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## Lampiran 1

### BIODATA

#### Identitas Diri

Nama : Rusdi  
Tempat, Tanggal Lahir : Maros, 09 Juni 1991  
Jenis Kelamin : Laki-laki  
Alamat Rumah : Jln. Pampang II  
Telpon Rumah dan HP : 08991449974  
Alamat Email : rusdi.bahar@gmail.com

#### Riwayat Pendidikan

- Pendidikan Formal
  1. SDN 30 Inpres Kaluku (1997-2003)
  2. SMPN 2 Camba (2003-2006)
  3. SMAN 1 Cenrana (2006-2009)

Demikian biodata ini dibuat dengan sebenarnya.

Makassar, 2 Desember 2013

Penulis

Rusdi

## Lampiran 2

Data Kedatangan Pasien Rawat Jalan  
di RSUD Salewangang Maros

No	Hari	Tanggal	Periode Waktu (Per Jam)	Kedatangan (Orang)	
				Pasien Lama	Pasien Baru
1	Rabu	6-Nov-13	08.00-09.00	23	2
			09.00-10.00	41	7
			10.00-11.00	55	11
			11.00-12.00	27	4
2	Kamis	7-Nov-13	08.00-09.00	7	1
			09.00-10.00	43	16
			10.00-11.00	35	8
			11.00-12.00	23	2
3	Jum'at	8-Nov-13	08.00-09.00	12	2
			09.00-10.00	45	10
			10.00-11.00	24	12
			11.00-12.00	9	4
4	Sabtu	9-Nov-13	08.00-09.00	11	2
			09.00-10.00	29	2
			10.00-11.00	31	3
			11.00-12.00	11	5
5	Senin	11-Nov-13	08.00-09.00	11	8
			09.00-10.00	45	17
			10.00-11.00	44	18
			11.00-12.00	40	10
6	Selasa	12-Nov-13	08.00-09.00	16	2
			09.00-10.00	26	13
			10.00-11.00	26	12
			11.00-12.00	23	6

### Lampiran 3

Hasil Perhitungan Menggunakan QM for Windows V3.0:

- Pasien Lama (M/M/1)

08.00-09.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.33		
Arrival rate( $\lambda$ )	13	Average number in the queue( $L_q$ )	.16		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	.48		
Number of servers	1	Average time in the queue( $W_q$ )	.01	.72	43.33
		Average time in the system( $W_s$ )	.04	2.22	133.33

09.00-10.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.95		
Arrival rate( $\lambda$ )	38	Average number in the queue( $L_q$ )	18.05		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	19		
Number of servers	1	Average time in the queue( $W_q$ )	.48	28.5	1710
		Average time in the system( $W_s$ )	.5	30	1800

10.00-11.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.9		
Arrival rate( $\lambda$ )	36	Average number in the queue( $L_q$ )	8.1		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	9		
Number of servers	1	Average time in the queue( $W_q$ )	.23	13.5	810
		Average time in the system( $W_s$ )	.25	15	900

11.00-12.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.55		
Arrival rate( $\lambda$ )	22	Average number in the queue( $L_q$ )	.67		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	1.22		
Number of servers	1	Average time in the queue( $W_q$ )	.03	1.83	110
		Average time in the system( $W_s$ )	.06	3.33	200

## - Pasien Lama (M/M/s)

08.00-09.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.16		
Arrival rate( $\lambda$ )	13	Average number in the queue( $L_q$ )	0		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	.33		
Number of servers	2	Average time in the queue( $W_q$ )	0	.04	2.44
		Average time in the system( $W_s$ )	.03	1.54	92.44

09.00-10.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.48		
Arrival rate( $\lambda$ )	38	Average number in the queue( $L_q$ )	.28		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	1.23		
Number of servers	2	Average time in the queue( $W_q$ )	0	.44	26.22
		Average time in the system( $W_s$ )	.03	1.94	116.22

10.00-11.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.45		
Arrival rate( $\lambda$ )	36	Average number in the queue( $L_q$ )	.23		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	1.13		
Number of servers	2	Average time in the queue( $W_q$ )	0	.38	22.85
		Average time in the system( $W_s$ )	.03	1.88	112.85

11.00-12.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.28		
Arrival rate( $\lambda$ )	22	Average number in the queue( $L_q$ )	.04		
Service rate( $\mu$ )	40	Average number in the system( $L_s$ )	.59		
Number of servers	2	Average time in the queue( $W_q$ )	0	.12	7.36
		Average time in the system( $W_s$ )	.03	1.62	97.36

## - Pasien Baru (M/M/1)

08.00-09.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.15		
Arrival rate( $\lambda$ )	3	Average number in the queue( $L_q$ )	.03		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.18		
Number of servers	1	Average time in the queue( $W_q$ )	0	.53	31.76
		Average time in the system( $W_s$ )	.06	3.53	211.76

09.00-10.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.55		
Arrival rate( $\lambda$ )	11	Average number in the queue( $L_q$ )	.67		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	1.22		
Number of servers	1	Average time in the queue( $W_q$ )	.06	3.67	220
		Average time in the system( $W_s$ )	.11	6.67	400

10.00-11.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.55		
Arrival rate( $\lambda$ )	11	Average number in the queue( $L_q$ )	.67		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	1.22		
Number of servers	1	Average time in the queue( $W_q$ )	.06	3.67	220
		Average time in the system( $W_s$ )	.11	6.67	400

11.00-12.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/1 (exponential service		Average server utilization	.25		
Arrival rate( $\lambda$ )	5	Average number in the queue( $L_q$ )	.08		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.33		
Number of servers	1	Average time in the queue( $W_q$ )	.02	1	60
		Average time in the system( $W_s$ )	.07	4	240



- Pasien Baru (M/M/s)

08.00-09.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.08		
Arrival rate( $\lambda$ )	3	Average number in the queue( $L_q$ )	0		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.15		
Number of servers	2	Average time in the queue( $W_q$ )	0	.02	1.02
		Average time in the system( $W_s$ )	.05	3.02	181.02

09.00-10.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.28		
Arrival rate( $\lambda$ )	11	Average number in the queue( $L_q$ )	.04		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.59		
Number of servers	2	Average time in the queue( $W_q$ )	0	.25	14.73
		Average time in the system( $W_s$ )	.05	3.25	194.73

10.00-11.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.28		
Arrival rate( $\lambda$ )	11	Average number in the queue( $L_q$ )	.04		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.59		
Number of servers	2	Average time in the queue( $W_q$ )	0	.25	14.73
		Average time in the system( $W_s$ )	.05	3.25	194.73

11.00-12.00

Parameter	Value	Parameter	Value	Minutes	Seconds
M/M/s		Average server utilization	.13		
Arrival rate( $\lambda$ )	5	Average number in the queue( $L_q$ )	0		
Service rate( $\mu$ )	20	Average number in the system( $L_s$ )	.25		
Number of servers	2	Average time in the queue( $W_q$ )	0	.05	2.86
		Average time in the system( $W_s$ )	.05	3.05	182.86