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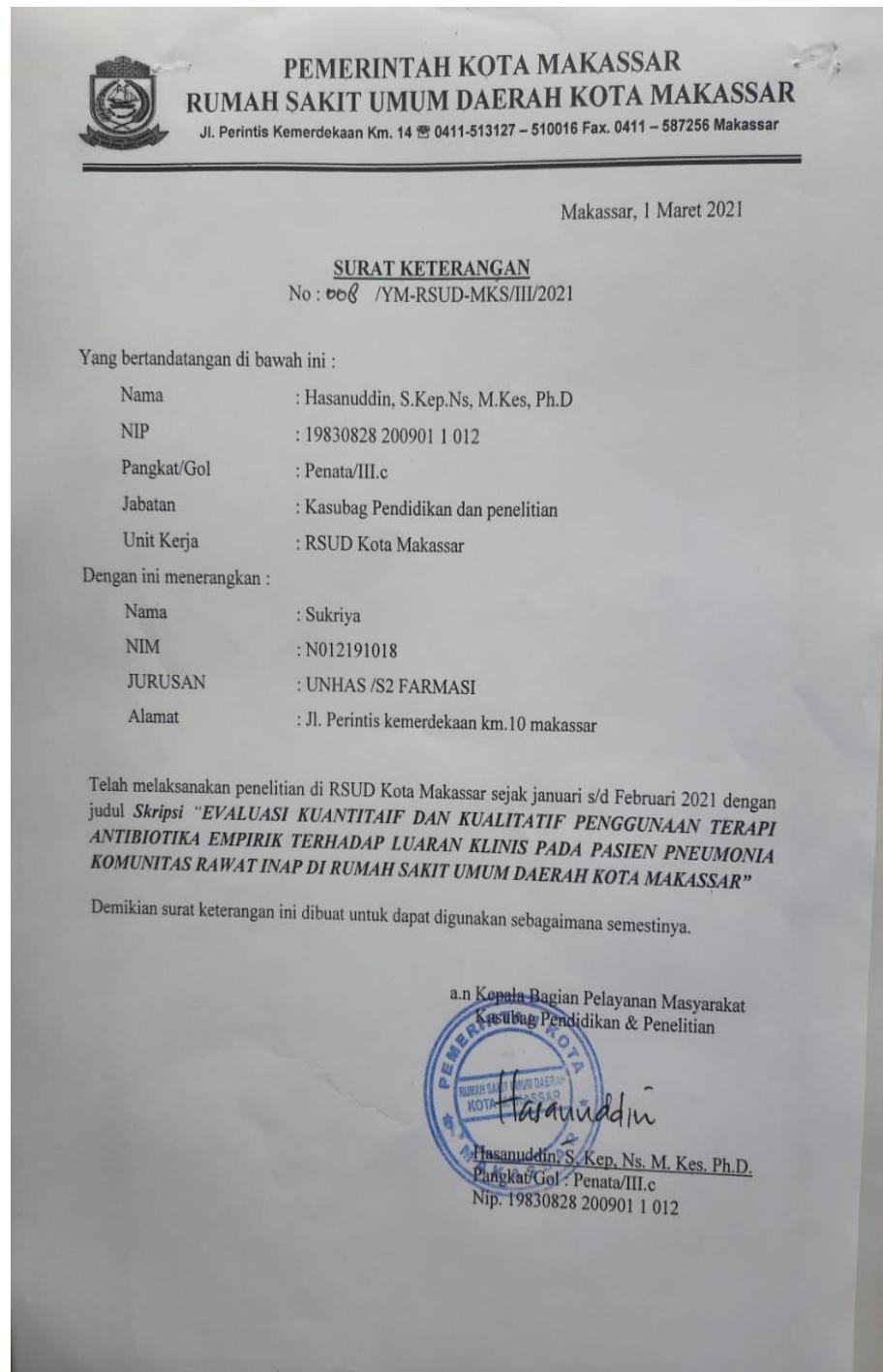
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LAMPIRAN

Lampiran I. Surat etik penelitian kesehatan

KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
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JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

REKOMENDASI PERSETUJUAN ETIK
Nomor : 805/UN4.6.4.5.31/ PP36/ 2020

Tanggal: 11 Desember 2020

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

No Protokol	UH20110689	No Sponsor Protokol	
Peneliti Utama	**Sukriya,S.Si,Apt**	Sponsor	
Judul Peneliti	Evaluasi Kuantitatif Dan Kualitatif Penggunaan Terapi Antibiotika Empiris Terhadap Luaran Klinis Pada Pasien Pneumonia Komunitas Rawat Inap Di Rumah Sakit Umum Daerah Kota Makassar		
No Versi Protokol	1	Tanggal Versi	30 November 2020
No Versi PSP		Tanggal Versi	
Tempat Penelitian	**Rumah Sakit Umum Daerah Kota Makassar**		
Jenis Review	☐ Exempted ☒ Expedited ☐ Fullboard Tanggal	Masa Berlaku **11 Desember 2020** sampai **11 Desember 2021**	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama **Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)**	Tanda tangan	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	Nama **dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)**	Tanda tangan	

Kewajiban Peneliti Utama:
- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Lapor SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 2. Surat keterangan selesai penelitian

PEMERINTAH KOTA MAKASSAR
RUMAH SAKIT UMUM DAERAH KOTA MAKASSAR
Jl. Perintis Kemerdekaan Km. 14 ☎ 0411-513127 – 510016 Fax. 0411 – 587256 Makassar

Makassar, 1 Maret 2021

SURAT KETERANGAN
No : 008 /YM-RSUD-MKS/III/2021

Yang bertandatangan di bawah ini :

Nama	: Hasanuddin, S.Kep.Ns, M.Kes, Ph.D
NIP	: 19830828 200901 1 012
Pangkat/Gol	: Penata/III.c
Jabatan	: Kasubag Pendidikan dan penelitian
Unit Kerja	: RSUD Kota Makassar

Dengan ini menerangkan :

Nama	: Sukriya
NIM	: N012191018
JURUSAN	: UNHAS /S2 FARMASI
Alamat	: Jl. Perintis kemerdekaan km.10 makassar

Telah melaksanakan penelitian di RSUD Kota Makassar sejak januari s/d Februari 2021 dengan judul *Skripsi "EVALUASI KUANTITAIF DAN KUALITATIF PENGGUNAAN TERAPI ANTIBIOTIKA EMPIRIK TERHADAP LUARAN KLINIS PADA PASIEN PNEUMONIA KOMUNITAS RAWAT INAP DI RUMAH SAKIT UMUM DAERAH KOTA MAKASSAR"*

Demikian surat keterangan ini dibuat untuk dapat digunakan sebagaimana semestinya.

a.n Kepala Bagian Pelayanan Masyarakat
Kasubag Pendidikan & Penelitian

Hasanuddin. S. Kep, Ns. M. Kes, Ph.D.
Pangkat/Gol : Penata/III.c
Nip. 19830828 200901 1 012

Lampiran 3. Lembar pengambilan data

DATA PENGOBATAN PASIEN

No. Sampel :

Tgl Sampel :

I.   IDENTITAS PASIEN

Nama Pasien :   L [   ] / P [   ]

Umur :   BB : [   ] kg   TB [   ]

Tanggal perawatan :

Ruang perawatan :

Nama dokter :   No Dok Medik :

Diagnosis utama :

Diagnosis penyerta :

Keluhan Utama :

Sumber biaya :   [   ] BPJS   [   ] SKTM   [   ] Asuransi Lain-lain   [   ] Umum

II   RIWAYAT KESEHATAN

Riwayat penyakit :

Riwayat pengobatan :

Riwayat lain :

Tujuan keluar :

III   PENGOBATAN

No	Obat	Dosis	Rute Pemberian	Tanggal

IV   PEMERIKSAAN RADIOLOGI

Tgl	Pemeriksaan	Keterangan

V   PEMERIKSAAN FISIK DAN LABORATORIUM

Parameter	Nilai Normal							
Hematologi								
Hb (g/dL)								
Trombosit (10^3/ uL)								
Leukosit (10^3/ uL)								
Neutrofil (103 / uL)								
Monosit (103 / uL)								
Hematokrit (%)								
Fungsi Hati								
SGOT								
SGPT								
Fungsi Ginjal								
Ur								
Cr								
Lain-lain								
Suhu badan								
Tekanan Darah								
RR								
HR								

