HERMESS

HEALTH INFORMATION DISTRIBUTION SYSTEM

Developed by:

NETMARKETING AND DIRECT CORPORATION

HERMESS
Health Information Distribution System

A. What is HERMESS - HIDS?

1. It is a tool using SMS (text mesagging), a mobile phone functionalities, in getting vital information or gathering statistical health data in remote areas without internet or in situations internet is not available.

"Information managers can then validate the data and generate the needed descriptive analysis through charts, graphs, spreadsheets and status reports to transmit this vital information to all levels of the health system real-time and SIMULTANEOUSLY."

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B. Objective of HERMESS-HIDS

HERMESS-HIDS has the following objectives:

1. To augment present available technology in gathering statistical health information in creating a Central Data Base

2. To serve in early detection of unusual increases or occurrences in communicable and non- communicable diseases/health conditions;

3. monitor health trends;

4. and enable identification of appropriate response

HERMESS
Health Information Distribution System
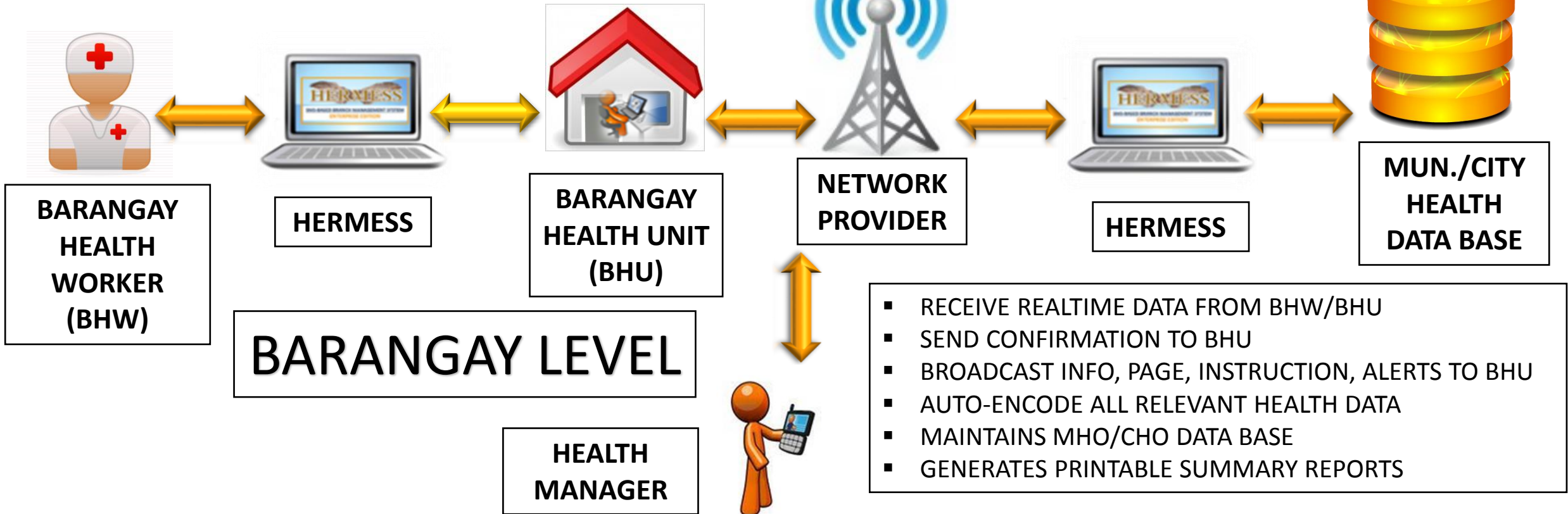
C. Public Health Significance of HERMESS-HIDS

1. To provide secure and real-time transmission of clinical patient information between the basic Health Care Units (Barangay Health Workers) to all Health Care Managers and Government Health Agencies.

