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**Studies: TRaC & the
Dashboard to Decision
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Population Services International
1120 Nineteenth Street NW, Suite 600
Washington, DC 20036

Studies: TRaC & the Dashboard to Decision Making Process

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Contact Information

Daun Fest¹, Dhaval Patel, PhD², MPH, Navendu Shekhar, MSc, MPA³, and James Ayers⁴

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|---|---|
| 1. Interventions Director,
PSI/REsulTS Initiative | For more information, please contact:
Daun Fest |
| 2. Deputy Director, PSI/Research
Project Director, PSI/REsulTS
Initiative | 8 Hillside Road
2nd Floor, Block B
Metropolitan Park
Parktown, South Africa 2193 |
| 3. Regional Researcher,
PSI/Southern Africa | |
| 4. Interventions Deputy Director,
PSI/REsulTS Initiative | Telephone +27 11 484 5320
Email dhaval@sfh.co.za |
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STUDIES: TRaC & THE DASHBOARD TO DECISION MAKING PROCESS

LEARNING OBJECTIVES

By the end of this chapter, the reader will be able to:

1. Understand the basic components of the dashboard to decision making (DDM) process for tracking results continuously (TRaC) surveys.
 2. Create a DDM document.
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BACKGROUND

WHAT IS THE PSI DASHBOARD?

The PSI Research Division adapted the dashboard used by Coca Cola as a tool for social marketing decision making. The dashboard is made up of five standard tables with data that is useful for making decisions related to strategic, project, and marketing planning.

The dashboard is designed to answer questions that cannot be made without evidence and to do so with timely, accurate, objective, and easy to read instruments and measures that complement a social marketer's experience or feeling (Balch & Sutton, 1997).

PSI uses the dashboard to identify drivers and inhibitors of product consumption, health services use, or more generally the adoption of a behavior. It is intended to:

- Provide a quick means for social marketers to identify those perceptions that drive behavior change and supply source choice in HIV/AIDS, reproductive health, and maternal and child health.
- Track key logical framework indicators and measures of product and service coverage, quality of coverage, and access.
- Determine whether the marketing mix is effective and equitable in changing behavior.

In 2005, PSI/Nepal's research team completed the evidence-based decision making (EBDM) process for the TRaC (tracking results continuously) dashboards with the social marketing team. The social marketers went off and discussed, debated, and tried to understand what the findings indicated in order to improve programming. After getting bogged down in the details of trying to address everything yet not making any programmatic decisions, the team came up with the dashboard to decision making (DDM) process. The output was a simple two page DDM document outlining the priority behavioral

determinants. It was then used to direct the communication strategy. The DDM document then became the key document used by all social marketers to ensure that all communication and interventions address only the prioritized behavioral determinants.

KEY TOOLS USED IN THE DASHBOARD

The tool uses evidence gathered through population and service delivery based studies. There are five tables that fall into three broad categories. Together they are referred to as **the dashboard**.

1. **Segmentation Tables** – There are two segmentation tables, one relating to behavior change or effectiveness and the other to preferred source of supply (be it the public sector, social marketing sector, or commercial sector) for purposes of identifying opportunities for increased efficiency. They are the most important in the PSI Dashboard.
2. **Monitoring Tables** – There are two monitoring tables, one relating to levels and trends in exposure, drivers and inhibitors, and behavior and the other relating to coverage, quality, and access to the PSI product or service delivery system (Chapman & Capo-Chichi, 2004).
3. **Evaluation Table** – There is a single evaluation table that measures the effectiveness of exposure to the social marketing campaign and whether that exposure results in unexpected positive consequences, halo effects, unexpected negative consequences, or substitution effects (Chapman, 2004).

GENERATING THE DATA FOR THE DASHBOARD

PSI uses two types of study designs to complete the dashboard; they are referred to as TRaC and measuring access and performance (MAP).

Project TRaC (Tracking Results Continuously) collects data among the target population through household, target group, or intercept surveys (Chapman & Coombes, 2003). TRaC provides data for four of the five dashboard tables:

1. segmentation table for behavior change,
2. segmentation table for supply source choice,
3. monitoring of population table, and
4. evaluation table.

They are repeated to produce updates for purposes of marketing plans and project monitoring and evaluation.

Project MAP (Measuring Access and Performance) collects data among product and service providers and provides data on the proximity of a population to the product or service delivery. MAP reports:

1. measures of coverage,
2. quality of coverage and access,
3. access, and
4. equity of access.

MAP is the source of one table in the dashboard that reports coverage, quality of coverage, access, and equity of access of the PSI product and/or service delivery system.

The PSI Research Division has implemented Project TRaC and Project MAP in almost every PSI platform. The process generates dashboards that include segmentation tables, monitoring tables, and evaluation tables which provide social marketers with a quick means to identify those perceptions that drive behavior change and supply source choice, to track key logical framework indicators and measures of product and service coverage, quality and access, and to determine whether the marketing mix is effective and equitable in changing behavior.

After the dashboards have been generated, the researchers implement the evidence-based decision making (EBDM) process with social marketers. The EBDM process identifies all of the behavioral determinants (or bubbles), coverage gaps, population characteristics, and exposure information that are significant from the dashboard tables. The social marketers are then tasked to use the outcome of the EBDM process to make informed, evidence-based decisions to improve programming and interventions. In reality, the PSI platforms often do not have the resources to effectively address all of the behavioral determinants or coverage gaps identified in the EBDM process. The methodology of the PSI dashboards is most effective if a program prioritizes a few of the behavioral determinants or coverage gaps to focus on and address them for a period of time, continue tracking the impact on those priorities, and then make decisions to move on to the second priorities.