CATATAN

Lampiran 4. Data dasar pasien

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Diagnosis Penyerta Non-Infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
1	L	35	Umum	Non-ICU	8	-	-	- NaCl 0,9% - paracetamol tab. - ambroxol tab. - lanzoprasol kaps. - ceterizin tab.	Ceftriaxone + levofloxacin	IV Oral	3
2	P	54	BPJS	Non-ICU	6	- Massive gum bleeding - anemia, - trombositopenia - HT emergency	-	- NaCL 0,9 % - asam tranexamat inj. - vit.K inj. - adona$^{®}$ inj. - dexametason inj. - lanzoprasol kaps. - amlodipine tab. - curcuma tab. - metilprednisolon tab.	Cefotaxime	IV	2
3	L	44	BPJS	Non-ICU	10	-	-	- NaCl 0,9 % - combivent$^{®}$ nebul - flixotide$^{®}$ nebul - aminofilin inj. - acetylsistein kaps. - ranitidin tab. - omeprazole inj.	Ceftriaxone	IV	8
4	L	43	BPJS	Non-ICU	8	-	-	- NaCl 0,9 % - ranitidin inj. - acetylsistein kaps. - salbutamol tab. - vit.B complex tab. - asam tranexamat inj. - paracetamol infus - ambroxol tab.	Ceftriaxone	IV	8
5.	P	44	BPJS	Non-ICU	6	DM tipe 2 non obese	ISK	- NaCl 0,9 % - ranitidin inj. - paracetamol infus - omeprazole kaps. - lantus$^{®}$ - acetylsistein kaps. - metformin tab. - amlodipin tab. - alprazolam tab.	Ceftriaxone injeksi	IV	5

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-Infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
6.	P	89	BPJS	Non-ICU	12	- Hipokalemia - CHF e.c HHD	-	- NaCl 0,9% - amlodipin tab. - candesartan tab. - omeprazol inj - KCL inj. - acetylsistein kaps. - ranitidin inj. - ketorolac inj. - furosemid inj. - lisinopril inj.	Ceftriaxone	IV	4
7	L	62	BPJS	Non-ICU	5	-	-	- RL - antrain® inj. - acetylsistein kaps. - cetirizin tab.	Ceftriaxone	IV	3
8	L	58	BPJS	Non-ICU	4	GEA	-	- NaCl 0,9% - ranitidin inj. - ondansetron inj. - loperamid tab. - ambroxol tab. - curcuma tab.	Levofloxacin	IV	2
9	L	57	Jamkesda	Non-ICU	10	Diabetes melitus tipe 2 non obese	Demam tifoid	- NaCl 0,9% - novorapid® - lantus® - ambroxol tab. - paracetamol infus - ranitidin inj. - ketorolac inj.	Ceftriaxone + Levofloxacin	IV	4
10	P	63	BPJS	Non-ICU	5	Dispepsia	-	- RL - Neurosanbe® inj. - ranitidin inj. - ondansetron inj. - sucralfat susp. - ambroxol tab. - antrain® inj. - ambroxol tab.	Ceftriaxone	IV	3
11	P	42	BPJS	Non-ICU	6	CKD stage V	vulnus infectiosa	- RL - ranitidin inj. - neurosanbe® inj .inj - furosemid inj. - antrain® inj.	Ceftriaxone injeksi	IV	Meninggal

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS
12	L	20	BPJS	Non-ICU	7	- Hipokalemia - hiponatremia - peningkatan LFT	demam tifoid	- NaCl - parasetamol tab. - ranitidine inj. - ondansetron inj. - paracetamol infus - acetylsistein inj. - curcuma tab. - ambroxol tab.	Ceftriaxone + Levofloxacin	IV	4
13	L	37	BPJS	Non-ICU	7	-	-	- NaCl, ranitidin inj. - ondansetron inj. - paracetamol inf. - acetylsistein inj. - curcuma tab	Cefadroxil + Levofloxacin	Oral IV	3
14	L	62	BPJS	Non-ICU	5	- Contusio cerebri - fraktur scapula	-	- Citicolin inj. - dexametason inj. - omeprazol inj. - PCNA. - ambroxol tab. - vit. B complex tab. - RL	Levofloxacin	IV	3
15	L	74	Jamkesda	Non-ICU	10	General weakness	-	- NaCL - dextrosa 5 %, - neurosanbe® inj. - domperidon tab. - antasida tab. - acetylsistein kaps. furosemid inj. - Aminofluid® - cetirizin tab. - omeprazol inj.	Levofloxacin infus	IV	4
16	P	76	BPJS	Non-ICU	9	Hipertensi	-	- NaCl - ventolin nebul - flixotide nebul - ambroxol tab. - ranitidin inj. - amlodipin tab. - neurosanbe® inj.	Levofloxacin infus	IV	2

Sambungan lampiran 4

NS	JK	Usia (hari)	PB	RP	LOS (hari	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
17	L	53	BPJS	Non-ICU	7	DHF grade II	-	- RL - ranitidin inj. - paracetamol tab. - acetylsistein kaps. - cetirizin tab. - curcuma tab. - codein tab. - ambroxol tab. - metil prednisolone tab.	Azithromicin	Oral	3
18	L	67	BPJS	Non-ICU	8	Anemia Prev.	-	- NaCl 0,9% - acetylsistein kaps. - curcuma tab. - paracetamol tab.	Meropenem	IV	4
19	P	58	BPJS	Non-ICU	5	HHD	-	- RL - paracetamol infus - ranitidin inj. - alprazolam tab. - ketorolac inj. - curcuma, tab. - acetylsistein kaps. - neurosanbe® inj.	Ceftriaxone	IV	2
20	L	67	BPJS	Non-ICU	7	- Anemia, - hipoalbumin - hiponatremia	Ulkus decubitus	- NaCl 0,9 % - NaCl 3 % - paracetamol infus - ranitidin inj. - omeprazol inj. - acetylsistein kaps.	Ceftriaxone + Levofloxacin	IV	3
21	L	71	jamkesda	Non-ICU	10	- Sistisis, - H. Prostat - Neuropain		- RL - neurosanbe® inj. - salbutamol tab. - ambroxol tab,. - ranitidin inj. - ketorolac inj. - cetirizin tab. - ventolin® nebul - metilprednisolon tab.	Ceftriaxone	IV	4
22	P	45	BPJS	Non-ICU	5	- DM tipe 2 non obese - gastropati diabetic - hypokalemia	-	- NaCl 0,9 - ondansetron inj. - ranitidin inj. - novorapid® - lantus® - acetylsistein kaps.	Ceftriaxone	IV	3

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
23	L	70	BPJS	Non-ICU	7	- CHF - PJK - hipokalemia - hematokezia	-	- RL - KCL - asam tranexamat inj. - ranitidin inj. - spiranolakton tab. - klopidogrel tab. - kotrimoksazol forte. - acetylsistein inj. - KCL	Levofloxacin	IV	2
24	L	51	BPJS	Non-ICU	6	-		- NaCl 0,9% - paracetamol infus - domperidon tab. - omeprazol inj. - betahistin tab. - acetylsistein kaps. - curcuma tab. - levofloxacin in	Ceftriaxone	IV	2
25	P	70	BPJS	Non-ICU	6	-	-	- NaCl0,9 % - omeprazol inj. - acetylsistein kaps. - neurosanbe® inj.	Ceftriaxone	IV	3
26	L	39	BPJS	Non-ICU	9	-	-	- NaCl 0,9 - paracetamol infus - omeprazol inj. - asam ursodexicolat kaps. - curcuma tab. - alprazolam tab. - acetylsistein kaps	Ceftriaxone injeksi + Levofloxacin	IV	2
27	P	57	BPJS	Non-ICU	5	Hipertensi	-	- NaCl 0,9, - omeprazol inj. - amlodipin tab. - ondansetron inj. - paracetamol infus. - acetylsistein kaps.	Ceftriaxone injeksi	IV	3
28	P	52	BPJS	Non-ICU	6	-	Demam thypoid	- NaCl 0,9 % - ketorolac inj. - omeprazol inj. - alprazolam tab. - amlodipin tab - candesartan tab. - bisoprolol tab. - acetylsitein kaps.	Ceftriaxone injeksi	IV	3

