Objectives To study the smoking abstinence rate by a group behaviour intervention combine with varenicline.

Methods Smokers willing to make a quit attempt were randomly allocated, using varenicline combine with a group behaviour intervention smoking cessation programme, or to a control group that received varenicline only to quitting. The primary outcome was 12 weeks self-reported continuous smoking abstinence, biochemically verified by exhaled CO test at 3 months.

Results We assessed 52 participants for eligibility. Eight were excluded. 27 smokers were allocated to the group behaviour intervention and varenicline, another 25 smokers were allocated to the control group; More participants had quit at 4 weeks in the group behaviour intervention compared to the control group: 70.3% vs 52%, p>0.05; 62.9% vs 32% at 12 weeks, p<0.05; Reported quit rates remained high difference at 6 months, but there was some
uncertainty about between group differences because of incomplete follow up.

**Conclusions** he group behaviour intervention therapy will improve the quit rate with medicine. This study provide a new effective behaviour intervention way to help smokers to quit with medicine.