

How Do Consumers Use the Candidate MRTP Tobacco Heating System (THS): Analysis of Whole Offer Test Data from Five Countries

S.Roulet¹, P.Magnani¹, G.Kallischnigg², S.Badoglio¹, K.Ackermann³, M.Veit³, A.Ramazzotti¹

¹Philip Morris International Management S.A., Lausanne, Switzerland (Part of Philip Morris International Group of Companies)

²ARGUS – Statistics and Information Systems in Environment and Public Health, Berlin, Germany, ³FehrAdvice & Partners, Zurich, Switzerland

Introduction

Philip Morris International (PMI) has conducted consumer studies in five countries for one of its candidate Modified Risk Tobacco Products (MRTPs), the Tobacco Heating System (THS). THS is comprised of a THS device and THS Tobacco Sticks named as “HeatSticks” and designed to be exclusively used with the THS device. The THS device and HeatSticks are currently sold in a few markets outside US.

PMI has conducted ‘Whole Offer Test’ (WOT) studies in Japan (Nagoya, Osaka, Tokyo; n=868), Italy (Bari, Milan, Rome; n=800), Germany (Dresden, Hannover, Munich; n=605), Switzerland (Basel, Berne, Geneva, Lausanne, Zurich; n=581), and South Korea (Busan, Seoul n=1068) between June 2013 and June 2015.

The WOTs have been undertaken to evaluate the adult smoker response to different elements of THS offer and their likelihood of switching from conventional cigarettes (CC) to THS.

Methods

WOT consists of a single group, descriptive actual use study of THS involving an assessment of participants’ self-reported, stick-by-stick consumption of HeatSticks and of CC. The study population included a quota sample of adult smokers aged between one year above the national legal smoking age and 64 years. The sample was frequency matched to the adult smoker population in terms of age, gender, social status, and main CC brand. Participants were recruited using market research databases.

During the observational period, participants were free to consume both HeatSticks and CC ad libitum. They had access to HeatSticks at no expense, while they had to purchase CC at their own expense. THS devices and HeatSticks provided to participants were unbranded. The duration of the observational period was four weeks.

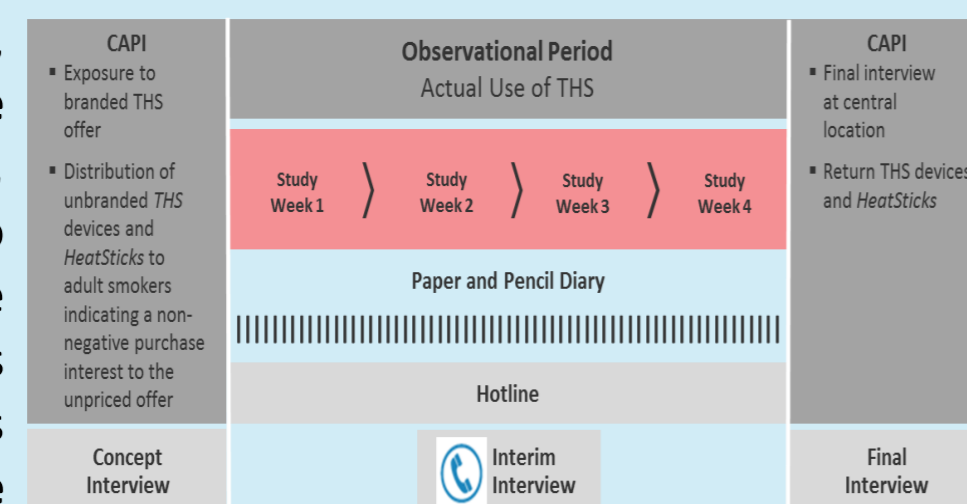


Figure 1. WOT Study Design

Results

The proportion of participants who started using HeatSticks by the end of the observational period ranged from 36.1% (Italy) to 76.3% (South Korea).

➤ Start using HeatSticks is defined as ≥ 100 HeatSticks consumed during the observational period (analogous definition of smokers of CC in WHO, 2008).

