

# A longitudinal study of transitions between smoking and smokeless tobacco use from the ITC Bangladesh Surveys: Implications for tobacco control in the Southeast Asia region

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## Abstract

**Background:** In Southeast Asia, tobacco use is a major public health threat. Tobacco users in this region may switch between or concurrently use smoked tobacco and smokeless tobacco (SLT), which makes effective tobacco control challenging. This study tracks transitions of use among different product users (cigarettes, bidis, and SLT) in Bangladesh, one of the largest consumers of tobacco in the region, and examines factors related to transitions and cessation.

**Methods:** Four waves (2009–2015) of the International Tobacco Control (ITC) Bangladesh Survey with a cohort sample of 3245 tobacco users were analysed. Generalized Estimating Equations (GEE) models were used to explore the socioeconomic correlates of transitions from the exclusive use of cigarettes, bidis, or SLT to the use of other tobacco products or quitting over time.

**Findings:** Among exclusive cigarette users, most remained as exclusive cigarette users (68.1%). However, rural smokers were more likely than urban smokers to transition to bidi use (odds ratio [OR] = 3.02, 95% confidence interval [CI] = 1.45–6.29); to SLT use (OR = 2.68, 95% CI = 1.79–4.02) and to quit tobacco (OR = 1.57, 95% CI = 1.06–2.33). Among exclusive bidi users, transitional patterns were more volatile. Fewer than half (43.3%) of the exclusive bidi users maintained their status throughout the waves. Those with higher socio-economic status (SES) were more likely to quit (OR = 4.16, 95% CI = 1.08–13.12) compared to low SES smokers. Exclusive SLT users either continued using SLT or quit with minimal transitions to other products ( $\leq 2\%$ ). Nevertheless, males were more likely to switch to other tobacco products; younger (OR = 2.94, 95% CI = 1.23–6.90 vs. older), more educated (OR = 1.55, 95% CI = 1.77–3.12 vs. less educated), and urban SLT users (OR = 0.52, 95% CI = 0.30–0.86 for rural vs. urban users) were more likely to quit.

**Interpretation:** Complex transitional patterns were found among different types of tobacco product users over time in Bangladesh. These findings can inform more comprehensive and multi-faceted approaches to tackle diversified tobacco use in Bangladesh and neighbouring countries in the Southeast Asia region with similar tobacco user profiles of smoked tobacco and SLT products.

## Recommended Citation

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