

DOI: [10.4081/mrm.2022.824](https://doi.org/10.4081/mrm.2022.824)

Long-term benefits of a new oral appliance on adult snoring: A trend analysis

Jui-Kun Chiang,¹ Yen-Chang Lin,² Hsiao-Chen Yu,² Chih-Ming Lu,^{3*} Yee-Hsin Kao^{4*}

*These authors contributed equally

¹Department of Family Medicine, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi

²Nature Dental Clinic, Puli Township, Nantou

³Department of Urology, Dalin Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Chiayi

⁴Department of Family Medicine, Tainan Municipal Hospital (Managed by Show Chwan Medical Care Corporation), Tainan, Taiwan

Corresponding author: Yee-Hsin Kao, MD, Department of Family Medicine, Tainan Municipal Hospital (managed by Show Chwan Medical Care Corporation), 670 Chung Te Road, Tainan, 70173 Taiwan. E-mail: m2200767@gmail.com



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Supplement 1. Codes for the predicting snoring rates based on the authors' model.

$$\begin{aligned} \text{Logit of (Y=snoring rates)} &= \\ &-8.038 \\ &+ (-0.630)* (\text{LOA.1cm, yes =1, no=0}) \\ &+ (-5.037)* (\text{LOA.2.5cm, yes =1, no=0}) \\ &+ 2.516*(\text{daytime sleepiness, yes =1, no=0}) \\ &+ 0.696* (\text{recording time within 5.5-7.5 hours, yes =1, no=0}) \\ &+ 2.108*(\text{snoring rate(t-1), >10\%, yes=1, no=0}) \\ &+ 1.673*(\text{snoring rate(t-3), >10\%, yes=1, no=0}) \\ &+ 1.319*(\text{snoring rate(t-5), >10\%, yes=1, no=0}) \\ &+ 0.987*(\text{snoring rate(t-6), >10\%, yes=1, no=0}) \\ &+ 1.238*(\text{snoring rate(t-7), >10\%, yes=1, no=0}) \\ &=\Sigma x \end{aligned}$$

$$\begin{aligned} Y / (1-Y) &= \exp(\Sigma x) \\ Y &= \exp(\Sigma x) / (1+ \exp(\Sigma x)) \end{aligned}$$

For example, a patient with 6-hour sleep duration, daytime sleepiness, LOA-1, day t-1 snoring rate (49th day) 8%, t-3 snoring rate (47th day) 7%, t-5 snoring rate (45th day) 8%, t-6 snoring rate (44th day) 20%, t-7 snoring rate (43rd day) 25%, and the 50th day predictive snoring rate was 3.8%.

$$\begin{aligned} \text{Logit of (Y=snoring rates)} &= \\ X &= -8.038 \\ &+ (-0.630)*1 \# (\text{LOA.1cm, yes =1, no=0}) \\ &+ (-5.037)*0 \# (\text{LOA.2.5cm, yes =1, no=0}) \\ &+ 2.516*1 \# (\text{daytime sleepiness, yes =1, no=0}) \\ &+ 0.696*1 \# (\text{recording time within 5.5-7.5 hours, yes =1, no=0}) \\ &+ 2.108*0 \# (\text{snoring rate(t-1), >10\%, yes=1, no=0}) \\ &+ 1.673*0 \# (\text{snoring rate(t-3), >10\%, yes=1, no=0}) \\ &+ 1.319*0 \# (\text{snoring rate(t-5), >10\%, yes=1, no=0}) \\ &+ 0.987*1 \# (\text{snoring rate(t-6), >10\%, yes=1, no=0}) \\ &+ 1.238*1 \# (\text{snoring rate(t-7), >10\%, yes=1, no=0}) \end{aligned}$$

$$X = -3.231$$

$$\begin{aligned} Y / (1-Y) &= \exp(X) \\ Y &= \exp(X) / (1+ \exp(X)) \\ Y &= 3.8\% \end{aligned}$$