



Periodic Examination of Pregnant Women at Tanjung Lalak Kotabaru Health Center Based on Information System

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ABSTRACT

Tanjung Lalak Health Center is located at Education Street RT 1. TanjungLalak Selatan Village, Pulau Laut Kepulauan District, Kotabaru Regency. South Kalimantan. Tanjung Lalak Health Center has several poly services, including Pregnant/Obstetric poly. Some of the services provided by the puskesmas for pregnant women who check themselves include obtaining the MCH book (Maternal and Child Health), a pink book that mothers must have. Usually, the examination is only carried out by a midwife. By asking when the last menstruation started and finished before pregnancy to determine the estimated gestational age. The midwife will check blood pressure, measure arm circumference, and examine the pregnant woman's stomach condition. At the Tanjung Lalak Health Center, there are no ultrasound facilities, so if you want to confirm the fetus's condition, you must visit an obstetrician or regional hospital. Of course, this costs money because USG does not cover BPJS except for emergencies. The puskesmas midwife will provide free vitamins or supplements such as folic acid, calcium, and iron supplements to support the fetus's growth in the womb. In addition to vitamins, pregnant women get food like biscuits with strawberry-flavored cream. The puskesmas will supply several cartons of biscuits for a few weeks. These biscuits are consumed 2 to 3 pieces per day. The Tanjung Lalak Health Center requires blood tests for pregnant women. These tests include a blood test and checking sugar levels at least twice during pregnancy and are free of charge. The problem that will be discussed in this study is to record the examination history of pregnant women and record supplies of vitamins/supplements, biscuits for pregnant women and medicines available for the Pregnant/Obstetric Polyclinic. The application will be made using database access with Visual Basic .net. The application concludes that it can store data from midwives' examinations on pregnant women and print Maternal and Child Health Books. The application can print reports on the activities of the Pregnant Poly / Obstetrician Polyclinic every month as a general report to the Head of the Tanjung Lalak Health Center, as well as the application automatically records the remaining supplies of vitamins, biscuits and medicines, and make it easier for the Tanjung Lalak Health Center Midwives to see the history of examinations of pregnant women and the administration of medicines, vitamins and biscuits.

Keywords: *Application, Periodic Examination of Pregnant Women, Puskesmas.*

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INTRODUCTION

Tanjung Lalak Health Center is located at Education Street RT 1. Tanjung Lalak Selatan Village, Pulau Laut Kepulauan District, Kotabaru Regency. South Kalimantan (Makransky dkk., 2019). The Tanjung Lalak Health Center has several poly services, including general poly, maternal and child health poly (Nagaraja dkk., 2019), pregnancy/obstetrics poly (Kim dkk., 2022), family planning poly (Taliaferro dkk., 2021), elderly poly and dental poly (Kulachote dkk., 2020). Some of the services provided by the puskesmas for pregnant women who check themselves include obtaining the MCH book (Maternal and Child Health) (Galluzzi dkk., 2020), a pink book that mothers must have (Corbet dkk., 2020). Usually, a midwife only carries out the examinationmier dkk., 2019) by asking when the last menstruation started and finished before pregnancy to determine the estimated gestational age (Berg dkk., 2020). The midwife will check blood pressure, measure arm circumference, and examine the pregnant woman's stomach condition.

At the Tanjung Lalak Health Center, there are no ultrasound facilities (Meyers dkk., 2019), so if you want to confirm the fetus's condition, you have to visit an obstetrician or regional hospital (Jiang dkk., 2019). Of course, this costs money because BPJS is not covered for USG emergency conditions (Liang dkk., 2020). If needed, pregnant women will get an ultrasound referral from the midwife (Boelig dkk., 2020). The puskesmas midwife will provide free vitamins or supplements such as folic acid, calcium, and iron supplements to support the fetus's growth in the womb (Manes dkk., 2019). In addition to vitamins, pregnant women get food like biscuits with strawberry-flavored cream (Stelzig dkk., 2020). The puskesmas will supply several biscuits cartons for a few weeks (Cheung dkk., 2020). These biscuits are consumed 2 to 3 pieces per day. Tanjung Lalak Health Center is a first-level health facility requiring pregnant women to take blood tests (Schwabl dkk., 2019). These checks include blood tests and checking sugar levels at least twice during pregnancy and are free of charge (Kinner dkk., 2020). Usually, pregnant women will be referred by midwives to visit the nutrition clinic (Kociol dkk., 2020). The nutritionist on duty will give several suggestions to pregnant women to ask anything they want to know about the nutritional needs of themselves and their future babies.

