Enhancing the Electronic-Data Collection System (e-DCS) for Selected Components of the National Nutrition Survey

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INTRODUCTION

The National Nutrition Surveys (NNS) are conducted by the FNRI-DOST as vital sources of health and nutrition data for crafting/formulating policies and programs, track changes in nutritional status as indicator of poverty and hunger, and provide information on the attainment of the country’s commitment to the Sustainable Development Goals (SDGs).

The implementation of survey requires time and resources especially on data collection and management. The e-DCS is a computer-based program conceptualized, developed, and designed to replace the time-consuming, error-prone traditional paper-and-pen method of data collection and the tedious process of data management, to produce quality data and facilitate timely release of results to stakeholders.

The e-DCS was initially introduced in 2011 but fully utilized in the 2013 and 2015 Nutrition Surveys to manage voluminous health and nutrition survey data. However, analysis of its use pointed to the need to improve its internal system. Better communication, strong commitment, and collaboration between and among the Nutritional Assessment and Monitoring Division (NAMD) staff were also needed to develop their technical capability as complement in using the program.

The Re-entry Project (ReP) is aimed to enhance and improve the e-DCS on four selected components: the Socio-Economic, Anthropometry, Infant and Young Child Feeding Practices, and Clinical and Health by addressing people, materials, and processes as areas of concern.

MATERIALS and METHODS

The enhancement of the e-DCS program adopts the concept of the PDCA model of Edward Deming. It works on a simple concept of planning the required changes (Plan), making the changes (Do), checking whether the implemented changes have the desired effect (Check or study), and institutionalizing the changes (Act).

The updating and enhancement of the e-DCS program can only be successful if there are the 3 C’s (communication, collaboration, and commitment) between and among NAMD staff and with the support of the management.

The 3 C’s should be reinforced with the ability to take part in the changes, knowledge in the extent of the problem in the field operations and the possible solutions, the desire to improve and bring about change, and the awareness of the benefits that the enhancement will bring about.

The 3 C’s will promote NAS and NSIS partnership which are very crucial in the improvement of the systems and processes in the e-DCS program. Monitoring and evaluation should be conducted for the continuous improvement of the systems and processes. The end-result of the improvement will be quality data for warehousing and for use of stakeholders.
MATERIALS and METHODS

Workflow of e-DCS Enhancement and Improvement

- REVIEW OF VARIABLES AND INDICATORS AND UPDATING OF QUESTIONNAIRES
- STAKEHOLDERS’ MEETING
- FINALIZATION OF QUESTIONNAIRES AND SUBMISSION TO NSIS
- DEVELOPMENT/UPDATING OF E-DCS
- PRE-TESTING OF QUESTIONNAIRES
- ENCODING IN FORM GENERATOR
- INTERNAL REVIEW/TEST-RUN OF E-DCS PROGRAM BY NSIS
- TESTING AND DEBUGGING OF E-DCS PER COMPONENT BY RESPECTIVE STUDY LEADERS AND NAS TECHNICAL WORKING GROUP
- UPDATING/REVISION OF E-DCS
- FINALIZATION OF E-DCS
- PILOT TESTING
- INSTALLATION OF E-DCS PROGRAM TO NETBOOKS/ TABLETS
- QUALITY CONTROL
- RELEASE TO TEAM LEADERS AND RESEARCHERS

THE ReP IMPLEMENTATION... IN FOCUS...

1. Full engagement with staff of Nutrition Informatics and Statistics Section (NSIS) and Nutrition Assessment Section (NAS), and Technical Working Group (TWG) on the ReP implementation and finalization of survey questionnaires.

2. Enhancing technical capability of the TWG on the form generator and e-DCS program.

3. Testing and debugging of the e-DCS program by TWG for its functionality and ease of navigation.

4. Internal testing of enhanced e-DCS program and installation in netbooks/tablets by the Programmers/Developers/IT

5. On-site testing in Bgy. Cupang, Muntinlupa City
RESULTS

Program links and features can be accessed easily by researchers

Functionality Rating

7.6 out of 10
2017 e-DCS version

VS

6.8 out of 10
2015 e-DCS version

Program links and features can be accessed easily by researchers

Minimal updating of the program in the field

Minimized disruptions during interviews due to bogged down units, thus minimized need for repeated interviews

Filters, skipping, range, and validation checks were working, lessening need for editing and validation

CONCLUSION and RECOMMENDATIONS

The 2017 e-DCS program was successfully improved, enhanced and implemented through process changes, and better communication and coordination between and among NAMD staff.

The following are recommendations for further enhancement of the program:

- Enroll the system in ISO procedures of the Division for continuous improvement
- Implement the ReP in the remaining components of the NNS
- Pre-test the Training Module/Manual and the Operations Manual

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