2. To give decision makers immediate access to data specific to their area of responsibility and automatically generate health information through descriptive analysis necessary for appropriate and optimal response

3. To detect early any unusual increase of major public health problems including both communicable diseases and non-communicable diseases so that interventions can be taken earlier
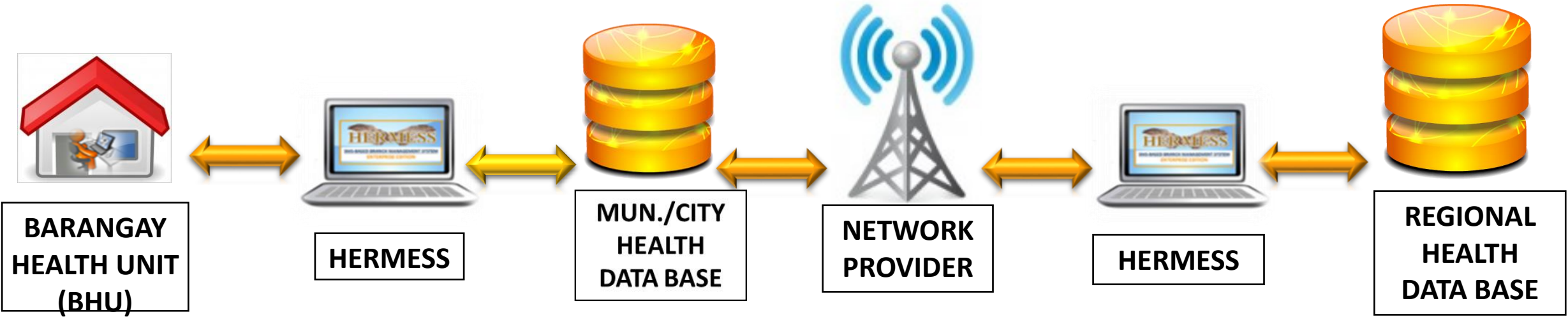
HERMESS
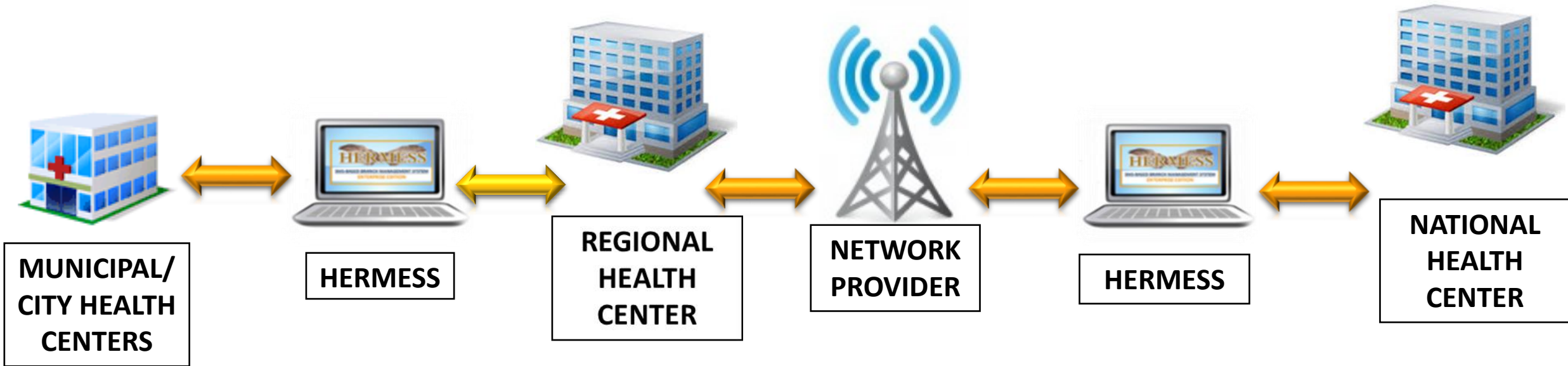HEALTH INFORMATION DISTRIBUTION SYSTEM