The problem discussed in this article is to record the history of examination of pregnant women and record supplies of vitamins/supplements, biscuits for pregnant women and medicines available for the Pregnant/Obstetric Polyclinic (Leonhard dkk., 2019). The application will be made using database access with Visual Basic (van der Pol dkk., 2019). net, all activities related to storing personal data of pregnant women,

midwives who handle them, and handling vitamins (Monk dkk., 2019), biscuits and supplements and medicines are stored properly, and reports can be made according to the needs of the Tanjung Health Center Lalak.

The problem formulation is how to apply for periodic examination of pregnant women at the Tanjung Lalak health center in Kotabaru district based on visuals (Sadarangani dkk., 2021). Limitations of problems in research, namely, The research discusses the issue of biodata of pregnant women, examination of midwives and availability of vitamins, biscuits, and medicines in the Pregnant Poly/Obsig (Hsissou dkk., 2021). The application uses Visual Basic .Net programming (Zhao dkk., 2019). The application will use the Access Database to store application data. The purpose of the research is a The application can print Maternal and Child Health Books (Sha & Xiong, 2020). The application stores the results of examinations by midwives on pregnant women (Hong dkk., 2020). Make a report on the activities of the Pregnant Polyclinic / Obstetrics every month as a general report to the Head of the Tanjung Lalak Health Center (Bouarab Chibane dkk., 2019). I am keeping track of the remaining supplies/stocks of vitamins, biscuits and medicines at the Pregnant Polyclinic/Observation Unit of the Tanjung Lalak Health Center.

The benefits of research for agencies or health centers include The application making it easier for midwives at the Tanjung Lalak Health Center to see a history of examinations of pregnant women and a history of administering drugs and vitamins. Make it easier to report supplies of medicines, biscuits, and vitamins needed for the Tanjung Lalak Health Center.

RESEARCH METHODOLOGY

Some of the research methods are as follows Library Research Method. This method is an activity that is carried out by studying and quoting from various literature and books related to the material being discussed (Mehran dkk., 2019). Interview (Snyder, 2019), It is an activity to obtain data by conducting interviews with employees of the Tanjung Lalak Health Center Kotabaru in the Pregnancy/Obsigence section (Wang dkk., 2021). Observational observation: The activity carried out was observing the activities of the Tanjung Lalak Health Center in Kotabaru. Documentation (Godard dkk., 2019) is a collection of data or document care sheets at the Tanjung Lalak Health Center Kotabaru.

To complete the making of this application (Waring dkk., 2020), the research stages are carried out (Ali kk., 2019), namely Determining the topic and object of research, Direct observation at the Tanjung Lalak Health Center Kotabaru (Johnson & Khoshgoftaar, 2019), Collect data and document files, Read documents, Determine the problem of the materials collected during the observation, Input system design, Output design as well, Writing application code, Menu Design, Trial program and Report writing.

Current System Analysis, Pregnant women who are going to check their wombs register with the employees of the Tanjung Lalak Health Center in the maternity poly /

Obigin section (Crowley dkk., 2019), this registration brings a healthy Indonesia card or a BPJS card (Zamaniyan dkk., 2020), this registration is also directly carried out by weighing, measuring blood pressure (Serrano dkk., 2019), height, and some biodata fields from pregnant women if it is the first time doing an examination, then after registering the pregnant woman is given a care sheet card to be later brought into the examination room which is carried out by the puskesmas midwife on duty. After an examination by the midwife, the midwife will then provide a paper note in the form of medicine/vitamins, maybe also biscuits for pregnant women, take medicine/vitamins/biscuits for free or not pay at the puskesmas drug depot. Every month the Tanjung Lalak Health Center staff will make a visit report and a recap report on the administration of drugs/vitamins/biscuits using a Microsoft Word word processor, which will later be signed by the Head of the Tanjung Lalak Health Center as a report to the District Health Office—a new city.

