Measuring Access and Performance (MAP) Studies

MAP studies are PSI’s standard tool for monitoring product or service availability. There are two main types of MAP study: coverage and access studies. The sampling methodology used for both study types is usually based on LQAS (Lot Quality Assurance Sampling), which is cost-effective because it uses a relatively small sample size while still allowing for the estimation of nationwide coverage and access rates. MAP studies can provide important information for increasing the efficiency of promotion and distribution activities that are tailored to local needs. This enables social marketers to increase access to health products and services among target populations, maximizing PSI’s health impact.

**MAP Coverage Studies**

MAP coverage studies are designed to provide program managers with information on the geographic coverage of PSI products and services, and on the quality of the delivery system:

- How widely are products/services available?
- Where is coverage or quality of coverage below pre-defined minimum standards?

The primary output of a typical coverage survey is a dashboard that includes tables on product/service availability and quality of coverage. Other outputs can be presented depending on program expectations. These include:

- **Thematic maps** showing coverage and penetration estimates for the products and services of interest, such as this map showing Prudence brand male condom penetration rates in the Democratic Republic of Congo by province (May 2010).
- **Additional tables** with findings related to consumer price levels, intention to sell, reasons for not selling a product, frequency of sales/supervision visits, and other variables related to the product or service delivery system.

Key indicators under a coverage study are defined as follows:

- **Coverage** is the proportion of geographic areas where a product or service is available according to pre-defined minimum standards. Geographic areas can be villages, neighborhoods, hotzones, census enumeration areas, etc. Minimum standards are defined, for example, as the presence of at least one condom outlet in the area.
- **Quality of coverage** is the proportion of geographic areas where a product or service is available and where additional minimum standards of quality are present: promotion materials are visible inside or outside the outlet, adherence to recommended retail price, there are no regular stock-outs, etc.
- **Outlet penetration** is the proportion of outlets in which a product or service is available: out of all potential outlets for a given product or service, it is the percentage of outlets that actually sell the product or provide the service.

**MAP Access Studies**

MAP access studies can answer all the same questions as coverage studies (coverage, quality of coverage, and outlet penetration), but they are also designed to answer managerial and strategic questions relating to the relationship between population need and delivery system coverage and quality:

- Is the product available where it is most needed?
- Do specific target groups have adequate access to the product, service or intervention?
- Is there equity of access between different population segments with similar levels of need?
In other words, access studies can be seen as an extension of coverage surveys because they still assess how widely a product or service is available to consumers, but they go one step further: they assess whether the product or service is close to PSI’s target populations – those with the greatest need. PSI uses Geographic Information Systems (GIS) for spatial analysis of product/service access and to create maps of product availability and target group distribution patterns. GPS devices allow researchers to record the coordinates of outlets, service providers, and target group sites.

The primary output of a typical access survey is a dashboard that includes the same information as a coverage survey, plus additional information on product/service accessibility among target populations. Maps are also important outputs of access surveys, such as the typical hotzone map in Figure 2 below showing target audience sites and access to condoms.

**Figure 2: High-risk venues and condom availability in Mbabane, Swaziland, 2009**

Key indicators under an access study are the same as for MAP coverage studies, plus:

- **Access** – the proportion of a population segment in a geographically defined area that is within the catchment area of a product or service delivery point. The catchment area is defined in terms of time or geographic distance, so this distance can be considered the minimum standard for access (Figure 3).

- **Equity of access** – equal levels of access to product or service delivery points at the minimum access standard among population segments with equal levels of need, risk or demand. Inequity of access, then, is when population segments do not have equal levels of access.

**Figure 3: Access to a product or service delivery point**

**GIS and Mapping in the Field**

PSI field offices increasingly make use of maps and geographic information for intervention planning, routine reporting and monitoring of field activities, and sharing information with partners and stakeholders. Some have actively adopted a holistic “geomarketing” approach – the integration of geographical intelligence into all marketing aspects, where location-based decision-making is key. GIS and mapping software such as ArcGIS and Google Earth are the main tools in use at PSI.

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