Sambungan lampiran 4

NS	JK	Usia (hari)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
29	L	50	BPJS	Non-ICU	5	Hipertensi	-	- RL - omeprazol inj. - paracetamol tab. - difenhidramin inj. - candesartan tab. - betahistin tab. - acetylsistein kaps.	Levofloxacin infus	IV	2
30	L	64	BPJS	Non-ICU	6	Hipertensi	-	- RL - paracetamol inf. - ondansetron inj. - ambroxol tab. - ranitidin inj.	Ceftriaxone injeksi	IV	4
31	L	51	BPJS	Non-CU	5	Hipokalemia	-	- NaCl, - KCL - flixotide® nebule - combivent® nebule - ketorolac inj. - omeprazol inj. - attalpugit tab. - ambroxol tab. - amlodipin tab.	Ceftriaxone injeksi	IV	4
32	4	41	BPJS	Non-ICU	13	- Anemia pro evaluasi - nefropati HT - CKD	-	- NaCl 0,9 - antrain® inj. - omeprazol inj. - amlodipin tab. - furosemid inj. - ondansetron inj. - ketorolac inj. - antasida tab. - ambroxol tab. - Nocid	Levofloxacin infus	IV	3
33	L	29	IOM	Non-ICU	5	-	-	- NaCl 0,9 % - paracetamol tab. - ambroxol tab. - alprazolam tab.	Ceftriaxone i	IV	3
34	P	70	BPJS	ICU	9	- Dengue shock sindroma - inkompatibilitas ABD - GGA - Psitopenia	-	- NaCl 0,9 % - ranitidin inj - neurosanbe® inj. - paracetamol tab. - dexametason inj. - asam tranexamat inj. - vitamin K inj.	Ceftriaxone	IV	5

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
35	P	60	BPJS	Non ICU	4	DM tipe 2	-	- RL - metformin tab. - glimepirid tab. - ambroxol tab. - cetirizin tab.	Ceftriaxone	IV	2
36	L	52	BPJS	Non-ICU	8	-	-	- NaCl, 0,9 % - paracetamol infus - omeprazol inj. - ambroxol tab. - ketorolac inj.	Ceftriaxone + Levofloxacin	IV	2
37	P	43	BPJS	Non-ICU	12	struma noduler toxic (hipertiroid)	-	- NaCl 0,9 % - flixotide® nebule - combivent® nebule - propanolo tab. - PTU tab - diazepam tab. - omeprazol inj. - metilprednislon tab.	Ceftriaxone + Levofloxacin	IV	4
38	P	53	BPJS	Non-ICU	6	-	-	- NaCl 0,9 % - omeprazol inj. - ambroxol tab. - paracetamol infus - flixotide® nebule - cetirizin tab	Ceftriaxone	IV	3
39	L	49	Jamkesda	Non-ICU	5	Dyspepsia	-	- RL - codein tab. - ambroxol tab. - salbutamol tab. - cetirizin tab. - ranitidin inj.	Ceftriaxone injeksi	IV	4
40	P	69	BPJS	Non-ICU	6	Fatty liver, hiponatremia	-	- NaCl - paracetamol infus - asam tranexamat inj - kotrimoksazol forte - attalpugit tab. - omeprazol inj. - acetylsistein inj. - curcuma tab. - ambroxol tab. - asam ursodexicolat kaps. - simvastatin tab.	Levofloxacin infus	IV	2

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
41	P	43	BPJS	Non-ICU	6	trombositopenia	-	- RL - ambroxol tab. - cetirizin tab. - ranitidin inj. - neurosanbe inj. - paracetamol tab. - vit B complex tab.	Ceftriaxone	IV	2
42	P	72	BPJS	Non-ICU	6	- Hipertensi Hearth Disease - Dispepsia	-	- NaCl - neurosanbe® inj. - combivent nebul - ambroxol tab. - cetirizin tab. - ranitidin inj. - paracetamol tab. - salbutamol tab. - spiranolakton tab. - neurodex® tab.	Cefotaxime	IV	2
43	L	38	BPJS	Non-ICU	6	Cefalgia hemierantal	-	- RL - rantidin tab. - santagesic® tab. - analsik tab. - neurosanbe® inj. - ambroxol tab.	Ceftriaxone	IV	4
44	P	22	BPJS	Non-ICU	9	- Anemia - Hypokalemia	-	- NaCL - omeprazol inj. - paracetamol infus - ambroxol tab. - cetrizin tab/ - tablet tambah darah	Ceftriaxone	IV	4
45	P	65	BPJS	Non-ICU	3	Dispepsia	-	- RL - ambroxol tab. - antrain® - curcuma tab. - ambroxol tab - codein tab. - cetirizin tab.	Cefadroxil	Oral	2
46	L	64	BPJS	Non-ICU	4	- Hernia inkarserata - multiple advanced - effect spinal anastesi	-	- RL - tramadol inj. - ranitidin inj. - ambroxol tab. - ondansetron inj. - ketorolac inj.	Ceftriaxone	IV	2

Sambungan lampiran 4

NS	JK	Usia (hari)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
47	P	72	Jamkesda	Non-ICU	6	-	-	- NaCl 0,9 % - vitamin B. kompleks - acetylsistein kaps. - combivent® nebul - flixotide® nebul	Ceftriaxone	IV	5
48	L	70	BPJS	Non-ICU	4	-	-	- NaCl 0,9 %, - ranitidin inj. - ventolin nebul - acetylsistein kaps. - vit. B complex tab. - codein tab.	Ceftriaxone i	IV	4
49	P	21	BPJS	Non-ICU	4	CHF e.c penyakit jantung katup	-	- NaCL 0,9 % - ranitidin inj. - paracetamol infus, - antasida sir. - ambroxol tab.	Levofloxacin	IV	2
50	P	43	BPJS	Non-ICU	5	- DM Tipe 2 non-obese - Hiponatremia - Hypokalemia	-	- NaCl 0,9 % - ranitidin inj. ondansetron inj, - paracetamol tab,. - vit. b complex tab. - ketorolac in. - NaCl 3 %, - KCL - lantus® - novorapid® - acetylsistein kaps. - curcuma tab. - domperidon tab.	Ceftriaxone	IV	2
51	P	41	BPJS	Non-ICU	8	Hiponatremia,hipokalemia	-	- NaCl 3 % - paracetamol infus - ambroxol tab. - ondansetron inj. - neurosanbe® inj. - ranitidin inj, - KCl - alprazolam 0,5 tab. - cetirizin tab.	Ceftriaxone + levofloxacin	IV	2

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
52	P	59	BPJS	Non-ICU	6	DM tipe 2 non-obese	Abses peranal	- NaCl 0,9 % - ketorolac inj. - ranitidin inj. - metilprednisolon tab. - novorapid® - lantus® - laktulosa sirup	Ceftriaxone + levofloxacin + Metronidazol	IV	4
53	P	47	BPJS	Non-ICU	5	DM tipe 2 non-obese	- Osteomilitis - kaki diabetes terinfeksi	- NaCL 0,9 % - omeprazol inj. - ambroxol tab. - novorapid® - lantus® - amlodipin tab	Ceftriaxone + levofloxacin + Metronidazol	IV	2
54	P	51	BPJS	Non-ICU	7	-	-	- NaCl - combivent ®nebul - neurosanbe® inj - ranitidin inj. - captopril tab. - cetirizin tab. - acetylsistein kaps. - paracetamol tab. - codein tab. - salbutamol tab. - metilprednisolon tab. - cefadroxil kaps. - furosemid tab.	Ceftriaxone	IV	2
55	P	23	BPJS	Non-ICU	8	- Hipokalemia - tumor abdomen	PID	- NaCL 0,9 % - ranitidin inj. - neurosanbe® inj. - paracetamol tab. - KCL - KSR - ambroxol tab.	Ceftriaxone + levofloxacin	IV	5
56	P	59	BPJS	Non-ICU	5	- Hiperkalemia - DM Tipe 2 non obese - PJK		- NaCL 0,9 % - omeprazol inj - gliklazid tab - metformin tab. - aspilet® tab. - ondansetron inj. - furosemid inj. - ambroxol tab.	Levofloxacin	IV	2