Analysis of the Proposed System, The proposed system analysis makes an application for periodic check-ups for pregnant women starting from data collection on pregnant women, midwives, admissions, administration and stock of medicines/vitamins/biscuits, as well as data collection on pregnant women's examinations by storing data into an access database and Microsoft Visual Basic.

RESULT AND DISCUSSION

Data Flow Diagram Design

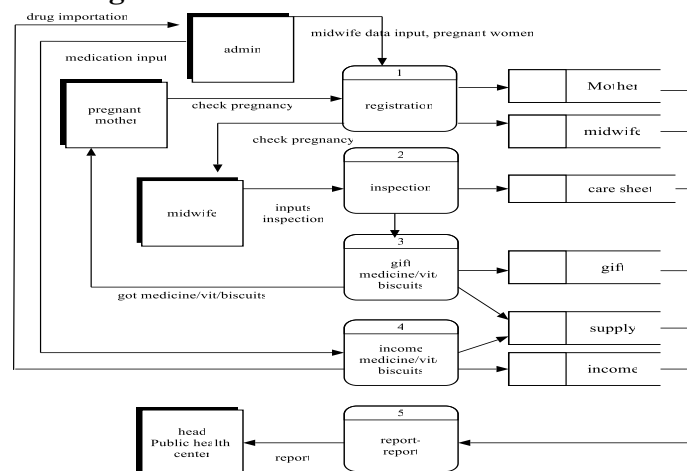


Figure 1. Data Flow Diagram Design

Display Running Application

The application user input login form is asked to fill in the user name = 'ADMIN' and password = 'ADMIN'. If something does not match, then an error message will be displayed. The application's main menu will be displayed if the username and password match.

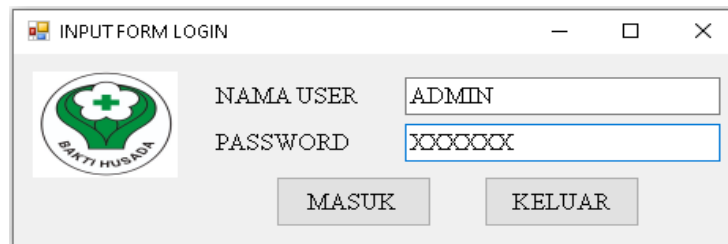


Figure 2. Login Form

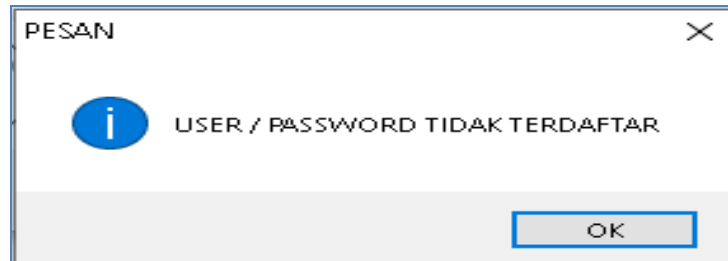


Figure 3. Password error message

Application Main Menu

The main menu of this application consists of data, transactions, reports and completion.



Figure 4. Main Menu

Sub Menu Data

The data sub-menu consists of mothers, midwives and supplies.

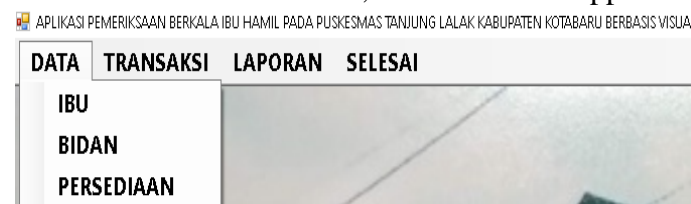


Figure 5. Data Sub Menu

Mother data

In the data input for pregnant women for the first time, the id number is in the form of a BPJS card number or other health insurance that has been registered. The name, address, telephone, date of birth and age will be displayed if found. -data, several uses of the new button to fill in new data, the save button to save data, the edit button to change data, the delete button to delete data, and the finish button to return to the previous menu.