SYSTEMS FLOW

- BHW SEND DATA TO BHU
- SEND CONFIRMATION RECEIPT TO BHW
- BROADCAST INFO, PAGE, INSTRUCTIONS, ALERT TO BHW
- AUTO-ENCODE AND GENERATES PRINTABLE LOCAL REPORTS
- MAINTAINS LOCAL (BHU) DATA BASE
- 70% OF THE HEALTH PERSONNEL ARE IN THIS LEVEL

HEALTH MANAGER

MUNICIPAL/CITY LEVEL

BARANGAY HEALTH WORKER (BHW)

HERMESS

BARANGAY HEALTH UNIT (BHU)

NETWORK PROVIDER

HERMESS

MUN./CITY HEALTH DATA BASE

BARANGAY LEVEL

HEALTH MANAGER

- RECEIVE REALTIME DATA FROM BHW/BHU
- SEND CONFIRMATION TO BHU
- BROADCAST INFO, PAGE, INSTRUCTION, ALERTS TO BHU
- AUTO-ENCODE ALL RELEVANT HEALTH DATA
- MAINTAINS MHO/CHO DATA BASE
- GENERATES PRINTABLE SUMMARY REPORTS

HERMESS
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SYSTEMS FLOW

REGIONAL LEVEL

BARANGAY HEALTH UNIT (BHU)

HERMESS

MUN./CITY HEALTH DATA BASE

NETWORK PROVIDER

HERMESS

REGIONAL HEALTH DATA BASE

SYSTEMS FLOW

NATIONAL LEVEL

MUNICIPAL/ CITY HEALTH CENTERS

HERMESS

REGIONAL HEALTH CENTER

NETWORK PROVIDER

HERMESS

NATIONAL HEALTH CENTER

SYSTEMS USER REGISTRATION

1. UNIQUE IDENTIFICATION IS THRU SIM OR MOBILE NUMBER

2. EXAMPLE(CITY OR MUNICIPAL LEVEL) :

> DAVAO CITY HEALTH CENTER – 09187776655
> BARANGAY HEALTH CENTER 1 – 09328865544
> BARANGAY HEALTH WORKER 1 – 09176545533
> BARANGAY HEALTH WORKER 2 - 09168899675
> BARANGAY HEALTH WORKER 3 - 09208899654
> AND MORE . . .

The 21 disease entities monitored by the DOH Cluster

NO.	DISEASE SYNDROME	INITIAL DIAGNOSIS	SYSTEMS CODE
1	Fever	Fever	FEV
2	Cough, colds or sore throat with or without fever	Acute Respiratory Infection	ARI
3	Fever with rash	Suspected Measles	SUM
4	Fever with spontaneous bleeding	Acute Hemorrhagic Fever	AHF
5	Fever with severe headache and stiff neck in children 12 months and older/ Fever and bulging fontanels or refusal to suckle in children < 12 months	Suspected Meningitis	SME
6	Fever with headache, muscle pains and any of the following: eye irritation, jaundice, skin rash, scanty urination	Suspected Leptospirosis	SUL
7	Yellow eyes or skin with or without fever	Acute Jaundice Syndrome	AJS
8	Fever with other symptoms not listed above	Fever with Other Symptoms not specified above	FWO
9	Loose stools, 3 or more in the past 24 hours with or without dehydration	Acute Watery Diarrhea	AWD
10	Loose stools with visible blood	Acute Bloody Diarrhea	ABD
11	Open wounds and bruises/burns	Open Wounds & Bruises/Burns	OWB

The 21 disease entities monitored by the DOH Cluster

NO.	DISEASE SYNDROME	INITIAL DIAGNOSIS	SYSTEMS CODE
12	Fractures	Fractures	FRA
13	Skin disease	Skin Diseases	SKD
14	Animal bites	Animal Bites	ANB
15	Eye itchiness, redness with or without discharge	Conjunctivitis	CON
16	Spasms of neck and jaw (lock Jaw)	Tetanus	TET
17	High blood pressure (≥ 140/90)	High Blood Pressure	HBP
18	Known diabetes	Known Diabetes Mellitus	KDM
19	Difficulty of breathing and wheezing	Acute Asthmatic Attack	AAA
20	Floppy paralysis of the limbs which occurred recently in a child <15 years who is previously normal	Acute Flaccid Paralysis	AFP
21	Visible wasting, with or without bipedal pitting edema	Acute Malnutrition	ACM

The 21 entities, as approved by the DOH Service Delivery Cluster, are described in a syndromic approach for patients seen in health facilities like evacuation centers, and health centers/stations to enable health workers (not necessarily physicians) to identify the correct entity based solely on the signs and symptoms. For patients seen in hospitals, the 21 entities are directly translated to the equivalent initial diagnoses that can be made by physicians.