Sambungan lampiran 4

NS	JK	Usia (hari)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
57	P	70	BPJS	ICU	5	- Anemia aplastic - enselopati - imbalance electrolit		- RI - paracetamol infus - neurosanbe® inj. - ranitidin inj - KCL - dexametason inj. - sucralfat sirup	Ceftriaxone	IV	meninggal
58	L	19	BPJS	Non-ICU	4	-	-	- NaCl 0,9% - asam tranexamat inj. - vit.K inj - adona® inj - codein tab. - ceterizin tab.	Ceftriaxone	IV	2
59	P	37	Jamkesda	Non-ICU	4	-	-	- NaCl 0,9 % - ventolin® nebul - flixotide ®nebul - paracetamol tab. - ranitidin inj - vit. B. complex tab.	Ceftriaxone	IV	4
60	P	54	BPJS	Non-ICU	9	-	-	- NaCl 0,9 % - asam tranexamat inj. - vit.K inj. - codein tab. - vit. C tab. - cetirizin tab. - Vit. B. complex tab	Ceftriaxone	IV	5
61	P	39	IOM	Non-ICU	7	-	-	- NaCl 0,9% - metilprednisolon inj. - ventolin® nebul - flixotide® nebul - aminofilin inj. - ambroxol tab.	Ceftriaxone	IV	3
62	P	78	Jamkesda	Non-ICU	6	-	-	- NaCl 0,9 % - Amlodipine tab. - acetylsistein kaps. - flixotide® nebul - ventolin® nebul - furosemid inj.	Ceftriaxone	IV	5
63	L	59	Jamkesda	Non-ICU	8	- Hipokalemia - CHF	-	- NaCl 0,9 % - ventolin ®nebul - furosemid inj. - amlodipin tab. - codein tab.	Ceftriaxone	IV	5

Sambungan lampiran 4

NS	JK	Usia (tahun)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
64	P	72	BPJS	Non-ICU	4	-	-	- NaCl 0,9 % - kodein tab. - cetirizin tab. - Vit. B complex - ranitidin inj. - asam tranexamat inj.	Ceftriaxone	IV	2
65	P	50	BPJS	Non-ICU	7	Hipertensi	-	- RI - ventolin® nebul - amlodipin tab. - acetylsistein kaps. - ceterizin tab.	Cefixime	oral	2
66	L	56	Jamkesda	Non-ICU	8	-	-	- NaCl 0,9 % - asam tranexamat inj. - vit. K inj. - adona® inj. - codein tab. - ceterizin tab - vit. C tab.	Ceftriaxone	IV	6
67	L	46	BPJS	Non-ICU	3	-	-	- NaCl 0,9 % - ventolin® nebul - ambroxol tab. - paracetamol tab. - cetirizin tab.	Ceftriaxone	IV	2
68	P	41	BPJS	Non-ICU	7	nephrolithiasis bilateral		- RL - ondansetron inj. - ranitidin inj. - ketorolac inj. - sucralfat susp. - ambroxol tab. - codein tab.	Cefadroxil	oral	4
69	P	46	Jamkesda	Non-ICU	10	- Angina pectoris - gagal jantung - hypokalemia		- NaCl 0,9 % - nitrocaf® kaps. - clopidogrel kap. - simvastatin tab. - furosemid tab. - spiranolakton. - valsartan tab - omeprazol inj. - ranitidin inj. - ondansetron inj. - sucralfat susp. - KCL	Ceftriaxone	IV	4

Sambungan lampiran 4

NS	JK	Usia (hari)	PB	RP	LOS (hari)	Non-infeksi	Infeksi	PO	Antibiotik	Rute	TTCS (hari)
70	L	48	BPJS	Non-ICU	7	-	TB paru	- NaCl 0,9 % - ranitidin inj - sohobion® - combivent® nebul - ranitidin inj. - codein tab. - ceftriaxone inj. - acetylsistein kaps.	Levofloxacin infus	IV	6
71	L	71	BPJS	Non-ICU	3	-	-	- NaCl 0,9 % - combivent® nebul	Ceftriaxone	IV	3
72	L	31	BPJS	Non-ICU	5	-	-	- NaCl 0,9 % - asam tranexamat inj - vit. K inj - adona® inj. - codein tab. - vit. C tab.	Ceftriaxone	IV	3
73	P	40	BPJS	Non-ICU	6	Dispepsia, anemia	-	- Nacl 0,9 % - Futrolit® - ranitidin inj. - ketorolac inj. - sesden® kap. - paracetamol tab. - Vit. B. complex tab.	Cefotaxime	IV	2
74	L	51	BPJS	Non-ICU	7	Dispepsia	TB paru	- NaCl 0,9 % - sohobion® inj. - combivent inj. - ranitidin inj. - acetilsistein kaps. - codein tab.	Levofloxacin	IV	4

Lampiran 5. Data penggunaan antibiotik

NS	Regimen AB		LPA	Evaluasi Kualitatif AB		Ket.
	Nama	**Dosis**	**(hari)**	**Kat.**	*Drug issue*	Ket.
1	Ceftriaxone Levofloxacin kap.	1 g/12 jam 500 mg/24 jam	4	IVb	ada AB kurang toksik	Setting non-ICU
2	Cefotaxime	1 g/12 jam	3	IVa	ada AB lebih efektif	
3	Ceftriaxone	1 g/12 jam	9	IVa	ada AB lebih efektif	
4	Ceftriaxone	1 g/12 jam	8	IVa	ada AB lebih efektif	
5	Ceftriaxone	1 g/12 jam	5	IVa	ada AB lebih efektif	
6	Ceftriaxone	1 g/12 jam	6	IVa	ada AB lebih efektif	
7	Ceftriaxone	1 g/12 jam	4	IVa	ada AB lebih efektif	
8	Levofloxacin	500 mg/24 jam	2	0	-	-
9	Ceftriaxone Levofloxacin	1 g/12 jam 500 mg/24 jam	4	IVb	ada AB kurang toksik	Interaksi moderat levofloxacin dan insulin
10	Ceftriaxone	1 g/12 jam	3	IVa	ada AB lebih efektif	
11	Ceftriaxone	1 g/12 jam	3	IVa	ada AB lebih efektif	
12	Ceftriaxone Levofloxacin	1 g/24 jam 750 mg/24 jam	2	IVb	ada AB kurang toksik	Kombinasi berpotensi menambah peningkatan LFT
13	Cefadroxil kaps. Levofloxacin	500 mg/12jam 500 mg/24 jam	3	IVb	ada AB kurang toksik	Setting non-ICU
14	Levofloxacin	750mg/24 jam	3	0	-	
15	Levofloxacin	500mg/24 jam	4	0	-	
16	Levofloxacin	500mg/24 jam	2	0	-	
17	Azitromisin tab.	500 mg/24jam	5	IVa	ada AB lebih efektif	
18	Meropenem	1g/8jam	6	IVa	ada AB lebih efektif	
19	Ceftriaxone	1g/12 jam	2	IVa	ada AB lebih efektif	
20	Ceftriaxone Levofloxacin	1g/12 jam 500 mg/24 jam	4	IVb	ada AB kurang toksik	Hipoalbumin (Ikatan protein ceftriaxone 85-95%)
21	Ceftriaxone	1g/12 jam	6	IVa	ada AB lebih efektif	
22	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
23	Levofloxacin	500 mg/24 jam	2	0	-	
24	Ceftriaxone	1g/12 jam	2	IVa	ada AB lebih efektif	
25	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
26	Ceftriaxone Levofloxacin	1g/12 jam 750mg/24jam	2	IVb	ada AB kurang toksik	Setting non-ICU
27	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
28	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
29	Levofloxacin	500 mg/24 jam	3	0	-	
30	Ceftriaxone	1g/12 jam	4	IVa.	ada AB lebih efektif	
31	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
32	Levofloxacin	500 mg/24 jam	8	IIa	tidak tepat dosis	Butuh *dosage adjust*.
33	Ceftriaxone	1g/12 jam	5	IVa	ada AB lebih efektif	
34	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
35	Ceftriaxone	1g/12 jam	2	IVa	ada AB lebih efektif	
36	Ceftriaxone Levofloxacin	1g/12 jam 500mg/24jam	5	IVb	ada AB kurang toksik	Setting non ICU
37	Ceftriaxone Levofloxacin	1g/12 jam 500mg/24jam	4	0	-	
38	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
39	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	