NOID	NAMAIBU	ALAMATIBU	TELEPONIBU	TGLLAH
0001484066777	HENIYATI NINGSIH	JL P.I KESUMA NEGARA NO. 123	081398657485	10/01/1995
0001484066775	SUSI HERLINA	JL SIRING LAUT NO. 45	0813986567876	08/05/1993

Figure 6. Data input for pregnant women

Midwife data

In the data input for the midwife, the first time that is filled in is the midwife id number in the form of the midwife employee identification number. If found, it will display the name, address, and telephone. If it is the first time it is filled in, it must fill in these data; several uses of the new button to fill in data new button, save button to save data, edit button to change data, delete button to delete data, done button to return to the previous menu.

IDBIDAN	NAMABIDAN	TELEPONB	ALAMATB
199009022019041002	MARIATI A.MD	081398786456	JL. SURYA GANDAMANA NO.45 KOTABARU
199110012019041003	HENNY HAYATI A.MD	081398678667	JL PUTRI CIPTASARI NO 78 KOTABARU

Figure 7. Midwife data input

Inventory Data

The first input of supply data is a code in the form of a drug/vitamin/biscuit code. If found, the name, unit, and stock will be displayed. If this is the first time it is filled, it is mandatory to fill in these data. Several uses of the new button to fill in data, the new one, the save button to save data, the edit button to change data, the delete button to delete data, finish button to return to the previous menu.

Kode	Nama	Satuan	Stok
ELKANA	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	1 LEMBAR ISI 10	148
NATAVIT	ASAM FOLAT,B KOMPLEK DAN DHA	1 BOTOL	148
BISKUIT	BISKUIT PMT IBU HAMIL	1 BUNGKUS	196

Figure 8. Inventory data input

Sub Menu Transactions

The transaction sub-menu consists of entry transactions and inspection transactions.

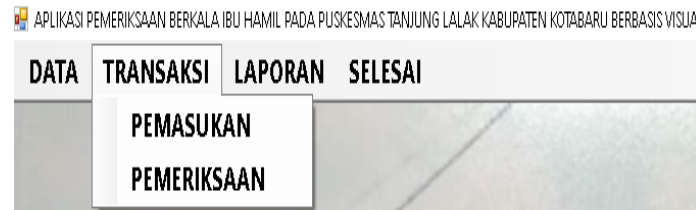


Figure 9. Transaction sub menu

Entry Transactions

In the input transaction for the first time that is entered is the transaction number in the form of a letter-number from the Kotabaru district health office, date of entry, code, and number of drugs received; several uses of the new button to fill in new data, the save button to save data to add drug supply data, the edit button to change data, the delete button to delete data, the finish button to return to the previous menu.

INPUT DATA PEMASUKAN

NO TRANSAKSI: MARET2022

TANGGAL MASUK: 12/04/2022

KODE: ELKANA MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL

JUMLAH MASUK: 50

BARU SIMPAN EDIT HAPUS SELESAI

NOTRANSAKSI	TGLMASUK	KODE	JUMLAHMASUK
MARET2022	01/03/2022	BISKUIT	100
MARET2022	01/03/2022	NATAVIT	50
MARET2022	12/04/2022	ELKANA	50

KODE	NAMA	SATUAN	STOK
BISKUIT	BISKUIT PMT IBU HAMIL	1 BUNGKUS	196
ELKANA	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	1 LEMBAR ISI 10	148
NATAVIT	ASAM FOLAT B KOMPLEK DAN DHA	1 BOTOL	148