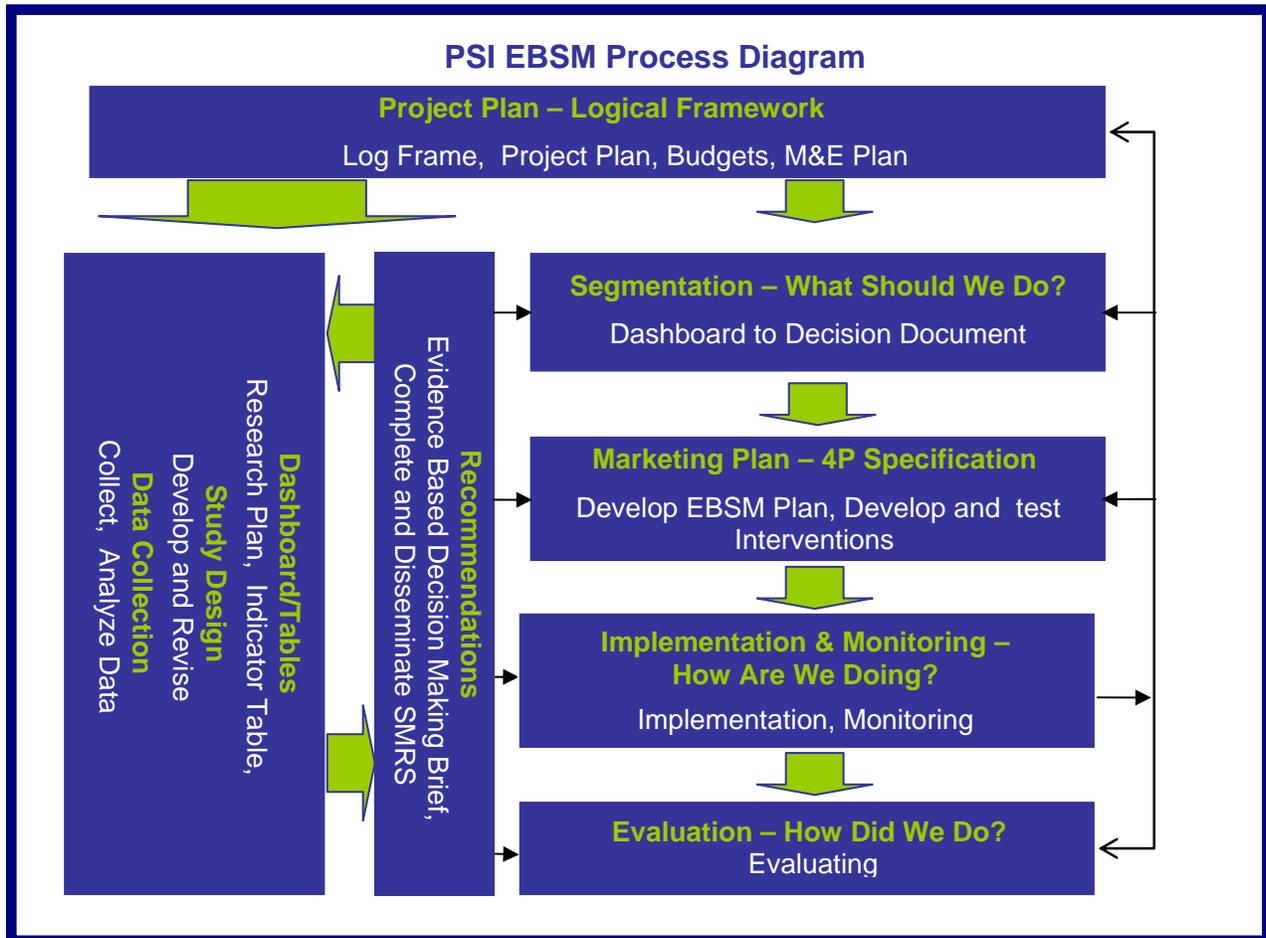
This DDM toolkit is designed to increase PSI social marketers' ability to take the information from the EBDM process and develop a DDM document that will drive the communication interventions strategy.

DASHBOARD TO DECISION MAKING (DDM) PROCESS

The key benefit of the DDM process is that it is a tool social marketers can apply to move research into action. DDM is an easy to use process that will allow social marketers to better understand and prioritize the key findings from TRaC and MAP dashboards. The process is helpful in making evidence-based programming decisions and to more strategically implement and monitor interventions.

Figure 1 below shows how the social marketing *research* process, which includes the production of the dashboard, links with the social marketing process. It is based on the backwards research approach in which research outputs such as the dashboard are designed and pre-tested first in terms of whether the recommendations that result from them are useful in the social marketing process before studies are designed and data are collected.

FIGURE 1: PSI EBSM PROCESS – UNDERSTANDING WHERE THE DDM PROCESS FITS



Implementing the DDM processes requires that social marketers clearly understand the link between the logframe, dashboards and the EBSM plan. Therefore, the first part of the TRaC DDM process includes reviewing the project proposal and logframe, lessons learned from past interventions, summary of the EBSM process, monitoring tables, segmentation tables, evaluation tables, and secondary research.

It is important to review the logframe to determine first if all of the indicators have been measured and to assess how previous interventions contributed to the progress of the indicators. This helps the social marketer to decide which indicators the strategy should focus on and prioritize the statistically significant behavioral determinants that should be prioritized.

In the case where there have been at least two rounds of TRaC surveys, analyzing lessons learned from past interventions in comparison with the results of the evaluation table assists the social marketer to determine whether past strategies have been effective in impacting on key behavioral indicators. Where there is only one round of TRaC, a baseline is being established. This is also a way to identify the platform strengths and which behavioral determinants and interventions the platform can quickly address and implement effectively. With this analysis, the social marketer can determine whether the program should keep implementing interventions addressing the same behavioral determinants or move on to the next set of prioritized behavioral determinants.

The PSI researchers use the EBDM process to review each of the dashboard tables and clarify how to interpret the findings in the dashboards. This process often results in a long list of significant behavioral determinants or coverage gaps that could be addressed in programming. It is the social marketers' responsibility to then take that information and quickly turn it around into the DDM document. The need for the quick turn around time is to build on the momentum of the EBDM process in order to prioritize the significant behavioral determinants or coverage caps that the platform can most quickly and efficiently address.

Secondary research such as the country DHS, qualitative, and other quantitative research is important to also consider in the DDM process. There is often data from these resources that provide additional support for prioritizing one bubble over another.

The DDM process is a means to verify gut feelings and past experiences with evidence generated from the dashboard and secondary research. It is essential to analyze and compare the research data with actual experience implementing interventions as well as *gut* feelings social marketers have from those experiences. For example, during the process, the social marketer needs to keep in mind the capacity and past experience of the organization. Specifically, what has been addressed in the past that either could be built off of with future interventions or was not successful and should be abandoned?

HOW-TO-STEPS

Due to the different types of components being addressed in TRaC and MAP, it is recommended to complete a separate DDM process and document for TRaC and a separate one for MAP. This section will address the different components for implementing the TRaC DDM process, assuming that there have been at least two rounds of TRaC. The DDM process for MAP is addressed in a separate chapter.