Sambungan lampiran 5

NS	Regimen AB		LPA (hari	Evaluasi kualitatif AB		Ket.
	Nama	Dosis		Kat.	Drug issue	
40	levofloxacin	500 mg/24 jam	2	0	-	
41	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
42	Cefotaxime	1g/12 jam	3	IVa	ada AB lebih efektif	
43	Ceftriaxone	1g/12 jam	5	IVa	ada AB lebih efektif	
44	Ceftriaxone	1g/12 jam	7	IVa	ada AB lebih efektif	
45	Cefadroxil kaps.	500 mg/12 jam	2	IVa	ada AB lebih efektif	
46	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
47	Ceftriaxone	1g/12 jam	5	IVa	ada AB lebih efektif	
48	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
49	Levofloxacin	500 mg/24 jam	4	0	-	
50	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
51	Ceftriaxone	1g/12 jam	2	0	-	
	Levofloxacin	500mg/24jam				
52	Ceftriaxone	1g/12 jam	5	IVb	ada AB kurang toksik	Interaksi moderat
	Levofloxacin	500mg/24jam				levofloxacin dan insulin,
	Metronidazol	500mg/8jam	5			perluasan spectrum
53	Ceftriaxone	1g/12 jam	3	IVb	ada AB kurang toksik	Interaksi moderat
	Levofloxacin	500mg/24jam				levofloxacin dan insulin,
	Metronidazol	500mg/12jam	3			perluasan spectrum
54	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
55	Ceftriaxone	1g/12 jam	5	0	-	
	Levofloxacin	500mg/24jam				
56	Levofloxacin	500mg/24jam	2	0	-	
57	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
58	Ceftriaxone	1g/12 jam	2	IVa	ada AB lebih efektif	
59	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
60	Ceftriaxone	1g/12 jam	9	IVa	ada AB lebih efektif	
61	Ceftriaxone	1g/12 jam	6	IVa	ada AB lebih efektif	
62	Ceftriaxone	1g/12 jam	6	IVa	ada AB lebih efektif	
63	Ceftriaxone	1g/12 jam	5	IVa	ada AB lebih efektif	
64	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
65	Cefixime kaps.	200 mg/12jam	2	IVa	ada AB lebih efektif	
66	Ceftriaxone	1g/12 jam	6	IVa	ada AB lebih efektif	
67	Ceftriaxone	1g/12 jam	2	IVa	ada AB lebih efektif	
68	Cefadroxil kaps.	500mg/12 jam	6	IVa	ada AB lebih efektif	
69	Ceftriaxone	1g/12 jam	5	IVa	ada AB lebih efektif	
70	Levofloxacin	750 mg/24 jam	6	0	-	
71	Ceftriaxone	1g/12 jam	3	IVa	ada AB lebih efektif	
72	Ceftriaxone	1g/12 jam	4	IVa	ada AB lebih efektif	
73	Cefotaxime	1g/12 jam	2	IVa	ada AB lebih efektif	
74	Levofloxacin	750 mg/24 jam	4	0	-	

Lampiran 6. Data kuantitatif penggunaan antibiotik tahun 2019

No sampel	Nama Antibiotik	Kode ATC /DDD	Rute	Regimen antibiotik				LPA (hari)	JPA (gram)	TPA (gram
1	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	326
3	Ceftriaxone	J01DD04	P	2	X	1,00	g	9	18	
4	Ceftriaxone	J01DD04	P	2	X	1,00	g	8	16	
5	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
6	Ceftriaxone	J01DD04	P	2	X	1,00	g	6	12	
7	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
9	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
10	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
11	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
12	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
19	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
20	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
21	Ceftriaxone	J01DD04	P	2	X	1,00	g	6	12	
22	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
24	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
25	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
26	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
27	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
28	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
30	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
31	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
33	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
34	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
35	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
36	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
37	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
38	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
39	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
41	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
43	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
44	Ceftriaxone	J01DD04	P	2	X	1,00	g	7	14	
46	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
47	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
48	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
50	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
51	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
52	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
53	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
54	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
55	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
57	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
1	Levofloxacin	J01MA12	O	1	X	0,50	g	4	2	2
8	Levofloxacin	J01MA12	P	1	X	0,50	g	2	1	37,25
9	Levofloxacin	J01MA12	P	1	X	0,50	g	4	2	
12	Levofloxacin	J01MA12	P	1	X	0,75	g	2	1,5	
13	Levofloxacin	J01MA12	P	1	X	0,50	g	3	1,5	
14	Levofloxacin	J01MA12	P	1	X	0,75	g	3	2,25	

Sambungan lampiran 6

No sampel	Nama Antibiotik	Kode ATC /DDD	Rute	Regimen antibiotik				LPA (hari)	JPA (gram)	TPA (gram)
15	Levofloxacin	J01MA12	P	1	X	0,50	g	4	2	
16	Levofloxacin	J01MA12	P	1	X	0,50	g	2	1	
20	Levofloxacin	J01MA12	P	1	X	0,50	g	4	2	
23	Levofloxacin	J01MA12	P	1	X	0,50	g	2	1	
26	Levofloxacin	J01MA12	P	1	X	0,75	g	2	1,5	
29	Levofloxacin	J01MA12	P	1	X	0,50	g	3	1,5	
32	Levofloxacin	J01MA12	P	1	X	0,50	g	8	4	
36	Levofloxacin	J01MA12	P	1	X	0,50	g	5	2,5	
37	Levofloxacin	J01MA12	P	1	x	0,50	g	4	2	
40	Levofloxacin	J01MA12	P	1	x	0,50	g	2	1	
49	Levofloxacin	J01MA12	P	1	x	0,50	g	4	2	
51	Levofloxacin	J01MA12	P	1	x	0,50	g	2	1	
52	Levofloxacin	J01MA12	P	1	x	0,50	g	5	2,5	
53	Levofloxacin	J01MA12	P	1	x	0,50	g	3	1,5	
55	Levofloxacin	J01MA12	P	1	x	0,50	g	5	2,5	
56	Levofloxacin	J01MA12	P	1	x	0,50	g	2	1	
2	Cefotaxime	J01DD01	P	2	x	1,00	g	3	6	12
42	Cefotaxime	J01DD01	P	2	x	1,00	g	3	6	
13	Cefadroxil	J01DB05	O	2	x	0,50	g	3	3	5
45	Cefadroxil	J01DB05	O	2	x	0,50	g	2	2	
17	Azithromycin	J01FA10	O	1	x	0,50	g	5	2,5	2,5
18	Meropenem	J01DH02	P	3	x	1,00	g	6	18	18
52	Metronidazole	J01XD01	P	3	x	0,50	g	5	7,5	10,5
53	Metronidazole	J01XD02	P	2	x	0,50	g	3	3	

Lampiran 7. Data kuantitatif penggunaan antibiotik tahun 2018.

No Sampel	Nama Antibiotik	Kode ATC /DDD	Rute	Regimen antibiotik				LPA (hari)	JPA (gram)	TPA (gram)
58	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	110
59	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
60	Ceftriaxone	J01DD04	P	2	X	1,00	g	9	18	
61	Ceftriaxone	J01DD04	P	2	X	1,00	g	6	12	
62	Ceftriaxone	J01DD04	P	2	X	1,00	g	6	12	
63	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
64	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
66	Ceftriaxone	J01DD04	P	2	X	1,00	g	6	12	
67	Ceftriaxone	J01DD04	P	2	X	1,00	g	2	4	
69	Ceftriaxone	J01DD04	P	2	X	1,00	g	5	10	
71	Ceftriaxone	J01DD04	P	2	X	1,00	g	3	6	
72	Ceftriaxone	J01DD04	P	2	X	1,00	g	4	8	
65	Cefixime	J01DD08	O	2	X	0,20	g	2	0,8	0,8
70	Levofloxacin	J01MA12	P	1	X	0,75	g	6	4,5	7,5
74	Levofloxacin	J01MA12	P	1	X	0,75	g	4	3	
73	Cefotaxime	J01DD01	P	2	X	1,00	g	2	4	4
68	Cefadroxil	J01DB05	O	2	X	0,50	g	6	6	6

Keterangan :

LPA= Lama penggunaan antibiotik

JPA= Jumlah penggunaan antibiotik

TPA= Total penggunaan antibiotik

Lampiran 8. Perhitungan DDD/100 *patient-days* penggunaan antibiotik periode Januari 2018-Desember 2019