Figure 10. Input income data

Examination Transactions

INPUT DATA PEMERIKSAAN

NO PERIKSA: PERIKSA002 NO ID: 0001484066775 SUSI HEELINA

TANGGAL PERIKSA: 01/03/2022 ID BIDAN: 199009022019041002 MARIATLA MD

KELUHAN: TIDAK ADA KELUHAN

KETERANGAN: HPHT 01-02-2022, TP-01-12-2022

KU: BAIK HB: 12,9

RR: 21/MENIT GOLDA: O+

NT: 20/MENIT MALARIA: NEG

T: 36,5 C ANTI HIV: NEG

BB: 61 KG HB-SAG: NEG

TB: 154 CM GDS: 93

TD: 150/100 MMHG PROTEN: NEG

LLA: 30 CM GLUKOSA: NEG

LP: 82 CM ASSESMENT: G II P1 A0 UK 4MNGGU

L1: TETAP JERAPUSAT

L2: PUKA DIT 121 NON

L3: FRESEK

L4: -

CETAK LEMBAR ASUH OBAT DAN VITAMIN

SIMPAN EDIT HAPUS SELESAI BARU

NO PERIKSA	NO ID	ID BIDAN	TGL	KELUHAN
PERIKSA002	0001484066775	199009022019041002	01/03/2022	TIDAK ADA KELUHAN
PERIKSA001	0001484066777	199009022019041002	01/03/2022	MUAL

Figure 11. Inspection data input

The first time that is filled in the examination data is the examination number, the date of the examination, the patient id of the pregnant woman, the midwife's ID, the complaints and the results of the examination of height, weight and laboratory test results if any, several uses of the new button to fill in new data, the button save to save examination data, edit button to change data, delete button to delete data, done button to return to the previous menu. The print foster sheet button prints the examination results and administration of medicines/vitamins/biscuits, while the buttons for medicines and vitamins are for giving medicines/vitamins/biscuits to pregnant women.

Puskesmas Tanjung Lalak
Jl. Pendidikan RT 1, Desa Tanjung Lalak Selatan
Kecamatan Pulau Laut Kepulauan, Kabupaten Kotabaru

LEMBAR ASUHAN KEBIDANAN

NO PERIKSA: PERIKSA002
TANGGAL PERIKSA: 01/02/2022
NID: 0001484066775
IBU HAMIL: SUSI HERLINA

KELUHAN: TIDAK ADA KELUHAN
ASPEK: G II P1 A0 UK 4MINGGU
KETERANGAN: HPHT: 01-02-2022, TP: 01-12-2022

KU	BAIK	HB	12,9
RE	20/MENIT	GLA	0+
N	80/MENIT	MALARIA	NEG
T	36,5 C	ANTI HIV	NEG
BB	61 KG	HSA G	NEG
TB	154 CM	GDS	93
TD	130/100 MMHG	PROTEIN	NEG
LILA	30 CM	GLUKOSA	NEG
LP	82 CM		
L1	TFU1 JR+PUS AT		
L2	PUKA DJJ 121 NON		
L3	PRESKEP		
L4	-		

NO	NAMA	JUMLAH
1	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	1
2	BISKUIT PMT IBU HAMIL	2
3	ASAM FOLAT,B KOMPLEK DAN DHA	1

Tanjung lalak, 17/05/2022
Bidan
MARIATI.A MD

Figure 12. Midwifery care sheet

Drugs/Vitamins/Cookies Administration Transactions

In the transaction input for administering drugs/vitamins/biscuits, the first time that is filled is the code and amount given, several uses of the new button to fill in new data, the save button to save data to add drug supply data, the edit button to change data, the delete button to delete data, finish button to return to the previous menu.

INPUT DATA PEMBERIAN OBAT/VIT/BISKUIT

NO PERIKSA: PERIKSA002
TANGGAL PERIKSA: 01/03/2022
NO ID: 0001484066775
ID BIDAN: 199009022019041002
KODE: BISKUIT
JUMLAH DIBERI: 2

SUSI HERLINA
MARIATI.A MD
BISKUIT PMT IBU HAMIL

BARU SIMPAN EDIT HAPUS SELESAI

NO PERIKSA	ID BIDAN	NID	TGL	KODE	JUMLAH DIBERI	PLANNING
PERIKSA002	199009022019041002	0001484066775	01/03/2022	BISKUIT	2	
PERIKSA002	199009022019041002	0001484066775	01/03/2022	ELKANA	1	
PERIKSA002	199009022019041002	0001484066775	01/03/2022	NATAVIT	1	