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HERMESS SCREENSHOT

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SAMPLE CODING SCHEME		
NO.	**BASIC PATIENT INFORMATION**	**SYSTEMS CODE**
1	LAST NAME	LAN
2	FIRST NAME	FIN
3	MIDDLE NAME	MIN
4	ADDRESS	ADD
5	BIRTH YEAR	BYR
6	SEX	SEX

SAMPLE TEXT :

LANCRUZ FINJUAN MINSANTA BYR1965 SEXM HBP1

E.   Components of the HERMESS - HIDS System

Information management systems have five basic components, namely:
1. People,
2. Procedure,
3. Hardware,
4. Software, and
5. Data.

HERMESS - HIDS, just like any information management system, also has the five basic components described below:

1."People"   =   HEALTH   HUMAN   RESOURCE This pertains to the human resources needed to run, manage, and maintain the system and those that ultimately use the system. SPEED requires the active participation of all decision makers, policy makers, health emergency managers, health workers and staff across all the levels of the Government, those coming from the Private Sector, even international humanitarian agencies. Each individual has a role in SPEED:

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2.   Procedure,
3.   Hardware,
4.   Software, and
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2. "Procedure"= STRUCTURE

This component includes the structures that guide the "People" in using and managing the system.

These include hierarchies, policies, plans, advocacy, and training.

HERMESS – HIDS will utilize the existing devolved health care system and will adhere in the existing IMS in the country and uphold the various hierarchies, structures, and mechanisms set up by the LGUs in accordance with the Local Government Code of 1991 and the existing policies on Health Emergency Management and takes into consideration the newly enacted RA 10121.

In effect, the usual reporting flow across all units of the Health Care System (from the LGU or hospitals, to the CHDs and up to DOH-CO) is observed.

3. "Hardware" = INFRASTRUCTURE

This component is defined as the tangible machinery/equipment/supplies in the system designed to help the "People" perform specific tasks. It is not limited to hi-tech gadgets such as computers and their peripheral equipment or communication devices. Reporting forms are at the forefront of this particular component.

- Data collection tools
- Reporting Forms
- Desktop or Laptop Computers
- USB Broadband/Mobile phones

4. "Software"   =   INSTRUCTION

This is the computer program that directs or provides instruction on what the computer needs to do and how to do it.

Through the software, data sent in the system can be transformed into tables, graphs, and maps for easier data analysis and report generation.

Minimum Computer Requirements to use HERMESS - HIDS
- Operating System: Microsoft Windows 7 or 8
- Programming Language: VB.Net
- Database Management System: MySQL (open source)

5. "Data"   =   DATA MANAGEMENT

This component is the manipulation of data collected to produce the needed information for dissemination

- Data collection
- Data storage
- Data validation
- Data analysis
- Report generation

SUMMARY

1. The rapidly growing use of mobile technologies has increased pressure on the demand for mobile-based data collection solutions to bridge the information gaps in the health sector of the developing world.

2. SMS (short for text message) as one of its integral function has been proven to be the most stable, most affordable and the most widely used compared to internet.

3. The deployment of HERMESS-HIDS clearly show the feasibility of mobile technologies, particularly SMS, in improving the health data collection and reporting systems for the developing world.

We have reviewed existing health data collection systems and the available tools that can be used to improve these systems.

And that, we propose a model that is SMS-BASED data collection framework in improving the health data collection in the developing world context like the Philippines.

END OF PRESENTATION