

## Utilization of Electronic Medical Records for Anggrek 7 Integrated Servant Post

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### ABSTRACT

*Processing of medical record information at the Anggrek 7 Integrated Servant Post, Langenharjo Village, Sukoharjo Regency, is still experiencing problems including recording medical record data and history of health services for toddlers and pregnant women as well as reporting activities. Electronic medical records as an effort to overcome these obstacles. The research method is descriptive by following the system development life cycle method. Electronic medical records are capable of recording master data including data on toddlers, pregnant women and elderly data. The history of health services for children under five, pregnant women and the elderly can be done through the check and drug service feature. This application can help integrated service post volunteers to manage master data and services accurately and continuously. Integrated service postal service reports can be reported neatly and on time*

**Keywords:** integrated service post, electronic medical records, toddlers and pregnant women

### I. INTRODUCTION

Initially, a medical record was a file containing notes and documents about the patient's identity, examination, treatment, actions, and other services provided by the patient [1]. Along with the development of medical record technology developed into electronic medical records [2]. Utilizing an

electronic medical record me m iliki benefit [3]. Administratively, electronic medical records are useful as a repository of electronic information about health status and health services obtained by patients throughout their life [4]. In addition, the use of electronic medical records provides benefits to physicians and health workers in accessing patient information which ultimately helps in clinical decision making [5].

Recording medical records is mandatory for doctors and dentists who perform medical actions on patients, in accordance with the rules so that there is no reason for doctors not to make medical records [6]. Electronic medical records are a solution to overcome various problems that often occur such as large storage areas, loss of medical records, removing needed data, and others [7]. These advantages are the basis for the use of medical records in health service facilities and community-based health care providers including hospitals, health centers and integrated service posts (posyandu)[8].

Posyandu is managed together with the community in the implementation of health development, providing convenience for the community in obtaining basic health services, mainly to accelerate the reduction in maternal and infant mortality [9]. Posyandu activities consist of (a) Maternal and Child Health (Pregnant

Women, Postpartum and Breastfeeding Women, Infants and Children Under five ) (b) Family Planning (KB) (c) Immunization if there are Puskesmas officers. (d) Nutritional Services done by cadres to babies, toddlers, pregnant women and W anita U worth S jellyfish . (e) Prevention and prevention of diarrhea by counseling on Clean and Healthy Living Behavior (PHBS) [10] .

Integrated Service Post (Posyandu) Anggrek 7 Langenharjo Village as a case study has provided posyandu services covering mothers and children posyandu. The health services provided at the orchid 7 posyandu require good, fast and continuous documentation. Obstacles that are still encountered in the process of recording patient medical records at the orchid posyandu 7 include (1) recording data of the posyandu target medical records is still carried out in notebooks, so that posyandu volunteers and village midwives find it difficult to find out the history of health services that have been obtained; (2) Volunteer posyandu experiencing difficulties in filling format of the report p u skesmas for formatting reports daam wide shape, the number of stuffing a lot and pengg u naan small font. There are 5 types of forms that must be completed by cadres, namely the format 1 Birth of a Baby, Infant Mortality, Pregnant Women and Maternal Mortality (Pregnancy, Childbirth, and Postpartum). Format 2: Register of Infants and Children in Posyandu Work Areas Format 3: Register of Women at Fertile Age (WUS) and Fertile Age Couples ( PUS) in Posyandu Work Areas. Format 4: Register of Ibu H amil in Posyandu Work Areas. Format 5: Data on Posyandu Activities Results on Posyandu Opening Day (D-Day); (3) Posyandu volunteers must collect service forms and carry out time-consuming recapitulation and the recapitulation must be sent to the puskesmas. Based on the description above, the invention m medical e lect t ronik is a solution to help Posyandu in health care data management, recording and reporting.