No.	Nama Antibiotik	Kode ATC	Rute	Total Penggunaan Antibiotik (gram)	Nilai DDD WHO	Total LOS pasien	Perhitungan	DDD/100 *patient days*
1	Ceftriaxone	J01DD04	P	436	2		$\frac{436}{2} x \frac{100}{485}$	44,9
2	Cefixime	J01DD08	O	0,8	0,4		$\frac{0,8}{0,4} x \frac{100}{485}$	0,4
3	Levofloxacin	J01MA12	O	2	0,5		$\frac{2}{0,5} x \frac{100}{485}$	0,8
	Levofloxacin	J01MA12	P	44,875	0,5		$\frac{44.875}{0,5} x \frac{100}{485}$	18,5
4	Cefotaxime	J01DD01	P	16	4	485	$\frac{16}{4} x \frac{100}{485}$	0,8
5	Cefadroxil	J01DB05	O	11	2		$\frac{11}{42} x \frac{100}{485}$	1,1
6	Azithromycin	J01FA10	O	2,5	0,3		$\frac{2,5}{0,3} x \frac{100}{485}$	1,7
7	Meropenem	J01DH02	P	18	3		$\frac{18}{3} x \frac{100}{485}$	1,2
8	Metronidazole	J01XD01	P	10,5	1,5		$\frac{10,5}{1,5} x \frac{100}{485}$	1,4
				Total				71,0

Lampiran 9. Perhitungan DDD/100 patient days penggunaan antibiotik tahun 2018 dan 2019

A.   2018

No.	Nama Antibiotik	Kode ATC	Rute	Total Penggunaan Antibiotik (gram)	Nilai DDD WHO	Total LOS Pasien	Perhitungan	DDD/100 patient days
1	Ceftriaxone	J01DD04	P	110	2	105	$\frac{110}{2}\text{x}\frac{100}{105}$	52,4
2	Cefixime	J01DD08	O	0,8	0,4	105	$\frac{0,8}{0,4}\text{x}\frac{100}{105}$	1,9
3	Levofloxacin	J01MA12	P	7,5	0,5	105	$\frac{7,5}{0,5}\text{x}\frac{100}{105}$	14,3
4	Cefotaxime	J01DD01	P	4	4	105	$\frac{4}{24}\text{x}\frac{100}{105}$	1,0
5	Cefadroxil	J01DB05	O	6	2	105	$\frac{110}{2}\text{x}\frac{100}{105}$	2,9
						Total		72,4

B.   2019

No.	Nama Antibiotik	Kode ATC	Rute	Total Penggunaan Antibiotik (gram)	Nilai DDD WHO	Total LOS pasien	Perhitungan	DDD/100 patient days
1	Ceftriaxone	J01DD04	P	326	2	380	$\frac{326}{2}\text{x}\frac{100}{380}$	42,9
3	Levofloxacin	J01MA12	O	2	0,5	380	$\frac{2}{0,5}\text{x}\frac{100}{380}$	1,1
	Levofloxacin	J01MA12	P	37,25	0,5	380	$\frac{37,25}{0,5}\text{x}\frac{100}{380}$	19,6
4	Cefotaxime	J01DD01	P	12	4	380	$\frac{12}{4}\text{x}\frac{100}{380}$	0,8
5	Cefadroxil	J01DB05	O	5	2	380	$\frac{5}{2}\text{x}\frac{100}{380}$	0,7
6	Azithromycin	J01FA10	O	2,5	0,3	380	$\frac{2,5}{0,3}\text{x}\frac{100}{380}$	2,2
7	Meropenem	J01DH02	P	18	3	380	$\frac{18}{3}\text{x}\frac{100}{380}$	1,6
8	Metronidazole	J01XD01	P	10,5	1,5	380	$\frac{10,5}{1,5}\text{x}\frac{100}{380}$	1,8
						Total		70,6

Lampiran 10. Perhitungan penyesuain dosis levofloksasin

Metode Crockcroft Gault (Shargel, L. et al., 2005)

$$CL_{CR} = \frac{[140 - usia\ (tahun)]\quad X\quad berat\ badan\ (Kg)}{72\ (CCr)}$$

$$CL_{CR} = \frac{[140 - 41]\quad X\quad 64,8}{72\ (15,8)} = 5,64\ ml/min$$

Karena CLCR <10 ml/min, dosis awal yang diberikan adalah 500 mg kemudian 250 mg sekali tiap 48 jam (AHFS Monographs, 2019)

Lampiran 11. Karakteristik pasien

Jenis_Kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	35	47.3	47.3	47.3
	Perempuan	39	52.7	52.7	100.0
	Total	74	100.0	100.0	

Usia

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-34 tahun	7	9.5	9.5	9.5
	35-49 tahun	23	31.1	31.1	40.5
	50-64 tahun	26	35.1	35.1	75.7
	65-79 tahun	17	23.0	23.0	98.6
	80-94 tahun	1	1.4	1.4	100.0
	Total	74	100.0	100.0	

Nilai minimum = 20

Nilai maksimum = 89

Range = nilai maksimum – nilai minimum = 89 – 20 = 69

Banyak kelas = 3.3 + log(n) = 3.3+log(74) = 5.169 ≈5

Panjang kelas = Range/Banyak kelas = 69/5 = 13.35 ≈ 14

Interval kelas

20-34

35-49

50-64

65-79

80-94

Pembiayaan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Umum	1	1.4	1.4	1.4
	Jamkesda	10	13.5	13.5	14.9
	IOM'	2	2.7	2.7	17.6
	BPJS	61	82.4	82.4	100.0
	Total	74	100.0	100.0	

Ruang_perawatan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Non-ICU	72	97.3	97.3	97.3
	ICU	2	2.7	2.7	100.0
	Total	74	100.0	100.0	

infeksi_penyerta

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ada	11	14.9	14.9	14.9
	tidak ada	63	85.1	85.1	100.0
	Total	74	100.0	100.0	

penyakit_penyerta_noninfeksi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ada	48	64.9	64.9	64.9
	tidak ada	26	35.1	35.1	100.0
	Total	74	100.0	100.0	

penyakit_penyerta_noninfeksi_infeksi

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ada	9	12.2	12.2	12.2
	tidak ada	65	87.8	87.8	100.0
	Total	74	100.0	100.0	

Kardiovaskular

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ada	15	20.3	20.3	20.3
	tidak ada	59	79.7	79.7	100.0
	Total	74	100.0	100.0	

diabetes_mellitus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	ada	8	10.8	10.8	10.8
	tidak ada	66	89.2	89.2	100.0
	Total	74	100.0	100.0	

LOS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3-5 hari	26	35.1	35.1	35.1
	6-9 hari	40	54.1	54.1	89.2
	10-13 hari	8	10.8	10.8	100.0
	Total	74	100.0	100.0	

Antibiotik

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Tunggal	62	83.8	83.8	83.8
	Kombinasi	12	16.2	16.2	100.0
	Total	74	100.0	100.0	

Rute_Penggunaan_Anti_biotik

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Parenteral	68	91.9	91.9	91.9
	Oral	4	5.4	5.4	97.3
	Parenteral dan Oral	2	2.7	2.7	100.0
	Total	74	100.0	100.0	

Jumlah_obat_yang_diterima_selama_perawatan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-5 obat	5	6.8	6.8	6.8
	6-9 obat	47	63.5	63.5	70.3
	10-14 obat	22	29.7	29.7	100.0
	Total	74	100.0	100.0	

Luaran_klinis

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Membaik	42	56.8	56.8	56.8
	Belum baik	32	43.2	43.2	100.0
	Total	74	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
mean_Usia	74	20	89	52.57	15.141
mean_LOS	74	3	13	6.55	2.159
mean_jumlah_obat	74	3	14	8.41	2.257
mean_Luaran_klinis	72	2	8	3.31	1.370
Valid N (listwise)	72				

Lampiran 12. Evaluasi kualitatif dan kuantitatif terhadap luaran klinis

Kategori

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	14	18.9	18.9	18.9
	Iva	50	67.6	67.6	86.5
	Ivb	9	12.2	12.2	98.6
	Iia	1	1.4	1.4	100.0
	Total	74	100.0	100.0	