TRAC DDM PROCESS

The most important part of reading the dashboard tables is having a working understanding of the different components such as the risk group, statistical significance, behavioral determinants, odds ratio (OR), population characteristics, exposure, and relevant statements. (These terms are defined in the glossary in the appendix.) More importantly, the researcher should have clarified these in the EBDM process.

The TRaC DDM document is short, concise, and focuses on the entire dashboard. It requires that the analysis of the logframe, segmentation, monitoring, and evaluation tables be incorporated into the DDM document. The process starts with reviewing the logframe, secondly analyzing the monitoring table, then analyzing the segmentation table, reviewing the evaluation table, and finally developing the DDM document.

Key Components and Steps for Project TRaC (DDM Process)

The key components and steps in completing the DDM process and document for the second round TRaC dashboard are outlined in this section.

STEP ONE – REVIEW LOGFRAME

1. Were all of the logframe indicators captured in the monitoring table?
2. Which indicators should be changed because the monitoring table shows they have already been met or the segmentation table shows they are no longer relevant? (Note: indicators may not be relevant because a high percentage of the target has been reached and the level of effort to reach more is too costly and/or they are not a driver to achieving the desired behavior.)
3. Which indicators should be added?
4. Which indicators are most important to be addressed in the new strategy?

STEP TWO – ANALYZE THE MONITORING TABLE

1. Comparing between the two rounds of data, which indicators and behavioral determinants are starred (i.e., significant)? Are they moving in the right direction?
2. Update the logframe by inserting the progress of purpose and output level indicators from the monitoring table into the logframe.
3. Review each of the median scores for behavioral determinants that are significant. Are they low or high? The median score is based on the scale of questions either one thru four or one thru five. The closer the score is to the higher number, the more likely the target is agreeing with the desired response. Are they moving in the right direction? If not, determine why.
4. Highlight the starred (statically significant) behavioral determinants that have lower median scores. Treat a single starred bubble the same as a double or triple starred bubble.
5. Review the statements of each bubble presented in the reliability analysis table. Accurately describe the bubble and provide just one description of the bubble that incorporates all of the key elements from the statements. This helps create a unified understanding of the bubble.
6. Under the exposure sections, review each of the components presented. Highlight the exposure components that have the higher reach. Compare the reference with the low, medium, and high exposure in the evaluation table.
7. Review the interventions that were implemented during the period referred to in the questionnaire. Compare this to the exposure presented in the monitoring table. Identify those interventions that do not have high exposure and determine why that is. Should the intervention be changed, increased in frequency, or cancelled?

STEP THREE – ANALYZE THE SEGMENTATION TABLE

1. Identify the behavioral determinants that have stars and review the relevant statements used to define those behavioral determinants.
2. Identify the behavioral determinants that are the strongest by determining which have stars and odds ratio greater than one (>1).
3. Look at the median scores for each of the starred behavioral determinants to identify the ones that are closer to strongly agree.
4. Review the indicators identified from the logframe that were most important to address.

5. Review secondary research to determine if there is supporting data that the program should prioritize one bubble over another.
6. Determine which behavioral determinants the platform has the time, resources, and ability to most effectively and quickly address.
7. Consider what other organizations are doing to address the bubbles. Are they addressing some of the behavioral determinants? Are they are doing it well; thus, should your organization also address the same behavioral determinant?
8. Prioritize two or maximum three behavioral determinants that the program will address.
9. Once a short list of the starred behavioral determinants is created, the next step is to prioritize that list and come up with two or at most three behavioral determinants that the social marketers will work on in the coming year. This prioritization is a bit of a work of art and there are many considerations that need to go in at this stage. Examples of these considerations include:
 - A. Look at the whole theme and aspects of the bubble. Try and come up with key messages/interventions that are likely to affect/increase the whole bubble. Also, please restrict the theme to what is conveyed through the scale items that were asked. Many times social marketers have their own impression of what *self-efficacy* may mean and may start designing interventions around that impression. This approach is incorrect. The self-efficacy definition as conveyed by the scale items (statements) that were asked in the questionnaire should drive the design of the interventions.
 - B. Compare the odds ratio (OR) of each starred bubble. The OR indicates the expected magnitude of output for one unit of input. For example, an OR of 1.5 means that if the score on the bubble were to increase by one unit, the odds¹ of the behavior increases by 1.5 times. The higher the OR, the larger the potential impact of that bubble.
 - C. Ignore behavioral determinants with ORs less than 1.0. These mean that increasing the scores on that bubble will not have a positive increase on the behavior. It may have a negative effect. One alternative way of looking at ORs less than one (<1) is to say that the “non-users” are already displaying the required level of behavior (and higher than what users are displaying). So, increasing that bubble is not likely to change their behavior any more.
 - D. If the absolute score on a bubble is to be considered (e.g., to see which starred behavioral determinants have the lowest score or to say, “This is a very low score on belief. I want this to go up.”), then use the scores provided in the monitoring table not the segmentation table.
10. Analyze the starred population characteristics to determine what (if anything) should be changed in targeting the non-users or non-behavers. Guidelines for reading and interpreting population characteristics:
 - A. Population characteristics are largely immutable (non-changing), so they are different than the rest of the segmentation table. The rest of the segmentation table is addresses changing behavioral determinants and what effect it will have on the behavior. Population characteristics cannot be used for *knowing what to do*.
 - B. Population characteristics can, however, be used very well for targeting (i.e., who is displaying or not displaying the desired behaviors). For example, the population characteristics may indicate that a non-user is significantly more likely to be uneducated,

¹ The odds are defined as the probability of the event happening (e.g., using condoms) divided by the probability of the event not happening (e.g., not using condoms).

from a rural area, older, and male. This information can be used for targeting interventions, and the social marketer may decide to target older men from rural areas who have little or no education.

- C. However, there are other tools available to choose the target group, these include:
- a *Risk Levels* – Perhaps the rural people are not using because they are actually at lower risk.
 - b *Epidemiological Pie Information* – Based on secondary literature, epidemiological pie exercises have been done in many countries. What target group might the social marketer decide on then?
 - c *Prevalence of Disease* – Maybe the prevalence is much higher among younger populations. Therefore, even if the older population is more likely to use, the intervention will continue to target the young population.
 - d *Logframe* – What target group did the platform commit to its donors?
 - e *Resources* – Are there enough money, skills and other resources to target the desired profile?
 - f *Volumes* – A decision may be made to stick with the younger population even when they are more likely to be users because most of the sales happen with that age group (e.g., 65% of the population is below the age of 30 years contributing to most of the sales).

