

# Is there money in mouth pain?

*Donna Kotronis, McCann-Erickson, and Michael Lieberman, Multivariate Solutions, show how simple research and careful analysis revealed untapped market potential*

**T**HE BRAND described in this case study is one of roughly four key players that dominate the US over-the-counter (OTC) topical analgesic mouth pain reliever category, and also compete with a myriad of small unadvertised brands in the tooth and gum aisle.

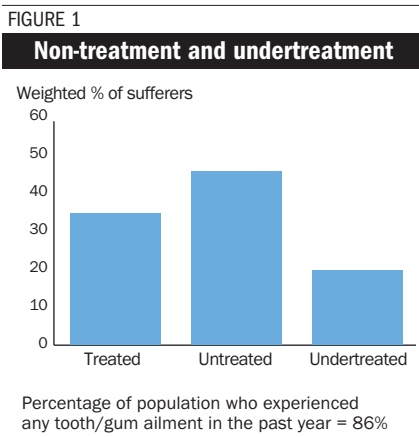
Recently, the brand had suffered from an eroding base of its regular strength users and the loss of significant sales for the canker sore ailment occasion to a new competitor. This competitor is a new brand entry that launched a cold sore/fever blister-specific product that claims shortened healing time and is priced two to three times higher than all major competitors. It was originally supported with 25m ad dollars, which is on average six times the spend level of key players. The competitor has been wildly successful, achieving \$36m in sales and elevating the brand to tie for second place. Moreover, it has doubled the total category in two short years.

The agency and brand team suspected that this real category growth in a low-involvement, infrequent-use category (suffering is typically two to three times per year) may actually be the result of a significant number of sufferers either not treating or undertreating – rather than the actual number of mouth pain occasions they suffer. The stimulus of new activity by the competitor had flushed out some of these latent category buyers.

## Assessing the problem

The first step was to review existing brand data and the competitive communication environment. This included a brand review and recommendations of marketing strategies, and the team went on to review current platforms and media spend to get to the bottom of the problem.

The next stage was to field a mini online quantitative study among 300



mouth pain sufferers to test our hypothesis that many sufferers do not actually treat, or treat less than they suffer; to establish OTC brand usage; and to quantify brand associations with key benefits such as relief and healing time. From this study we hoped to present to the brand team hard figures on percentages of undertreated mouth pain; the outlook and positioning of their brand; and how much money could potentially be made if the market was fully exploited.

For the last goal we developed a volume forecast analysis to quantify the ‘untreated and undertreated’ revenue potential for both category and brand. The method was to size the revenue potential on the basis of untapped occasions of mouth pain. Then we developed a sophisticated simulation model to validate the likelihood of the occasion potential and estimate a best-case, worst-case, and most-likely-case revenue potential for the category and the brand. What we learned was that there is a lot of money to be made in mouth pain.

## Bad news ... and good news

Most people suffer from mouth pain (86%). Toothache continues to be the most prevalent ailment, but cold sores/fever blisters are the most

frequently experienced. The bad news is that most people do not treat their mouth pain, and those that do are not satisfied with their pain relief.

The good news (for the brand involved in this case) is that mouth pain sufferers seem to be advertising-responsive. Reported incidence has risen for those ailments that brands in the category have supported through advertising. Tapping into the lack of treatment action and providing more motivation to treat ailments can mean significant revenue potential for the brand.

## Sizing up the opportunity

In order to emphasise the point, we employed a sophisticated forecasting technique to quantify the potential revenue in the existing market. Before this, though, we needed to have an idea of what percentage of mouth pain is left untreated.

We found from the research that nearly two-thirds (65%) of all mouth pain occurrences (which are extremely widespread through the population) are either untreated or undertreated (Figure 1).

## How much could this be worth?

The Monte Carlo method is a market-forecasting tool that enables us to combine differing factors with different ranges and distributions. While it is a relatively simply matter to develop a ‘guess’ for individual input, what is at issue is the ‘soup’ – the combined guess based on all the factors considered together.

In a Monte Carlo simulation, an Excel spreadsheet is created and the cells defined, based on their ranges and behaviours. For example, total category sales may be uniformly distributed between \$190m and \$210m, meaning that there is an equal chance of the actual figure being anywhere in between. The number of mouth pain occasions might

have an average of two, but is a bell-shaped probability curve: a normal distribution where the likelihood of one occasion is equal to the likelihood of three occasions. The number of mouth pain occasions treated might have a mean of 1.04, but this is exponentially distributed. In other words, it is more likely to be zero than two.