## II. METHOD

This research is a descriptive study. Collecting data through observation of the medical record recording process at the orchid 7 village posyandu in Langenharjo village, interviews were conducted with village midwives and posyandu volunteers regarding the process of recording medical records, recording forms and reporting. The method used in system development is the System Development Life Cycle. This research method includes (1) Problem Identification (2) Design (3) Implementation

## III. RESULT

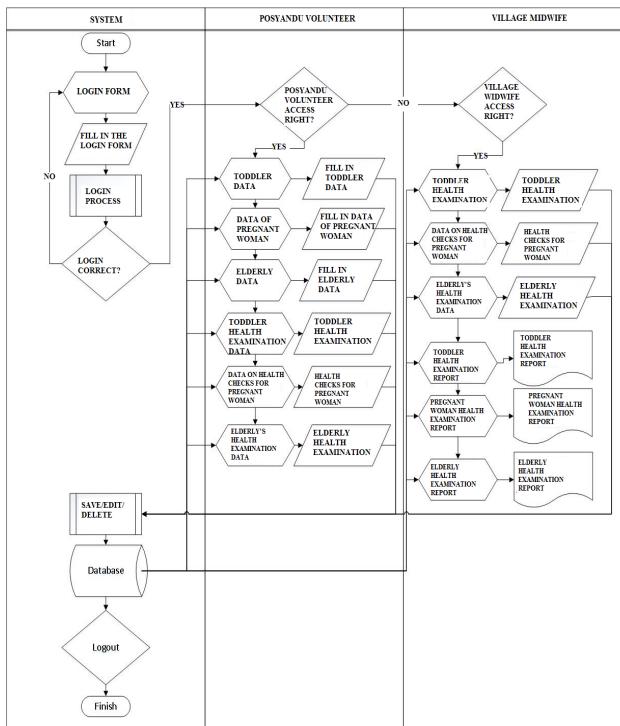
### 1. Problem Identification

Problems obtained from observation and interviews:

- a. Recording of medical records for pregnant women and immunization for children under five are still simple, unstructured and sustainable.
- b. Processing of medical record data and reporting of health services will take longer
- c. a lot of scattered medical record data and often loss of activity data
- d. Cannot present reports as needed immediately

### 2. The flow of the Posyandu Anggrek electronic medical record application 7

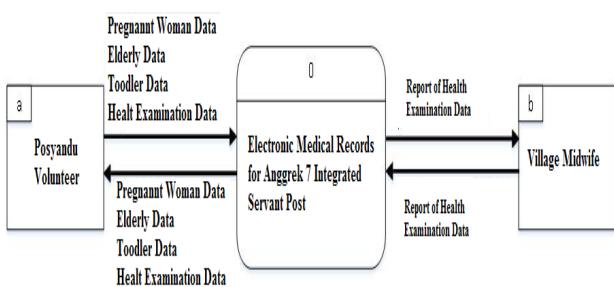
Posyandu Anggrek 7 electronic medical record program is divided into 2 access rights, namely volunteer posyandu (cadres) and village midwives. Each access right is able to record patient medical records including recording patient data including toddlers, elderly and pregnant women; as well as recording health checks for children under five, the elderly and pregnant women. For village midwives, they are able to carry out reports; as shown in figure 1



**Figure 1.** Flow of the Posyandu Anggrek Electronic Medical Record Program 7

### 3. Context Diagram

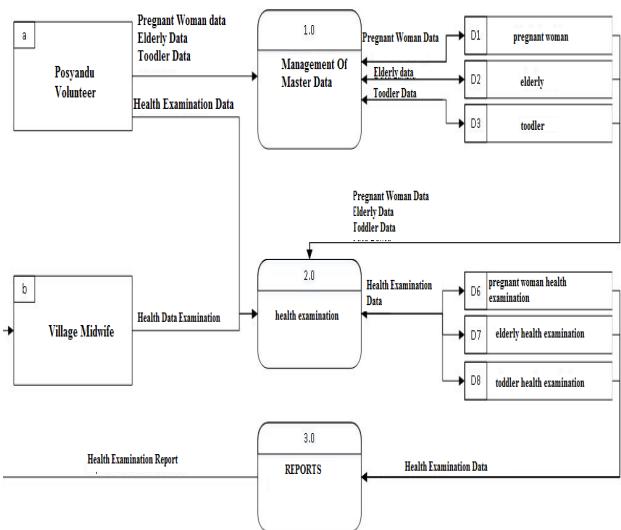
Figure 2 explains the outline of the data flow in the electronic medical record of Posyandu Anggrek 7. The processed data includes data on pregnant women, elderly data, toddler data and examination data. The entities involved include posyandu volunteers (cadres) and village midwives.



