

The Survey Management and Analytic System (SMAS) provides real time monitoring of the identification of poor households eligible for the National Health Insurance Scheme (NHIS) in Ghana.



Data validation is one of the most costly aspects of survey implementation – accounting for as much as 40% of total expenditures. The SMAS is an innovative solution for validating and managing geographic targeting of poor households more efficiently, at lower cost, and with greater transparency than previous methods. This snapshot considers the implementation of the SMAS database and how the dashboard is being used to improve efficiency in programme operations.



Intervention

The SMAS technology was introduced by the Health in Africa (HIA) team of the World Bank’s International Finance Corporation (IFC). It applies a proxy means test (PMT) tool using a tablet that works with a secure cloud-based web service. The digitised tool was a response to paper-based methods applied in earlier programs that were too cumbersome, expensive, or error-prone to be usable.

In the field, enumerators ask each household 10 questions. The responses are loaded onto the tablet and synched to a central database that populates a dashboard in real time. The system instantly analyses the information and sends a response regarding the household’s eligibility for NHIS. It also flags potential errors, which are fed back to enumerators to be checked or corrected on the spot, greatly enhancing the data reliability. Additional materials (e.g., photos of houses) are also loaded into the system to validate the living conditions reported in the survey. The SMAS tracks the location of each enumerator using GPS on the tablet, helping identify the location of people who qualify for NHIS in the absence of formal addresses. GPS data is also used to map the dispersion and density of poor households, benchmark district poverty rates, direct enumerators to target areas, and provide support if they become lost or stranded.

The SMAS is based in the cloud, with an operations site managed by the IFC HIA team. IFC also keeps a second dashboard for the National Health Insurance Authority (NHIA), which tracks details regarding NHIS registration. That system can disaggregate between new enrollees and those renewing with an exemption, for example, or keep track of those still waiting in the registration queue at the end of the day.

The ownership of the dashboard is being taken on by the Ministry of Gender, Children, and Social Protection. The HIA team still has privileged access, but SMAS is becoming embedded in the government system, and the Ministry features the dashboard prominently for advocacy purposes (showing work in the field in real time) and to support data-based program planning. The potential of SMAS beyond its capacity as a reporting tool is just beginning to be recognized. The dashboard offers a dynamic platform for managing the full operation of social service delivery programs, from beneficiary identification, to program delivery and coordination. It is an innovative tool for mapping services to people, and across multiple service sectors.

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Result

Costs for enumeration and validation using SMAS average US\$1.40 per person. Previous methods have ranged in cost from US\$15.87 to US\$95.44 per person, according to studies by Aryeetey et al (2011).



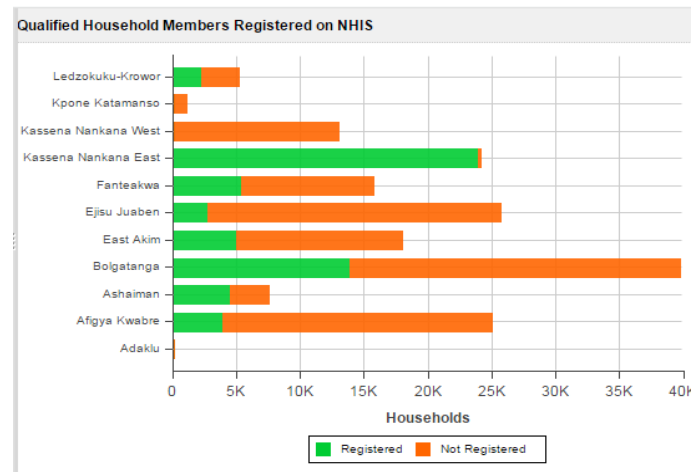
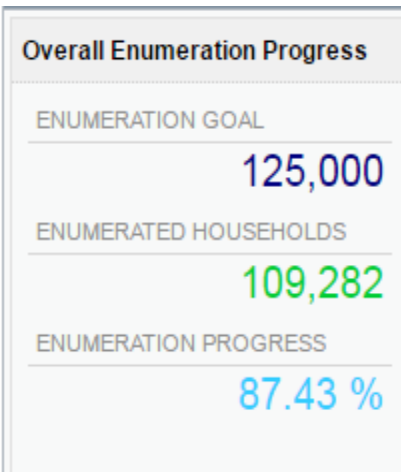
Examples and Evidence

The Minister of Gender, Children, and Social Protection prominently features a large screen in her office that displays the SMAS dashboard. It serves as a strong visual presentation for demonstrating the ministry’s reach and activities – showing how many people are in the field, and where, in real time.



Lessons Learned

The SMAS tool could be adopted across multiple countries and contexts. It saves costs compared to previous, paper-based versions and makes validation more rapid, accurate, and transparent. The tool also should be considered more widely for its benefits as an operations management system. It is a valuable planning tool and offers a method for mapping program activities to poverty levels across service sectors and geographic areas. Further work needs to be done to see if the SMAS can be linked to NHIA and other government data to improve coordination and beneficiary registration for social support services.



Outlook

The software used to identify and upload data to the dashboard in real time is open source, and can be easily replicated.

The IFC HIA program is in the process of formalising handover of the system to the Ministry of Gender, Children, and Social Protection, which is planning to use it for national household registrations.

Aryeetey, Jetu-Appiah, Spaan, Agyepong and Baltussen (2011) Costs, equity, efficiency and feasibility of identifying the poor in Ghana’s National Health Insurance scheme: empirical analysis of various strategies in Tropical Medicine and International Health, Vol 17, Issue 1, 2012