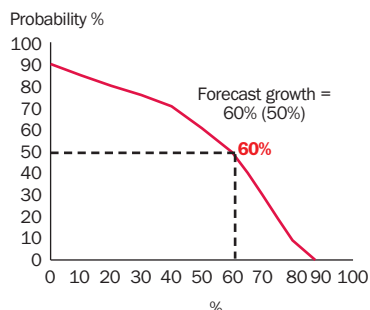
Once the cells have been set up and defined, a backend Excel software program called Crystal Ball runs the simulation 1000 times and charts all possible outcomes. The 1000 outcomes are then arrayed in a cumulative chart, so that the probability of revenue falling within a certain interval can be read off. This gives us the expected outcome, the worst-case scenario, and the best case. Also, clients can be told the chances of a given outcome anywhere in between. For example, they might want to know, given the forecast scenario, the chances of them making \$40m. We could answer, say, 65% – in other words, it is quite likely.

Key inputs for the Monte Carlo simulation are summarised below.

- Total US sales = total sales for treaters + assumed sales for non-treaters if fully converted.
- Occasion opportunity: untreated + undertreated occasions.
- Additional revenue potential projection = total sales multiplied by % of occasion opportunity.
- Revenue is forecast for both total US category of tooth and gum analgesics and brand markets.

Once the Monte Carlo is run, the mean results might be slightly different from the original spreadsheet. For example, in our case the Monte Carlo expected percentage of untreated mouth pain is slightly higher than that shown

FIGURE 2  
**Untreated gum/tooth pain occurrences**



Validating the reliability of the results			
'The Monte Carlo' simulation model also gives us an indication of the worst and best-case volume potential scenarios			
	Most likely case	Worst case	Best case
<b>Category sales growth</b> potential untreated/undertreated occasions are converted	118,900,000	1,380,000	176,917,000
<b>Brand dollar growth potential</b> assumes share is constant at 18%	21,337,000	653,000	31,845,000

above. The reason is simple. People are more likely to have an incidence of mouth pain than they are to treat it. When run 1000 times, this higher likelihood is evident and the results show the market potential to be higher than the straight output from the study. This is the power of the technique.

Results of the simulation are summarised below.

- The mean expected percentage of untreated tooth and gum discomfort occasions was validated to be 60%.
- At 60% of occasions, the expected additional category revenue if fully exploited is \$118,892,000.
- At 60% of occasions, the expected additional brand revenue if fully exploited is \$21,337,000.

The cumulative chart produced by the Monte Carlo simulation is shown in Figure 2. The middle point, showing the mean expected percentage of untreated occasions, is shown in red as 60%.

The table above summarises the range of potential volume scenarios. This assumes that the brand retains its current market share. If market share were to grow as a result of an effective campaign, the picture would become even rosier.

With even a modest effort, the brand can be virtually assured of a gain in revenue of nearly \$20 million – brand tracking and sales data show the category is highly advertising-responsive and the competitor's success confirms that quick growth is easily possible. The Monte Carlo shows that, category-wide, the expected uncollected revenue for tooth and gum analgesics is nearly \$118 million. The point has been made. There is a lot of money in mouth pain and more out there waiting.

At this point in the client presentation mouths hung open. There was no further

need to discuss if action should be taken, but rather what action.

### The new environment

There is a changing sea of competitiveness in a fluctuating and increasingly highly developed market. More and more brand managers are demanding answers from their brand teams. New understanding and sharper perspectives make inadequate the shotgun approach that has been used successfully in the past.

It is useful and desirable to measure the need in order to provide the sort of data given by this easily fielded and inexpensive survey. However, the successful employment of a sophisticated tool, such as the Monte Carlo market simulation, enables agencies to drive home their point more thoroughly and help keep their clients one step ahead. ■



**Donna Kotronis** is a vice president and strategic planner at McCann-Erickson New York. She is responsible for consumer insight and brand development on global brands including ExxonMobil and DuPont.

donna\_kotronis@mccann.com



**Michael Leiberman** is founder and president of Multivariate Solutions, a statistical and market research consultancy that works with major advertising, public relations, and political strategy firms.

michael@mvsolution.com