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Engaging in Change: Smoking Cessation in an Ambulatory Residency Clinic

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AIM

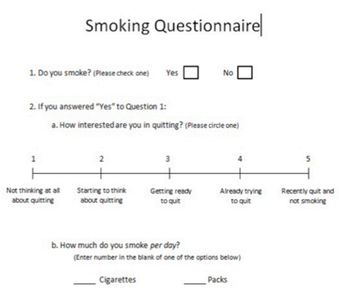
Decrease the quantity of daily cigarettes smoked by 25% in cigarette smokers receiving their care at an ambulatory resident practice from January 2016 to May 2016.

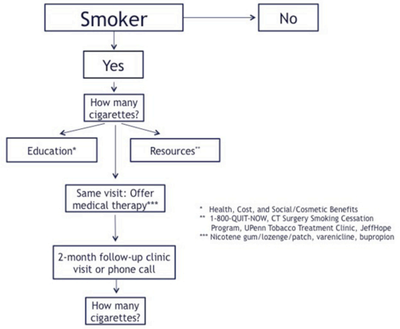
BACKGROUND

- In the US, roughly 40 million adults smoke cigarettes. Of those, 16 million live with a smoking-related disease, and there are 480,000 deaths per year attributed to cigarette smoking[1,2,3].
- Of those below the poverty level, 26.3% were smokers, similar to our JHAP population where 26.7% are smokers.
- The economic cost of smoking exceeds $300 billion each year, with half related to direct medical care[4].
- Due to the highly addictive properties of nicotine[5], smoking cessation presents a great challenge for patients and health care providers. Decreasing the daily use of cigarettes can be a step toward abstinence[6].

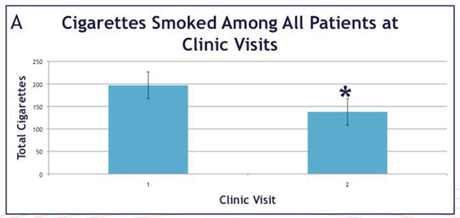
INTERVENTION (Cont.)

We aimed to decrease cigarette smoking by first identifying active smokers presenting to a residency ambulatory clinic, gauging their desire to quit, and then employing education or pharmacologic treatment strategies to facilitate this goal.





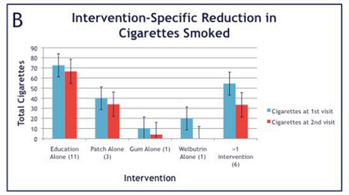
RESULTS

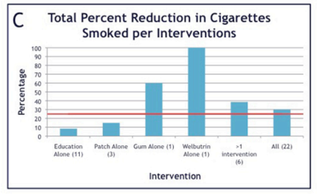


Total Cigarettes at Visit #1	Total Cigarettes at Visit #2	Total Quantity Reduction	Total Percent Reduction	Average Individual Reduction
197.13	138.017*	59.113	29.98681073	36.3482351

Figure/Table A: Additive total of cigarettes smoked among patients presenting to clinic on subsequent visits. There was a significant, absolute decrease from Visit #1 to Visit #2 (***p = 0.016**), representing a roughly 30% total reduction. On an averaged individual level, there was a 36% reduction over the same interval.

RESULTS (Cont.)





Intervention	Cigarettes at 1st visit	Cigarettes at 2nd visit	Total Quantity Reduction	Total Percent Reduction
Education Alone (11)	72.63	66.517	6.113	8.416632246
Patch Alone (3)	40	34	6	15
Gum Alone (1)	10	4	6	60
Welbutrin Alone (1)	20	0	20	100
>1 intervention (6)	54.5	33.5	21	38.53211009

Figure B: Absolute quantity reduction in cigarette usage specific to each intervention.
Figure C: Percent reduction in cigarette usage specific to each intervention, with trend-line representing goal of 25%.

DISCUSSION

We reached our aim of a 25% reduction in cigarette use among patients presenting to our residency clinic. This was statistically significant, though no individual intervention independently reached significance, suggesting that the infrequently prescribed bupropion and nicotine gum drove much of this effect. Patient education was the most commonly employed intervention. Lack of follow up was a primary limitation of this study. The small number of pharmacologic interventions, despite their apparent efficacy, likely limited the overall cigarette reduction, and may be explained by patient and/or provider hesitancy or unfamiliarity with medical management for this problem. Further work must be done to achieve a larger study population and to maximize the use of successful interventions, perhaps by educating providers on efficacy of pharmacologic therapy, which we hope will lead to a larger degree of smoking cessation.

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