STEP FOUR – REVIEW EVALUATION TABLE

There are two main benefits of the evaluation table: (1) attribution of the impact to PSI interventions and (2) understanding how behavior is related to various levels of exposure and what might be optimum exposure levels.

1. Compare the reference column, which provides the baseline results, to the columns that show the results of low, medium, and high exposure.
2. Identify what behaviors are starred and determine if there were any differences between levels of exposure.
3. Review the interventions that were implemented during the period referred to in the questionnaire. Compare this to the exposure presented in the monitoring table. Identify those interventions that do not have high exposure and determine why that is. Should the intervention be changed, increased in frequency, or cancelled?

Attribution of the Impact of PSI's Interventions

Table 1 provides a summary chart as a useful guideline to interpreting the findings of comparing the results of the monitoring table and evaluation table and what that means for PSI's impact on preventive behaviors.

The first column below refers to the change shown in the monitoring table between reporting periods. The second column below refers to the change shown in the evaluation table between the baseline values and the values provided in the various exposure columns. The third column summarizes the impact of the interventions.

TABLE 1: PSI'S ATTRIBUTION OF IMPACT ON PREVENTIVE BEHAVIORS

Monitoring Table	Evaluation Table	Conclusion about PSI's Impact
Positive	Positive	+ impact
Positive	Negative	no impact
Positive	Non-significant	no impact
Negative	Positive	+ impact (mitigation effect)
Negative	Negative	- impact (substitution effect)
Negative	Non-significant	no impact
Non-significant	Positive	no impact (targeting effect)
Non-significant	Negative	no impact
Non-significant	Non-significant	no impact

Guidelines for Determining Optimum Exposure Levels

1. Analyze findings of the evaluation table through the paradigm of “What would have happened if PSI was not there?”
2. Examine the target group mentioned in the evaluation table. Is it large enough to make decisions about the entire program?
3. Consider how exposure was defined in the evaluation table before making decisions about levels of communication activity or appropriate communication channels.
 - A. In most cases, exposure is defined as “number of channels through which received PSI messages are received”. In such cases, the exposure is referring to just the dispersion of messages across different channels and is not saying anything about the relative merits/efficacy of channels.
 - B. To compare the effects of different interventions (e.g., media exposure to effects of IPC) use the following exposure definition:
 - a Exposed only to mass media
 - b Exposed only to IPC
 - c Exposed to both
 - d Exposed to neither

STEP FIVE – DEVELOP THE DDM DOCUMENT

1. The key components covered in the DDM document are: (1) risk group, (2) behavior, (3) determining the resource allocation by the prioritized behavioral determinants, and (4) determining the basic communication strategy for addressing the prioritized behavioral determinants. The document should be very short and to the point (only 2-3 pages long).
2. There should be a different DDM document for each different risk group or behavior.
3. Risk group and behavior should be the same as it was defined in the dashboards.
4. *Target Resource Allocation* – Determining the resource allocation first requires identifying all of the resources the program has available. Some examples are funds, time, staff, expertise, experience, and partnerships. Taking the resources into consideration, the social marketing team then presents which behavioral determinants will be addressed and any prioritization of how resources will be used to address each bubble.

Consider the capacity and past experience of the organization:

- A. What has been addressed in the past that either:
 - a. Could be built off of with future interventions?
 - b. Was not successful and should be fixed?
 - c. Was not successful and should be abandoned?
- B. What resources are available?
 - a. Time – Some behavioral determinants take ages to change, and there is only a year left in the project.
 - b. Money – Some behavioral determinants (e.g., social norms) cost more and take more time, and there are not enough funds to effectively achieve the change.
 - c. Skills – What is the organization good at? What bubble would the organization most likely be able to address with little additional investment?
5. *Communication and Interventions Program Design* – This section defines the elements of each bubble and outlines the interventions that will be used most effectively to address each bubble. The social marketing team will take into consideration the analysis from the exposure section of the monitoring table and the results of the evaluation table to determine whether to continue, change, or develop new interventions. Consider external factors:
 - A. What communication channels are available? Are they appropriate for the behavioral determinants being considered? For example, say it would be best to address a bubble through mass media, but the capacity (or money) to do mass media does not exist. In such a scenario, another bubble will be targeted that can be addressed through less expensive interventions.
 - B. Who else is already addressing starred behavioral determinants? Are they thought to be doing it well? Are they reaching enough of the target? If they do, the social marketer may decide to concentrate on some other behavioral determinants.
 - C. Does the logframe specifically state that certain bubbles will be addressed? If the bubble is not the chosen one, donors may require an explanation and the program may try restructure the logframe. Sometimes, when change is not possible, a program may have to address a

bubble even though it is not a key determinant or a priority. Thus, it is very important to be careful when writing logframes.

CASE EXAMPLES AND LESSONS LEARNED

The following TRaC DDM documents are examples from the PSI/Madagascar HIV/AIDS preventions project targeting youth. The TRaC dashboard tables are provided in the appendix for reference.

PSI MADAGASCAR TRaC DDM CONDOM USE OF YOUTH 15 -24 YEAR OLD

PSI Madagascar implemented the baseline TRaC survey in 2003 and the follow-up survey in 2006 in seven areas where the TOP Réseau clinics are located. The researchers completed the EBDM process with the social marketers who then completed the DDM process and developed the following DDM document. The DDM document was then used to develop the communication strategy and interventions for the condom social marketing (CSM) program. The social marketers used the document to revise the EBSM plan and to help keep all communication focused on the behavioral determinants and strategy outlined in the DDM document.

TABLE 2: PSI MADAGASCAR 2006 TRaC DDM DOCUMENT

Risk Group Sexually active married or unmarried 15-24 year old, youth in seven intervention sites around the TOP Réseau clinics.

Behavior Used condom at last sex

Targeted Resource Allocation

Progress on the results in preventative behaviors:

- The monitoring table indicates that almost all of the behaviors have increased considerably from 2003 to 2006.
- Condom use at last sex significantly increased from 24.8% in 2003 to 29.1% in 2006. There is a surprisingly much larger significant increase from 49.7% to 76.4% among sexually active males who used a condom at last sex act with commercial partner.
- There was significant increase in all elements of self-efficacy with the exception of embarrassment to purchase condoms in a shop near where they lived, where it increased from 29% in 2003 to 39.7% in 2006.
- Abstinence among 15-18 year olds increased from 65.6% in 2003 to 82.1% in 2006.