By the end of the observational period, between 18.0% (Switzerland) and 47.4% (South Korea) of participants who started using HeatSticks, switched to HeatSticks.

➤ Switch to HeatSticks is defined as $\geq 70\%$ of tobacco products (CC+HeatSticks) used are HeatSticks, after participant ‘starts using’ HeatSticks, in any given week.

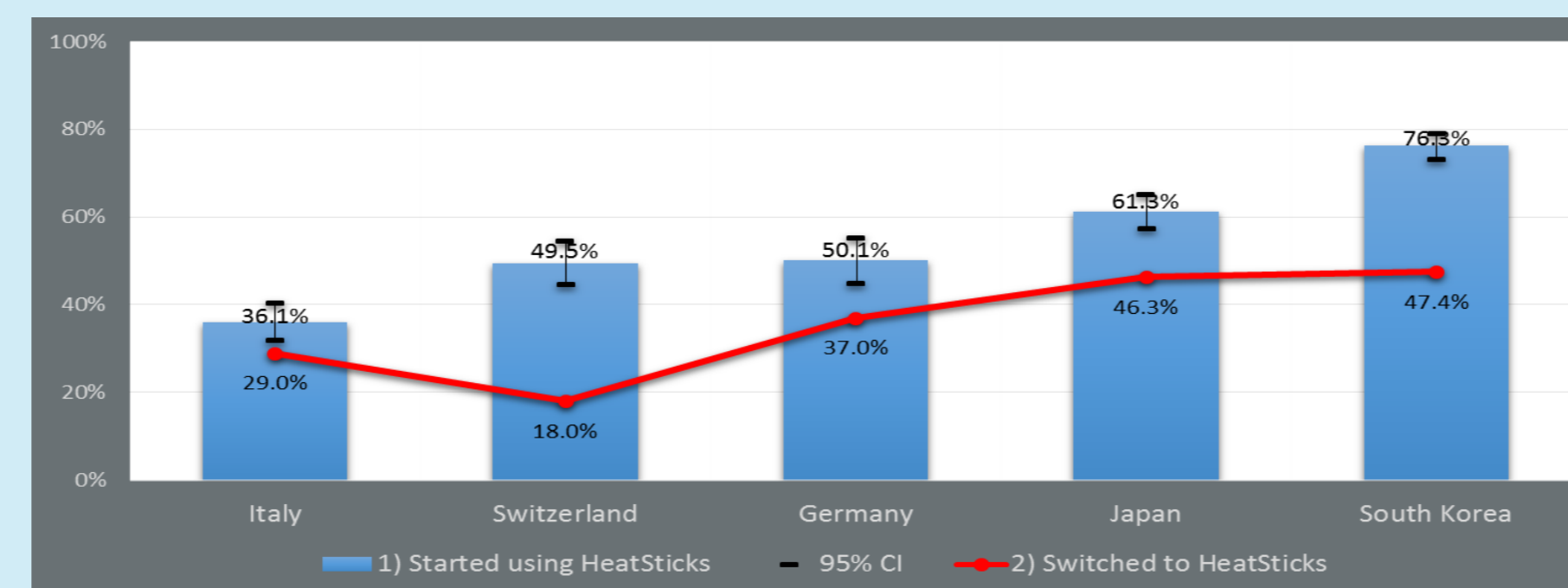


Figure 2. Adult Smoker Participants Who Started Using HeatSticks and Adult Smoker Participants Who Switched to HeatSticks

The proportion of participants, among those who switched to HeatSticks, who switched back to CC by the end of the observational period ranged between 0.0% (Japan) and 3.3% (South Korea).

➤ Switch back to CC is defined as $\leq 30\%$ of tobacco products used are HeatSticks, after participant ‘starts using’ and ‘switches’ to HeatSticks, in any given week.

Among participants who started using HeatSticks, between 39.9% (Japan) and 60.7% (Switzerland) used both CC and HeatSticks by the end of the observational period.

➤ Combined use of CC and HeatSticks is defined as $>30\%$ and $<70\%$ of tobacco products used are HeatSticks, after participant ‘starts using’ HeatSticks, in any given week.