KODE	NAMA	SATUAN	STOK
BISKUIT	BISKUIT PMT IBU HAMIL	1 BUNGKUS	198
ELKANA	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	1 LEMBAR ISI 10	148
NATAVIT	ASAM FOLAT,B KOMPLEK DAN DHA	1 BOTOL	148

Figure 13. Data input for drug/vitamin/biscuit administration

Sub Menu Report

The report sub-menu consists of reports on mothers, midwives, supplies, income and inspections.

APLIKASI PEMERIKSAAN BERKALA IBU HAMIL PADA PUSKESMAS TANJUNG LALAK KABUPATEN KOTABARU BERBASIS VISUAL

DATA TRANSAKSI LAPORAN SELESAI

IBU
BIDAN
PERSEDIAAN
PEMASUKAN
PEMERIKSAAN

Figure 14. Report sub menu

Mother's report

Fill in the month and year of printing and use the print button to print while the exit button returns to the previous menu.

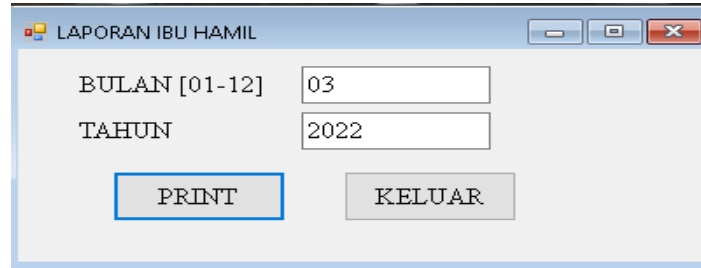
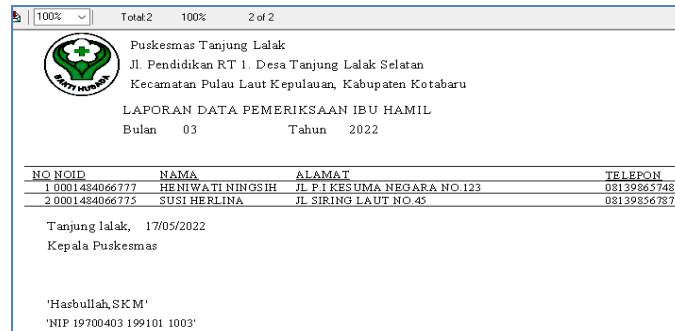


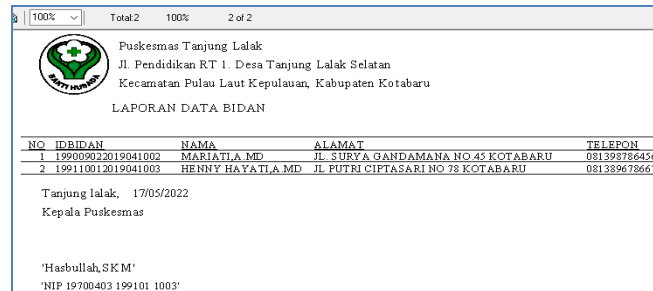
Figure 15. Input reports for pregnant women



NO NOLID	NAMA	ALAMAT	TELEPON
1 0001484066777	HENI WATI NINGSIH	JL P1 KESUMA NEGARA NO 123	081398637485
2 0001484066775	SUSI HERLINA	JL SIRING LAUT NO 45	081398567876