In 2003, there were seven behavioral determinants that were significant drivers to condom use (i.e., availability, social norm, social support, self-efficacy, beliefs, outcome expectations, and threat). After three years of interventions, only social support and self-efficacy remain drivers to condom use. The 2006 TRaC indicates that attitude, which is a new behavioral determinant, is an additional driver. The analysis indicates the following behavioral determinants remain key drivers that

can be addressed to increase condom use among the target group:

1. *Social Support* – Key elements are to increase discussion and support of friends, partners, and parents concerning the advantages and reasons (e.g., protects against STIs/HIV/AIDS, shows you care, keeps you healthy) to use condoms.
2. *Self-Efficacy* – Key elements include the capacity to negotiate condom use with partners, correct condom use no matter the situation, and empowerment to purchase condoms near where they live.
3. *Attitudes* – Key elements of condoms are effective in preventing STIs/HIV/AIDS; sex without a condom increases risk of STIs/HIV/AIDS, and using condoms with every sex act is an important way of staying healthy.

PSI/Madagascar's previous interventions have addressed self-efficacy with varying levels of impact. The dashboard indicates that by continuing to address self-efficacy there are greater odds of getting more non-condom users to become condom users. Therefore, approximately 60% of resources and level of effort will focus on self-efficacy.

The remaining resources and level of effort will focus on addressing attitudes concerning condom use. Since there is limited funding for CSM and less than 18 months left in the project, social support will only be indirectly addressed through IPC activities currently being implemented by peer educators at the TOP Réseau clinics.

Communication Interventions Program Design

Interventions addressing condom self-efficacy and attitudes:

Interpersonal Communication (IPC) and Small Group Interventions

1. *Female Specific Small Group Interventions* – Past experience has shown that it is important to implement some specific interventions with only females when addressing self-efficacy. Female interventions will increase self-esteem, ability to negotiate sexual relations (say no and mean it), and resist peer pressure. These interventions will be implemented by trained peer educators.
2. *IPC Interventions* implemented by TOP Réseau doctors
3. *Small Group Interventions* with both genders implemented by TOP Réseau peer educators

All of the above interventions will address and incorporate messages addressing:

1. *Self-Efficacy Elements* – Partner condom negotiation, correct condom use, and empowerment to find and purchase condoms whenever and wherever needed.
2. *Attitude Elements* – Condoms are effective in preventing STIs/HIV/AIDS;

sex without a condom increases risk of STIs/HIV/AIDS, and using condoms with every sex act is an important way of staying healthy.

Mass Media Interventions

1. *Branded radio and TV spot* addressing empowerment to find and purchase condoms whenever and wherever needed using “Protector Plus, always with me” messaging.
2. *Branded radio and TV spot* addressing condoms are effective in preventing STIs/HIV/AIDS, emphasizing that condoms are COOL and those who use them are responsible and intelligent.
3. “*Radio Roman*” *weekly radio program* that will run for three months will incorporate and address the key messages and elements of self-efficacy.
4. *MVU sessions* with TOP Réseau peer educators using videos and materials from the “Radio Roman” weekly radio program addressing both self-efficacy and attitudes.

Print Materials

A brochure will be developed to incorporate the key messages and elements on self-efficacy and attitudes. The brochure will be distributed at IPC and small group interventions as a re-enforcement of the messages provided during each intervention. The key elements from mass media will be incorporated in the materials as a re-enforcement link.

Improved Targeting

Analysis of the population characteristics indicate that interventions will have a more significant impact if there is a more refined segmentation of the 15-24 year youth. By establishing the primary target group as 15-24 year old in school and out of school youth from lower social economic and education levels, the interventions will be more effective in reaching non-condom users and engaging them to adopt the desired behavior of consistent condom use. It will also be important to implement gender specific interventions when addressing self-efficacy.

QUALITY IMPROVEMENT CHECKLIST

This section provides a check list that social marketers can use to improve the quality of the DDM process and developing the document for both TRaC and MAP.

TRAC DDM PROCESS CHECKLIST

The following checklist is designed to assist social marketers in completing the TRaC DDM process and document. It contains the key elements that are essential in ensuring quality improvement in developing the TRaC DDM document.

TABLE 3: QUALITY IMPROVEMENT CHECKLIST FOR TRAC DDM DOCUMENT

- Have all of the logical framework indicators been included in the monitoring dashboard tables?
- With the current resources, can the program effectively address the two to three behavioral determinants chosen?
- Is there a prioritization of resource allocation for each of the behavioral determinants?
- Has each of the behavioral determinants been clearly defined in the communication section of the document?
- Does the strategy address each of the priority behavioral determinants?

APPENDIX**PSI MADAGASCAR 2003 vs 2006 CONDOM USE TRaC DASHBOARD**

The following dashboard tables are the results of two TRaC surveys implemented by PSI/Madagascar in 2003 and 2006 to determine the condom use of sexually active, married or unmarried, 15-24 year old youth around seven sites where they have TOP Réseau clinics in Madagascar. These are the dashboard tables used by the social marketers to develop the TRaC DDM document above in the case study.

Segmentation Table

Behavioral Determinants of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) Prevention: Comparing Those who Used a Condom at Last Sex versus Those who did not in Madagascar within four Top Réseau Sites ² (2003)

Risk: Sexually active, married or unmarried, 15 to 24 year old youth

Behavior: Used Condom at Last Sex

INDICATORS	Behavior (N=747) (26.6%)	Non- Behavior (N=2061) (73.4%)	OR	Sig
a. OPPORTUNITY	%	%		
<i>Availability</i>				
- Able to find a preferred point of sale within 10 minutes from the house	84.4	81.0	1.40	*
<i>Social Norm</i>				
- Thought that use of condoms is common among friends of their age	60.9	47.9	1.84	***
ABILITY	%	%		
<i>Knowledge</i>				
- Know at least one sexually transmitted infection (STI) symptom	---	---	---	ns
<i>Social Support</i>				
- Talked to friends about STI prevention	55.3	48.6	1.36	**
- Talked to friends about HIV/AIDS prevention	---	---	---	ns
- Talked to partners about STI prevention	21.8	13.1	1.84	***
- Talked to partners about HIV/AIDS prevention	---	---	---	ns
- Thought that parents support the use of condoms by young people	67.2	61.2	1.45	**
- Thought that peers support the use of condoms by young people	---	---	---	ns
<i>Self-Efficacy</i>				
- Feel shame to buy a condom in a place close to home	74.5	68.8	1.56	***
- Able to refuse sexual intercourse with a person they knew a few days ago if she/he refuses to use a condom	89.8	81.0	2.36	***
- Able to refuse to have a sexual intercourse with a person they knew three months ago if she/he refuses to use a condom	---	---	---	ns