Jenis_antibiotik * Kategori Crosstabulation

			Kategori				Total
			0	IVa	IVb	IIa	
Jenis_antibiotik	Ceftriaxone-Levofloxacin	Count	3	0	6	0	9
		% of Total	4.1%	0.0%	8.1%	0.0%	12.2%
	Cefotaxime	Count	0	3	0	0	3
		% of Total	0.0%	4.1%	0.0%	0.0%	4.1%
	Ceftriaxone	Count	0	42	0	0	42
		% of Total	0.0%	56.8%	0.0%	0.0%	56.8%
	Levofloxacin	Count	11	0	0	1	12
		% of Total	14.9%	0.0%	0.0%	1.4%	16.2%
	Azitromisin	Count	0	1	0	0	1
		% of Total	0.0%	1.4%	0.0%	0.0%	1.4%
	Meropenem	Count	0	1	0	0	1
		% of Total	0.0%	1.4%	0.0%	0.0%	1.4%
	Cefadroxil	Count	0	2	0	0	2
		% of Total	0.0%	2.7%	0.0%	0.0%	2.7%
	Ceftriaxone-Levofloxacin-Metronidazol	Count	0	0	2	0	2
		% of Total	0.0%	0.0%	2.7%	0.0%	2.7%
	Cefadroxil-Levofloxacin	Count	0	0	1	0	1
		% of Total	0.0%	0.0%	1.4%	0.0%	1.4%
	Cefixime	Count	0	1	0	0	1
		% of Total	0.0%	1.4%	0.0%	0.0%	1.4%
Total		Count	14	50	9	1	74
		% of Total	18.9%	67.6%	12.2%	1.4%	100.0%

Jenis_antibiotik * Luaran_klinis Crosstabulation

			Luaran_klinis		Total
			membaik	belum baik	
Jenis_antibiotik	Ceftriaxone-Levofloxacin	Count	5	4	9
		% of Total	6.8%	5.4%	12.2%
	Cefotaxime	Count	3	0	3
		% of Total	4.1%	0.0%	4.1%
	Ceftriaxone	Count	21	21	42
		% of Total	28.4%	28.4%	56.8%
	Levofloxacin	Count	8	4	12
		% of Total	10.8%	5.4%	16.2%
	Azitromisin	Count	1	0	1
		% of Total	1.4%	0.0%	1.4%
	Meropenem	Count	0	1	1
		% of Total	0.0%	1.4%	1.4%
	Cefadroxil	Count	1	1	2
		% of Total	1.4%	1.4%	2.7%
	Ceftriaxone-Levofloxacin-Metronidazol	Count	1	1	2
		% of Total	1.4%	1.4%	2.7%
	Cefadroxil-Levofloxacin	Count	1	0	1
		% of Total	1.4%	0.0%	1.4%
	Cefixime	Count	1	0	1
		% of Total	1.4%	0.0%	1.4%
Total		Count	42	32	74
		% of Total	56.8%	43.2%	100.0%

Kategori * Luaran_klinis Crosstabulation

			Luaran_klinis		Total
			Membaik	Belum baik	
Kategori	0	Count	9	5	14
		% of Total	12.2%	6.8%	18.9%
	Iva	Count	27	23	50
		% of Total	36.5%	31.1%	67.6%
	Ivb	Count	6	3	9
		% of Total	8.1%	4.1%	12.2%
	Iia	Count	0	1	1
		% of Total	0.0%	1.4%	1.4%
Total		Count	42	32	74
		% of Total	56.8%	43.2%	100.0%

Ketepatan_antibiotik * Luaran_klinis Crosstabulation

			Luaran_klinis		Total
			Membaik	Belum baik	
Ketepatan_antibiotik	Tepat	Count	9	5	14
		Expected Count	7.9	6.1	14.0
		% of Total	12.2%	6.8%	18.9%
	tidak tepat	Count	33	27	60
		Expected Count	34.1	25.9	60.0
		% of Total	44.6%	36.5%	81.1%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% of Total	56.8%	43.2%	100.0%

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Ketepatan_antibiotik (tepat / tidak tepat)	1.473	.441	4.918
For cohort Luaran_klinis = membaik	1.169	.743	1.838
For cohort Luaran_klinis = belum baik	.794	.372	1.691
N of Valid Cases	74		

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.399[a]	1	.528	.566	.373	
Continuity Correction[b]	.110	1	.740			
Likelihood Ratio	.404	1	.525	.566	.373	
Fisher's Exact Test				.566	.373	
Linear-by-Linear Association	.393[c]	1	.531	.566	.373	.197
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.05.

b. Computed only for a 2x2 table

c. The standardized statistic is .627.

antibiotik * luaran_klinis Crosstabulation

			luaran_klinis		Total
			membaik	belum membaik	
Antibiotik	seftriakson	Count	21	21	42
		% of Total	28.4%	28.4%	56.8%
	kombinasi seftriakson	Count	6	5	11
		% of Total	8.1%	6.8%	14.9%
	lainnya	Count	15	6	21
		% of Total	20.3%	8.1%	28.4%
Total		Count	42	32	74
		% of Total	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	2.645[a]	2	.266	.296		
Likelihood Ratio	2.720	2	.257	.266		
Fisher's Exact Test	2.646			.281		
Linear-by-Linear Association	2.469[b]	1	.116	.144	.074	.031
N of Valid Cases	74					

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.76.

b. The standardized statistic is -1.571.

Lampiran 13. Analisis faktor perancu

Jenis_Kelamin * Luaran_klinis

Crosstab

			membaik	belum membaik	Total
			Luaran_klinis		
Jenis_Kelamin	Laki-laki	Count	18	17	35
		Expected Count	19.9	15.1	35.0
		% within Jenis_Kelamin	51.4%	48.6%	100.0%
	Perempuan	Count	24	15	39
		Expected Count	22.1	16.9	39.0
		% within Jenis_Kelamin	61.5%	38.5%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within Jenis_Kelamin	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.768[a]	1	.381	.482	.261	
Continuity Correction[b]	.411	1	.521			
Likelihood Ratio	.769	1	.381	.482	.261	
Fisher's Exact Test				.482	.261	
Linear-by-Linear Association	.758[c]	1	.384	.482	.261	.127
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.14.
b. Computed only for a 2x2 table
c. The standardized statistic is -.871.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Jenis_Kelamin (Laki-laki / Perempuan)	.662	.262	1.669
For cohort Luaran_klinis = membaik	.836	.557	1.255
For cohort Luaran_klinis = belum membaik	1.263	.748	2.131
N of Valid Cases	74		

Kelompok_usia * Luaran_klinis

Crosstab

			Membaik	belum membaik	Total
			Luaran_klinis		
Kelompok_usia	>=65 tahun	Count	9	9	18
		Expected Count	10.2	7.8	18.0
		% within Kelompok_usia	50.0%	50.0%	100.0%
	<65 tahun	Count	33	23	56
		Expected Count	31.8	24.2	56.0
		% within Kelompok_usia	58.9%	41.1%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within Kelompok_usia	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.442[a]	1	.506	.589	.346	
Continuity Correction[b]	.153	1	.695			
Likelihood Ratio	.440	1	.507	.589	.346	
Fisher's Exact Test				.589	.346	
Linear-by-Linear Association	.436[c]	1	.509	.589	.346	.172
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 7.78.

b. Computed only for a 2x2 table

c. The standardized statistic is -.661.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for Kelompok_usia (>=65 tahun / <65 tahun)	.697	.240	2.025
For cohort Luaran_klinis = membaik	.848	.509	1.415
For cohort Luaran_klinis = belum membaik	1.217	.696	2.128
N of Valid Cases	74		

jumlahobat * Luaran_klinis

Crosstab

			Luaran_klinis		Total
			membaik	belum membaik	
jumlahobat	3-8 obat	Count	25	17	42
		Expected Count	23.8	18.2	42.0
		% within jumlahobat	59.5%	40.5%	100.0%
	9-14 obat	Count	17	15	32
		Expected Count	18.2	13.8	32.0
		% within jumlahobat	53.1%	46.9%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within jumlahobat	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.303[a]	1	.582	.640	.377	
Continuity Correction[b]	.098	1	.754			
Likelihood Ratio	.303	1	.582	.640	.377	
Fisher's Exact Test				.640	.377	
Linear-by-Linear Association	.299[c]	1	.585	.640	.377	.161
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 13.84.