Figure 16. Data Report on pregnant women

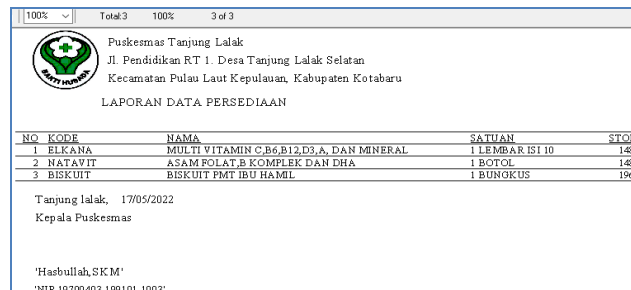
Midwife report



NO ID BIDAN	NAMA	ALAMAT	TELEPON
1 199009023019041002	MARIATIA MD	JL SURYA GANDAMANA NO 45 KOTABARU	081398786456
2 199110012019041003	HENNY HATATIA MD	JL PUTRI CIPTASARI NO 78 KOTABARU	081389678667

Figure 17. Midwife data report

Inventory Report



NO	KODE	NAMA	SATUAN	STOK
1	ELKANA	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	1 LEMBAR ISI 10	142
2	NATAVIT	ASAM FOLAT,B KOMPLEK DAN DHA	1 BOTOL	142
3	BISKUIT	BISKUIT PMT IBU HAMIL	1 BUNGKUS	196

Figure 18. Inventory data report

Report on the Entry of Drugs/Vitamins/Cookies

Fill in the start and end dates of printing; use the print button to print while the exit button returns to the previous menu.

Figure 19. Input report on the entry of drugs/vitamins/biscuits

NO	NOTRANSAKSI	TGLMASUK	NAMA OBAT/VIT	JUMLAHMASUK
1	FEB2022	01/02/2022	BISKUIT PMT IBU HAMIL	100
2	FEB2022	01/02/2022	ASAM FOLAT B KOMPLEK DAN DHA	100
3	FEB2022	01/02/2022	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	100
4	MARET2022	01/03/2022	ASAM FOLAT B KOMPLEK DAN DHA	30
5	MARET2022	01/03/2022	BISKUIT PMT IBU HAMIL	100
6	MARET2022	01/03/2022	MULTI VITAMIN C,B6,B12,D3,A, DAN MINERAL	30

Tanjung lalak, 17/05/2022
Kepala Puskesmas
'Hasbullah,SKM'
'NIP 19700403 199101 1003'

Figure 20. Data report on drug/vitamin/biscuit entry

Report on Administration of Medicines/Vitamins/Cookies

Fill in the start and end dates of printing; use the print button to print while the exit button returns to the previous menu.

Figure 21. The input of reports on the administration of drugs/vitamins/biscuits

NO	NOPERIKSA	TANGGALPERIKSA	IBU HAMIL	IDIBIDAN	KODE	JUMLAH
1	PERIKSA A001	01/03/2022	0001484066777	HENI WATI NINGSIH	199009022019041002	ELKANA
2	PERIKSA A001	01/03/2022	0001484066777	HENI WATI NINGSIH	199009022019041002	NATAYIT
3	PERIKSA A001	01/03/2022	0001484066777	HENI WATI NINGSIH	199009022019041002	BISKUIT
4	PERIKSA A002	01/03/2022	0001484066775	SUSI HELINA	199009022019041002	ELKANA
5	PERIKSA A002	01/03/2022	0001484066775	SUSI HELINA	199009022019041002	BISKUIT
6	PERIKSA A002	01/03/2022	0001484066775	SUSI HELINA	199009022019041002	NATAYIT

Tanjung lalak, 17/05/2022
Kepala Puskesmas
'Hasbullah,SKM'
'NIP 19700403 199101 1003'

Figure 22. Report on the administration of drugs/vitamins/biscuits

CONCLUSION

The conclusions that can be drawn from the research are that The application can store data on the results of examinations by midwives on pregnant women and print

Maternal and Child Health Books. The application can print monthly reports on the Pregnant Polyclinic / Obstetrics activities as a general report every month to the Head of the Tanjung Lalak Health Center as well. The application automatically records the remaining supplies of vitamins, biscuits and medicine. The application makes it easier for midwives at the Tanjung Lalak Health Center to see a history of examining pregnant women and administering drugs, vitamins, and vitamin biscuits. Suggestions for developing this information system are reading library material for researchers/students who want to develop the same topic but with a wider scope. The application is developed to be web-based to help the work of midwives and employees of the Tanjung Lalak Health Center, Kotabaru Regency.

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