² 4 TOP Réseau sites: Antananarivo, Mahajanga, Fort Dauphin, Diégo

MOTIVATION	%	%		
Belief				
- Believed that STI can be avoided by choosing carefully their partner	---	---	---	ns
- Believed that condoms are not only to use with doubtful partners	80.1	74.2	1.32	**
- Believed that condoms do not break easily and do not reduce sexual pleasure	---	---	---	ns
Outcome Expectation				
- Believed that condoms are effective in preventing STI	88.6	84.4	2.07	***
- Believed that condoms are effective in preventing HIV/AIDS	---	---	---	ns
- Believed that condoms are effective in preventing unwanted pregnancy	91.6	90.0	2.15	**
Threat (Susceptibility)				
- Perceived medium/high risk for contracting STI if they do not consistently use condoms	---	---	---	ns
- Perceived medium/high risk for contracting HIV/AIDS if they do not consistently use condom	45.8	33.9	1.81	***
Threat (Severity)				
- Believed that AIDS really exists among Malagasy youth	---	---	---	ns
POPULATION CHARACTERISTICS				
	%	%		
Age (15 to 24 years of age)	---	---	---	ns
Level of Education (Secondary and more versus Primary)	---	---	---	ns
School Enrollment (Student versus Non-Student)	---	---	---	ns
Marital Status (Married versus Unmarried)	21.2	31.7	.49	***
Socio-Economic Status (High versus Low)	---	---	---	ns

- ns: not significant; *: p<.05; **: p<.01; ***: p<.001
- Population characteristics controlled for are age, school enrollment, education, marital status, and socio-economic status
- Pseudo-R²=27.8%
- OR= Odds Ratio
- “---“ Used for the full model but not significant in the analysis
- High socio-economic status refers to quintile five of amenities and assets possession

Monitoring Table

Trends and Levels of Indicators for Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) Prevention: Percentages and Mean Scores for Behaviors, Need/Risk, Behavioral Determinants, Exposure, and Source of Supply in Madagascar within four Top Réseau Sites³, (2003 versus 2006)

Risk: Sexually active, married or unmarried, 15 to 24 year old youth

Behavior: Used Condom at Last Sex

INDICATORS	2003 (N=2808)	2006 (N=3074)	Sig.
BEHAVIOR/USE	%	%	
- Used condom at last sex	24.8	29.1	**
- Used condom at last sex with regular partner (among sexually active male who had regular partner)	24.3	35.3	***
- Used condom at last sex with occasional partner (among sexually active male who had occasional partner)	42.2	57.3	***
- Used condom at last sex with commercial partner (among sexually active male who had commercial partner)	49.7	76.4	***
- Used condom at last sex with regular partner (among sexually active female who had regular partner)	20.2	27.3	*
- Used condom at last sex with occasional partner (among sexually active female who had occasional partner)	43.2	44.1	ns
- Used condom at last sex with commercial partner (among sexually active female who had commercial partner)	35.1	56.0	***
- Used condom in most cases or always with regular partners (among sexually active youth who had regular partner)	18.6	19.0	ns
- Used condom in most cases or always with occasional partners (among sexually active youth who had occasional partner)	41.6	44.0	ns
- Used condom in most cases or always with commercial partners (among sexually active youth who had commercial partner)	46.9	58.0	***
NEED/RISK	%	%	
- Never had sexual intercourse (among never married 15 to 18 year old youth)	65.6	82.1	***
- Had sexual intercourse before the age of 18 (among never married 15 to 19 year old youth)	60.6	45.4	***
OPPORTUNITY	% or Mean Scores	% or Mean Scores	
<i>Availability</i>			
- Able to find a preferred point of sale within 10 minutes from the house	83.5	84.0	ns
Mean	n/a	3.51	n/a
<i>Social Norm</i>			
- Thought that use of condoms is common among the friends	50.1	n/a	n/a

³ 4 TOP Réseau sites: Antananarivo, Mahajanga, Fort Dauphin, Diégo

ABILITY	% or Mean Scores	% or Mean Scores	
Knowledge			
- Can cite the three effective means of preventing HIV/AIDS	2.7	3.6	ns
- Can cite the three effective means of preventing sexually transmitted infection (STI) (abstinence, being faithful and condom use)	6.2	10.0	***
- Do not know any symptoms of STI	25.1	33.0	***
Social Support			
- Talked to friends about STI prevention	49.0	28.5	***
- Talked to friends about HIV/AIDS prevention	45.1	30.8	***
- Talked to partners about STI prevention	15.9	8.2	***
- Talked to partners about HIV/AIDS prevention	13.4	10.2	*
- Thought that parents support the use of condoms by young people	64.0	74.4	***
- Thought that peers support the use of condoms by young people	72.7	88.9	***
Mean	n/a	2.99	n/a
Self-Efficacy			
- Feel shame to buy a condom in a place close to their residence	29.0	39.7	***
- Able to probably or absolutely refuse sexual intercourse with a person they knew few days before if she/he refuses to use a condom	84.3	87.9	**
- Able to probably or absolutely refuse sexual intercourse with a person they knew more than 3 months before if she/he refuses to use a condom	65.2	86.9	***
- Can convince their regular partner to use condoms (among sexually active female who had regular partner)	78.6	84.6	*
Mean	n/a	3.25	n/a
MOTIVATION	% or Mean Scores	% or Mean Scores	
Attitude			
Mean	n/a	3.58	n/a
Belief			
- Believed that HIV/AIDS can be avoided by choosing carefully their partner	65.2	59.0	**
- Believed that STI can be avoided by choosing carefully their partner	64.8	51.3	***
- Believed that a person's STI status cannot be determined by looking at the person	78.8	69.7	***
- Believed that a person's HIV status cannot be determined by looking at the person	78.6	80.0	ns
- Believed that condoms are only to use with doubtful partners	26.9	39.3	***
- Believed that condom breaks easily	18.5	38.3	***
- Believed that condom reduces sexual pleasure	54.3	62.7	***
Mean	n/a	2.28	n/a
Outcome Expectation			
- Believed that condoms are effective in preventing STI	85.0	88.1	*
- Believed that condoms are effective in preventing AIDS	90.8	85.0	***
- Believed that condoms are effective in preventing unwanted pregnancy	91.3	87.5	**
- Believed that the use of condoms during each sexual intercourse can reduce the risk of STI	86.1	97.1	***
Mean	n/a	3.79	n/a
Threat			
- Perceived medium/high risk for HIV/AIDS if they did not consistently use a condom	39.1	74.1	***
- Perceived medium/high risk for STI if they did not consistently use a condom	36.1	64.2	***
- Perceived that AIDS really exists among Malagasy youth	55.3	56.1	ns
Mean	n/a	3.25	n/a
Willingness to Pay			
Mean	n/a	515.01	n/a