**Figure 2.** Context Diagram of the Posyandu Anggrek Electronic Medical Record 7

#### 4. Data Flow Diagram Level 0

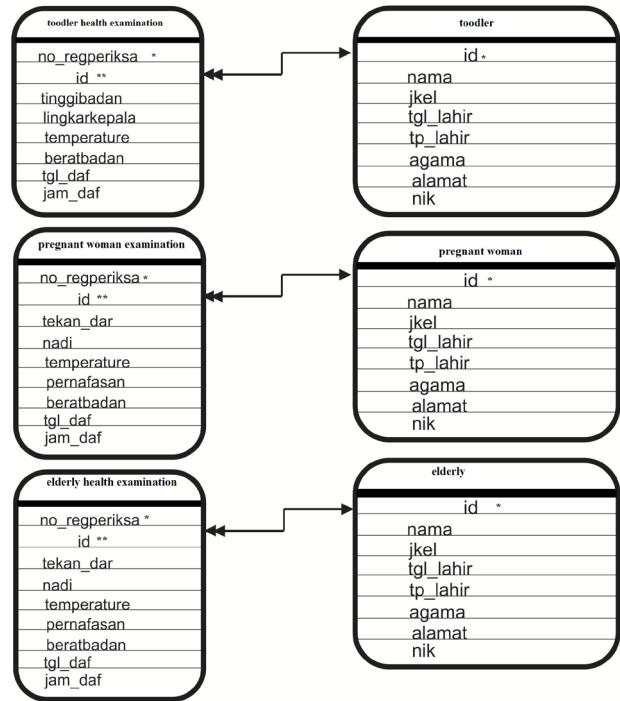
Level 0 diagrams illustrate the breakdown of the data flow in the context diagram. Figure 3 describes the posyandu volunteer entity (cadres) managing master data for pregnant women, toddlers and the elderly. Posyandu volunteers are able to manage health checks. The village midwife is able to record the patient's medical history after conducting the examination and produce the reports needed by the puskesmas.



**Figure 3** Level 1 Diagram of the Posyandu Anggerek Electronic Medical Record 7

## 5. Relations Between Tables

Database design produces interrelated tables, tables are used to store electronic medical record data for orchid 7 Posyandu as listed in Figure 4



**Figure 4** Relations between Tables

## 6. Master Data

Master data electronic medical record for Posyandu Anggrek 7 includes recording patient data. What is meant by patients are people who receive posyandu health services, including data on pregnant women, data on the elderly, data on toddlers. This master data is used before carrying out the health check service process at the posyandu. The main menu of the electronic medical record program as shown in Figure 5



**Figure 5** Main Menu of Posyandu Anggrek 7 Electronic Medical Records 7

**Figure 6** Toodler Data

Figure 6 displays the toddler data page interface, this page is used to record toddler data.

**Figure 7** Recording of Master Data for Pregnant Women

Figure 7 shows the interface of the data page for pregnant women, this page is used to record data for pregnant women.

**Figure 8** Elderly Master Data Recording

Figure 8 shows the interface of the elderly mother's data page, this page is used to record elderly data.

## 7. Recording of Medical Examination Medical Records

**Figure 9** Toddler examination records

Figure 9 shows the interface page for the maternal health examination of a toddler. Midwives and posyandu volunteers (cadres) can carry out health checks for toddlers, the development of toddler growth and development through the toddler examination page. Every month the health development of children under five is observed.

**Figure 10** Recording of Pregnant Women Health Examination

Figure 10 shows a front page for a pregnant woman's health check. Midwives and posyandu volunteers (cadres) can carry out health checks for pregnant women, pregnancy development, blood pressure, and history of examinations for pregnant women to be continuous.

**Figure 11** Registration of Elderly Examination

Figure 11 shows the elderly health examination interface page. Midwives and posyandu volunteers (cadres) can carry out health checks for the elderly, blood pressure, history of congenital and chronic diseases are recorded continuously.

**Figure 12** Report management interface

Posyandu volunteers can print reports to be submitted to midwives and puskesmas as shown in Figure 13.

**Figure 13** Print interface of the report

#### IV. CONCLUSION

Based on the results of the study, it was found that the Posyandu Anggrek 7 electronic medical record was able to solve problems in recording data for pregnant women, toddlers and the elderly, the history of examinations was continuous and reporting could be displayed quickly.

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