5 (14.7)	5 (15.2)
100%	--	--	5 (13.2)	6 (18.2)	4 (11.8)	4 (12.1)

[a] n missing = 1 (2.6%); [b] m missing =9 (23.7%); [c] n missing = 15 (45.5%); [d] n missing = 11 (32.4%); [e] n missing = 17 (51.5%); [f] n missing = 16 (48.5%); [g] n missing = 18 (54.5%)

Reduction in CPD and CAT score by study arm



CONCLUSIONS

E-cigs represent an acceptable and potentially effective means of harm reduction amongst smokers with pulmonary disease.

- Switching to e-cigs may reduce pulmonary symptoms
- Need for more exploration of switching as a harm reduction strategy among smokers who have been unsuccessful at quitting by other means
- More large-scale RCTs are needed to estimate effects and inform tobacco regulatory science about the health effects and behavior of e-cig switching