ADDITIONAL LOGICAL FRAMEWORK INDICATORS	%	%	
- Can indicate where to access VCT services	40.1	40.4	ns
EXPOSURE			
- Attended peer educator sessions or talked to peer educator (3 activities)	n/a	17.6	n/a
- Heard radio spots on condom (20 activities)	n/a	96.7	n/a
- Heard Protector Plus slogan (1 activity)	n/a	78.5	n/a
- Saw TV spots on Protector Plus (4 activities)	n/a	91.4	n/a
- Attended mobile video unit sessions on Protector Plus (2 activities)	n/a	17.4	n/a
- Saw or got behavior change communication materials on Protector Plus (1 activity)	n/a	95.5	n/a
MARKET SHARE			
- Private Sector	2.5	7.5	ns
- Social Marketing	93.4	89.1	ns
- Other unidentified brand	4.1	3.4	**

- ns: not significant, *: p<.05, **: p <.01, ***: p <.001

- n/a: not applicable

- Mean scores are measured on Likert scale responses, ranging from 1 (strongly disagree) to 4 (strongly agree)

- Willingness to Pay: maximum prices vary from 50 to 20,000 Ariary

- Population characteristics controlled for are age, school enrollment, education, marital status, and socio-economic status

- Some indicators have different sample sizes, which are available upon request

Segmentation Table

Behavioral Determinants of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) Prevention: Comparing Those who used the Social marketing Condom versus Those who used Commercial Condom in Madagascar within seven Top Réseau Sites⁴

Risk: Sexually active, married or unmarried, 15 to 24 Year old youth

Behavior: Used Condom at Last Sex

INDICATORS	Social Marketing Brand (N=1052) (94.9%)	Commercial Brand (N=56) (5.1%)	OR	Sig.
OPPORTUNITY	Mean Scores	Mean Scores		
<i>Availability</i>	---	---	---	ns
ABILITY	Mean Scores	Mean Scores		
<i>Social Support</i>	3.27	3.53	0.27	**
<i>Self-Efficacy</i>	---	---	---	ns
MOTIVATION	Mean Scores	Mean Scores		
<i>Attitude</i>	3.86	3.75	3.02	*
<i>Belief</i>	---	---	---	ns
<i>Outcome Expectation</i>	---	---	---	ns
<i>Threat</i>	---	---	---	ns
<i>Willingness to Pay</i>	---	---	---	ns

POPULATION CHARACTERISTICS	% or Mean Scores	% or Mean Scores		
<i>Age</i> (15 to 24 years of age)	---	---	---	ns
<i>Level of Education</i> (Secondary and more versus Primary)	---	---	---	ns
<i>School Enrollment</i> (Student versus Non-Student)	---	---	---	ns
<i>Marital Status</i> (Married versus Unmarried)	---	---	---	ns
<i>Socio-Economic Status</i> (High versus Low)	---	---	---	ns

- ns: not significant; *: p<.05; **: p<.01; ***: p<.001

- Mean scores are measured on Likert scale responses, ranging from 1 (strongly disagree) to 4 (strongly agree)

- Willingness to Pay : maximum prices vary from 50 to 20,000 Ariary

- Pseudo-R²=42.5%

- OR= Odds Ratio

- “---“ Reliable Cronbach’s Alpha but not significant in the analysis

- High Socio-Economic Status refers to quintile 5 of amenities and assets possession

⁴ 7 TOP Réseau sites: Toamasina, Antananarivo, Mahajanga, Fort Dauphin, Diégo (5 old sites) , Antsirabe, Morondava (new sites)

Evaluation Table

Impact of Population Services International / Madagascar's Programmatic Activities on Behavior and Behavioral Determinants for Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) Prevention in Madagascar within four Top Réseau Sites⁵ (2006)

Risk: Sexually active, married or unmarried, 15 to 24 year old youth

Behavior: Used Condom at Last Sex

INDICATORS	Ref. 2003 (N=2808) (47.7%)	EXPOSURE			Sig
		Low (N=1035) (17.6%)	Med (N=1021) (17.4%)	Hi (N=1018) (17.3%)	
BEHAVIOR/USE	%	%	%	%	
- Used condom at last sex	24.8 ^{d2d3}	24.5 ^a	30.6	32.2 ^c	***
- Used condom at last sex with regular partner (among sexually active male who had regular partner)	24.2 ^{d2d3}	30.8 ^a	38.0	36.3	***
- Used condom at last sex with occasional partner (among sexually active male who had occasional partner)	42.4 ^d	53.1	56.8	61.0	**
- Used condom at last sex with commercial partner (among sexually active male who had commercial partner)	50.1 ^d	74.5	71.1 ^b	81.8	***
- Used condom at last sex with regular partner (among sexually active female who had regular partner)	20.3 ^{d2d3}	22.5	27.9	31.6 ^c	**
- Used condom at last sex with occasional partner (among sexually active female who had occasional partner)	45.4	33.0	38.8	57.5	ns
- Used condom at last sex with commercial partner (among sexually active female who had commercial partner)	35.1 ^d	49.2	60.6	58.6	***
- Used condom in most cases or always with regular partners (among sexually active youth who had regular partner)	18.5 ^{d2}	15.6 ^a	22.9 ^b	18.4	*
- Used condom in most cases or always with occasional partners (among sexually active youth who had occasional partner)	41.9	42.8	40.9	47.2	ns
- Used condom in most cases or always with commercial partners (among sexually active youth who had commercial partner)	47.2 ^{d2d3}	53.6	55.8	63.1 ^c	***
OPPORTUNITY		Mean Scores	Mean Scores	Mean Scores	
<i>Availability</i>	n/a	3.35 ^a	3.53	3.55 ^c	***
ABILITY		Mean Scores	Mean Scores	Mean Scores	
<i>Social Support</i>	n/a	2.87 ^a	3.01 ^b	3.11 ^c	***
<i>Self-Efficacy</i>	n/a	3.16 ^a	3.27	3.32 ^c	***
MOTIVATION		Mean Scores	Mean Scores	Mean Scores	
<i>Attitude</i>	n/a	3.56 ^a	3.63	3.65 ^c	**
<i>Belief</i>	n/a	2.83 ^a	2.89	2.89 ^c	*
<i>Outcome Expectation</i>	n/a	3.71 ^a	3.82	3.84 ^c	***