Across countries, the daily average total tobacco consumption (i.e. the number of HeatSticks and CC consumed) measured during the observational period was lower, by approximately two sticks, than the self-reported consumption of CC before the observational period.

Results

During the last week of the observational period, between 3.9% (Switzerland) and 15.3% (South Korea) of participants started using HeatSticks and had substituted CC completely or almost completely with HeatSticks (i.e. HeatSticks consumption $>95\%$ of tobacco products).

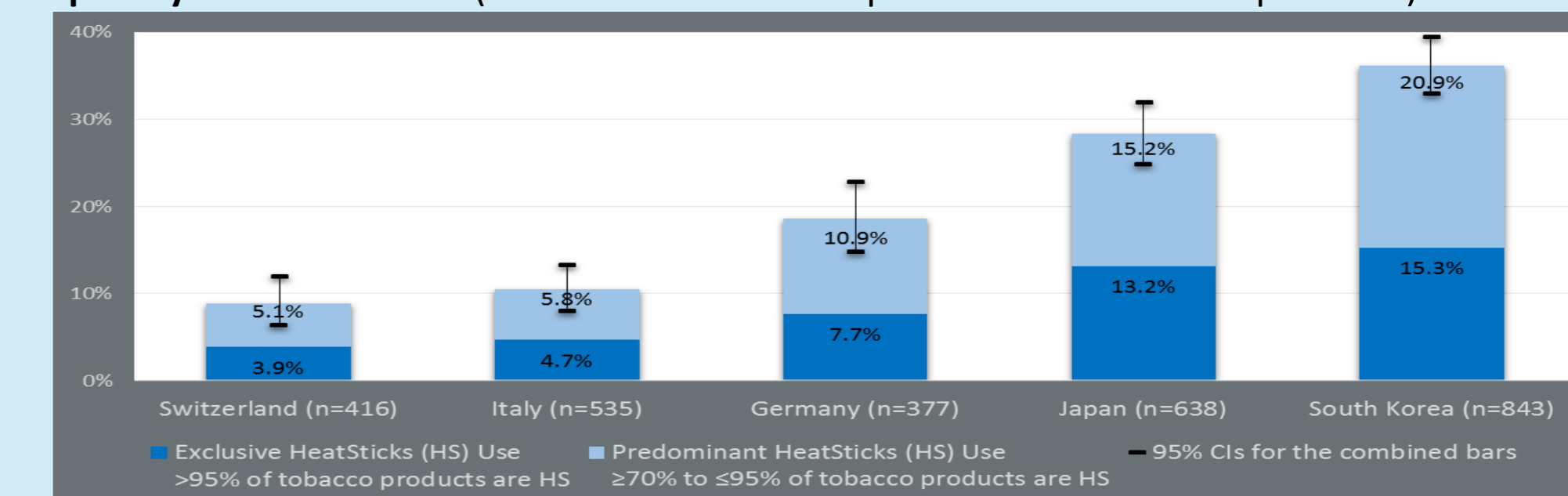


Figure 3. Participants Who Started Using HeatSticks and With Exclusive/Predominant Use

Across countries, switchers (i.e. subsample of participants who switched to HeatSticks) and non-switchers (i.e. subsample of participants who did not switch to HeatSticks) were similar in terms of gender distribution. In Japan, Italy, Switzerland and South Korea, the proportion of switchers aged one year above the national legal smoking age and 24, was lower compared to non-switchers. In Germany, switchers and non-switchers were similar in terms of age.

Conclusions

Across countries, a proportion of participants adopted a usage behavior involving exclusive use of HeatSticks, suggesting that HeatSticks are able to substitute CC completely or almost completely. Results also indicate that when adult smokers switch to HeatSticks, the likelihood of relapsing to CC is limited.

Based on the results, there is no evidence that would suggest that the availability of HeatSticks would lead to an increase in daily average total tobacco product consumption.

Moreover, the results also indicate that HeatSticks may be more attractive to adult smokers aged above 25 years than to young adult smokers.

REFERENCES

WHO (World Health Organization). Measuring tobacco use behaviours. World Health Organization; 2008.