Best Practices (*Give to Best Practices*)

Name of the Constituent Unit: Bharati Vidyapeeth (DTU) Medical College, Pune

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1) Title of the practice
Health & Demographic Surveillance System (HDSS)
(Demographic Trends and Morbidity Profile of Population in Pune District using TAB based data collection)

2) Objective of the Practice
- To monitor demographic trends and morbidity profile of rural population in Pune district.
- To derive baseline data for future follow up.
- To track population dynamics through real-time updated demographic research.
- GPS mapping of all the households

3) **The Context:**
Health and Demographic Surveillance System (HDSS) is a household census system which involves the prospective follow-up of a well-defined population living in a clearly circumscribed geographic area. It records and monitors changes in vital health and demographic events relating to the population under surveillance.

4) The Practice
HDSS project has been initiated in the field practice area of Rural Health & Training Centre, Lavale, run by Department of Community Medicine, since 1st January 2019. Twenty five volunteers (ASHA & non-ASHA) are involved in the HDSS project for collection and reassessment of Health & Demographic data. Four institutional field supervisors monitor the work of volunteers and cross verify the information.
Baseline round information has been conducted by house to house survey using semi structured questionnaire incorporated into software application (Survey Solutions, World Bank) of tablet phones. Baseline round questionnaire consists of discrete sections such as household registration, household characteristics, standard of living index indicators, household individual's information and pregnancy registration form.
Thirteen digit unique permanent alphanumeric identifiers are being generated from round 1 for each household and household individual so as to ameliorate authentication of database. Subsequent rounds after baseline survey will be conducted every six months from July, 2019. Assorted questionnaire forms (such as pregnancy follow up form, birth event form, death event form, marriage form) will be introduced in the subsequent rounds to update and validate the health and demographic information.
Along with rural project as mentioned above, HDSS survey has also been initiated at Urban Health & Training Centre (Sadashiv Peth, Pune), under the umbrella of Dept. of Community Medicine of BVDUMC, Pune. Three health supervisors are involved in the HDSS for collection and reassessment of Health & Demographic data. Training to health supervisors for data entry in software application of tablet phones are given before initiating data collection. By house to house survey data collection is done using semi structured questionnaire incorporated into software application of tablet phones (Magpi+ software). Permanent Unique identification number is generated for each household and also for individual living in that household for follow up in future.
Automatic GPS tracking/ mapping of all households covered by this survey is done.

5) Evidence of Success

Till date, demographic information of 12,428 households (total population = 44,785) has been collected in baseline round of Rural HDSS. Demographic and health information of this population will be updated in subsequent rounds every six month by house to house survey.

In Urban Setup, HDSS data collection is in the budding phase and it will be useful to find prevalence of various morbidities from field practice area of UHTC and further research can be done in future using this baseline data.

6) Problems encountered and resources required

We had identified women representative from few villages, where ASHA workers did not volunteer to join the project. Few of the ASHA volunteers, being not exposed to paperless data collection before, needed considerable hand holding for basic usage of tablet phone and HDSS software application handling. Full time commitment of ASHA volunteers was difficult at times because of their involvement with government projects

As there are no separate funds were allocated for Urban HDSS, free software used for data collection which needs to be refresh at a certain interval.