⁵ 4 TOP Réseau sites: Antananarivo, Mahajanga, Fort Dauphin, Diégo

<i>Threat</i>	n/a	3.21	3.23 ^b	3.30 ^c	***
<i>Willingness to Pay</i>	n/a	535.94	564.59	592.97	ns

- ns: not significant, *: p <.05; **: p <.01; *** p<.001
- n/a: not applicable
- Mean scores are measured on Likert scale responses, ranging from 1 (strongly disagree) to 4 (strongly agree)
- Willingness to Pay : maximum prices vary from 50 to 20,000 Ariary
- Population characteristics controlled for are age, school enrollment, education, marital status, and socio-economic status
- Some indicators have different sample sizes, which are available upon request
- Low exposure: 0 to 8 activities
- Medium exposure: 9 to 13 activities
- High exposure: more than 13 activities
- ^a : Significant between low and medium exposure
- ^b : Significant between medium and high exposure
- ^c : Significant between low exposure and high exposure
- ^{d1} : Significant between reference and low exposure
- ^{d2} : Significant between reference and medium exposure
- ^{d3} : Significant between reference and high exposure
- ^d : Significant between reference and all other exposures

Segmentation Table

Behavioral Determinants of Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) Prevention: Comparing Those who Used Condom at Last Sex versus Those who did not in Madagascar within seven Top Réseau Sites⁶ (2006)

Risk: Sexually active, married or unmarried, 15 to 24 year old youth

Behavior: Used Condom at Last Sex

INDICATORS	Behavior (N=1507) (28.4%)	Non- Behavior (N=3793) (71.6%)	OR	Sig
b. OPPORTUNITY	Mean Scores	Mean Scores		
<i>Availability</i>	---	---	---	ns
ABILITY	Mean Scores	Mean Scores		
<i>Social Support</i>	3.14	2.98	1.55	***
<i>Self-Efficacy</i>	3.38	3.22	3.01	***
MOTIVATION	Mean Scores	Mean Scores		
<i>Attitude</i>	3.69	3.64	1.62	***
<i>Belief</i>	---	---	---	ns
<i>Outcome Expectation</i>	---	---	---	ns
<i>Threat</i>	---	---	---	ns
<i>Willingness to Pay</i>	---	---	---	ns
POPULATION CHARACTERISTICS	% or Mean Scores	% or Mean Scores		
<i>Age</i> (15 to 24 years of age)	20.4	20.1	1.05	**
<i>Level of education</i> (Secondary and more versus Primary)	74.4	69.8	1.41	***
<i>School Enrollment</i> (Student versus Non-Student)	58.2	63.4	0.80	**
<i>Marital Status</i> (Married versus Unmarried)	21.7	32.5	0.44	***
<i>Socio-Economic Status</i> (High versus Low)	17.9	14.9	1.27	*

- ns: not significant; *: p<.05; **: p<.01; ***: p<.001
- Mean scores are measured on Likert scale responses, ranging from 1 (strongly disagree) to 4 (strongly agree)
- Willingness to Pay : maximum prices vary from 50 to 20,000 Ariary
- Pseudo-R²=26.5%
- OR= Odds Ratio
- “---“Reliable Cronbach’s Alpha but not significant in the analysis
- High socio-economic status refers to quintile five of amenities and assets possession

⁶ 7 Top Réseau sites: Toamasina, Antananarivo, Mahajanga, Fort Dauphin, Diégo (5 old sites) , Antsirabe, Morondava (new sites)

GLOSSARY

The following are the definitions and clarification of terms used in the toolkit.

Access – The proportion of a population segment in a geographically defined residential area or hotzone that is within the catchment area of a service delivery point.

Behavioral Determinants (Bubbles) – Drivers or inhibitors that help or hinder the individual from adopting the desired behavior.

Coverage – Proportion of geographically defined areas in which the product, service, or idea promoted by the social marketing intervention is available.

Equity of Access – Equal access to delivery points of a minimum standard among populations with equal levels of need or demand.

Exposure

1. *As measured by pre-testing:* The extent to which the target audience understands the concepts, materials, and or messages proposed in the marketing plan. Includes target population likes and dislikes of the concepts, materials and messages, and the extent to which the target audience is persuaded by the concept, materials, and or messages.
2. *As measured by post-testing:* The extent to which the target audience has seen, recalls, and understands the elements of the marketing campaign.

Halo Effect – The tendency of commercial and public sector brands to benefit from social marketing campaigns through increased sales.

Key Element – A summary of the most important statements that are determined from the scale items used in the questionnaire. The key elements describe each of the behavioral determinants that come up as statistically significant.

Mean Score – The scale items are combined together into one composite variable (after doing some statistical tests) that is referred to as a scale. This variable or scale signifies a measure of the determinant. This measure is usually expressed as a mean score. Statistically, it is the mean value of the scale variable.

Odds Ratio (OR) – A statistic calculated by logistic regression analysis, which measures the relative risk of being positive on the dependent variable being measured, controlling for the independent variables.

Penetration – The proportion of outlets where the product or service is available.

Population Characteristics – The education, socio-economic, geographic, and gender identifiers that are used to help target non-users.

Quality of Coverage – The proportion of geographically defined areas or service delivery points in which the product, service, or idea is delivered in compliance with minimum standards.

Relevant Statements – Those statements grouped by bubble from the questionnaire which are statistically significant.

Risk Group – The group of people who are engaging in the targeted risk behavior.

Scale Items – Most determinants of a behavior are complex concepts and need to be looked at from many different ways to capture its complete meaning.

To arrive at a measure of a determinant, its various parts (dimensions) must be measured. A scale item is a simple statement or question pertaining to the determinant that helps capture part of the determinant. Each scale item is usually uni-dimensional. That is, it has one clear idea and aims at measuring one part of an overall concept of the determinant. These scale items are then combined to get an overall measure of the determinant which is referred to as a scale.

Stars or Statistical Significance – A result that is unlikely to have occurred by chance; determined by using a statistical test such as a chi-square and is normally expressed in terms of the P value, or probability of this occurring (e.g., $P < .05$).

Substitution Effect – Refers to the situation when the introduction of a social marketed product results in commercial brand users to switch to the lower priced social marketed brand, with no net benefit in health impact.

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