b. Computed only for a 2x2 table

c. The standardized statistic is .547.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for jumlahobat (3-8 obat / 9-14 obat)	1.298	.513	3.283
For cohort Luaran_klinis = membaik	1.120	.744	1.688
For cohort Luaran_klinis = belum membaik	.863	.513	1.453
N of Valid Cases	74		

infeksi_penyerta * Luaran_klinis

Crosstab

			Luaran_klinis		Total
			membaik	belum membaik	
infeksi_penyerta	ada	Count	3	8	11
		Expected Count	6.2	4.8	11.0
		% within infeksi_penyerta	27.3%	72.7%	100.0%
	tidak ada	Count	39	24	63
		Expected Count	35.8	27.2	63.0
		% within infeksi_penyerta	61.9%	38.1%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within infeksi_penyerta	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.576[a]	1	.032	.048	.035	
Continuity Correction[b]	3.274	1	.070			
Likelihood Ratio	4.609	1	.032	.048	.035	
Fisher's Exact Test				.048	.035	
Linear-by-Linear Association	4.515[c]	1	.034	.048	.035	.029
N of Valid Cases	74					

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 4.76.

b. Computed only for a 2x2 table

c. The standardized statistic is -2.125.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for infeksi_penyerta (ada / tidak ada)	.231	.056	.956
For cohort Luaran_klinis = membaik	.441	.165	1.179
For cohort Luaran_klinis = belum membaik	1.909	1.182	3.084
N of Valid Cases	74		

penyakit_penyerta_noninfeksi * Luaran_klinis

Crosstab

			Luaran_klinis		Total
			membaik	belum membaik	
penyakit_penyerta_noninfeksi	ada	Count	25	23	48
		Expected Count	27.2	20.8	48.0
		% within penyakit_penyerta_noninfeksi	52.1%	47.9%	100.0%
	tidak ada	Count	17	9	26
		Expected Count	14.8	11.2	26.0
		% within penyakit_penyerta_noninfeksi	65.4%	34.6%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within penyakit_penyerta_noninfeksi	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	1.216[a]	1	.270	.330	.196	
Continuity Correction[b]	.734	1	.392			
Likelihood Ratio	1.230	1	.267	.330	.196	
Fisher's Exact Test				.330	.196	
Linear-by-Linear Association	1.199[c]	1	.273	.330	.196	.108
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 11.24.

b. Computed only for a 2x2 table

c. The standardized statistic is -1.095.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for penyakit_penyerta_noninfeksi (ada / tidak ada)	.575	.215	1.543
For cohort Luaran_klinis = membaik	.797	.539	1.176
For cohort Luaran_klinis = belum membaik	1.384	.756	2.535
N of Valid Cases	74		

penyakit_penyerta_noninfeksi_infeksi * Luaran_klinis

Crosstab

			Luaran_klinis		
			membaik	belum membaik	Total
penyakit_penyerta_noninfeksi_infeksi	ada	Count	2	7	9
		Expected Count	5.1	3.9	9.0
		% within penyakit_penyerta_noninfeksi_infeksi	22.2%	77.8%	100.0%
	tidak ada	Count	40	25	65
		Expected Count	36.9	28.1	65.0
		% within penyakit_penyerta_noninfeksi_infeksi	61.5%	38.5%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within penyakit_penyerta_noninfeksi_infeksi	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	4.979[a]	1	.026	.035	.030	
Continuity Correction[b]	3.506	1	.061			
Likelihood Ratio	5.079	1	.024	.035	.030	
Fisher's Exact Test				.035	.030	
Linear-by-Linear Association	4.912[c]	1	.027	.035	.030	.026
N of Valid Cases	74					

a. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 3.89.

b. Computed only for a 2x2 table

c. The standardized statistic is -2.216.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for penyakit_penyerta_noninfeksi_infeksi (ada / tidak ada)	.179	.034	.929
For cohort Luaran_klinis = membaik	.361	.105	1.244
For cohort Luaran_klinis = belum membaik	2.022	1.270	3.220
N of Valid Cases	74		

kardiovaskular * Luaran_klinis

Crosstab

			Luaran_klinis		Total
			membaik	belum membaik	
kardiovaskular	ada	Count	10	5	15
		Expected Count	8.5	6.5	15.0
		% within kardiovaskular	66.7%	33.3%	100.0%
	tidak ada	Count	32	27	59
		Expected Count	33.5	25.5	59.0
		% within kardiovaskular	54.2%	45.8%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within kardiovaskular	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	Df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.753[a]	1	.386	.561	.285	
Continuity Correction[b]	.332	1	.565			
Likelihood Ratio	.768	1	.381	.561	.285	
Fisher's Exact Test				.561	.285	
Linear-by-Linear Association	.743[c]	1	.389	.561	.285	.162
N of Valid Cases	74					

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.49.

b. Computed only for a 2x2 table

c. The standardized statistic is .862.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for kardiovaskular (ada / tidak ada)	1.688	.514	5.544
For cohort Luaran_klinis = membaik	1.229	.801	1.885
For cohort Luaran_klinis = belum membaik	.728	.338	1.570
N of Valid Cases	74		

diabetes_mellitus * Luaran_klinis

Crosstab

			Luaran_klinis		Total
			membaik	belum membaik	
diabetes_mellitus	ada	Count	5	3	8
		Expected Count	4.5	3.5	8.0
		% within diabetes_mellitus	62.5%	37.5%	100.0%
	tidak ada	Count	37	29	66
		Expected Count	37.5	28.5	66.0
		% within diabetes_mellitus	56.1%	43.9%	100.0%
Total		Count	42	32	74
		Expected Count	42.0	32.0	74.0
		% within diabetes_mellitus	56.8%	43.2%	100.0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)	Point Probability
Pearson Chi-Square	.121[a]	1	.728	1.000	.518	
Continuity Correction[b]	.000	1	1.000			
Likelihood Ratio	.122	1	.727	1.000	.518	
Fisher's Exact Test				1.000	.518	
Linear-by-Linear Association	.119[c]	1	.730	1.000	.518	.280
N of Valid Cases	74					

a. 2 cells (50.0%) have expected count less than 5. The minimum expected count is 3.46.

b. Computed only for a 2x2 table

c. The standardized statistic is .345.

Risk Estimate

	Value	95% Confidence Interval	
		Lower	Upper
Odds Ratio for diabetes_mellitus (ada / tidak ada)	1.306	.288	5.923
For cohort Luaran_klinis = membaik	1.115	.626	1.987
For cohort Luaran_klinis = belum membaik	.853	.335	2.174
N of Valid Cases	74		

Lampiran 14. Pedoman Rekomendasi Terapi Antibiotik Empiris

a. **PDPI tahun 2014**

Rawat jalan	• Pasien yang sebelumnya sehat atau tanpa riwayat pemakaian antibiotik 3 bulan sebelumnya
	  - Golongan β laktam atau β laktam **ditambah** anti β laktamase ATAU
	  - Makrolid baru (klaritromisin, azitromisin)
	• Pasien dengan komorbid atau mempunyai riwayat pemakaian antibitotik 3 bulan sebelumnya.
	  - Fluorokuinolon respirasi (levofloksasin 750 mg, moksifloksasin) ATAU
	  - Golongan β laktam **ditambah** anti β laktamase ATAU
	  - β laktam **ditambah** makrolid

Rawat inap non ICU	• Fluorokuinolon respirasi levofloksasin 750 mg, moksifloksasin) ATAU • β laktam **ditambah** makrolid
Ruang rawat Intensif	Tidak ada faktor risiko infeksi pseudomonas: • β laktam (sefotaksim, seftriakson atau ampisilin sulbaktam) **ditambah** makrolid baru **atau** fluorokuinolon respirasi intravena (IV)
Pertimbangan khusus	Bila ada faktor risiko infeksi pseudomonas: • Antipneumokokal, antipseudomonas β laktam (piperacilin-tazobaktam, sefepime, imipenem atau meropenem) **ditambah** levofloksasin 750 mg ATAU β laktam seperti tersebut diatas ditambah aminoglikosida dan azitromisin ATAU • β laktam seperti tersebut diatas ditambah aminoglikosida dan antipneumokokal fluorokuinolon (untuk pasien yang alergi penisilin, β laktam diganti dengan aztreonam) Bila curiga disertai infeksi MRSA • **Tambahkan** vankomisin atau linezolid

Catatan:
• Pola kuman setempat menjadi dasar pemilihan antibiotik
• Bila dengan pengobatan secara empiris tidak ada perbaikan/memburuk maka pengobatan disesuaikan dengan bakteri penyebab dan uji sensitivitas
• Bila pengobatan secara empiris memberikan respons yang baik walaupun hasil uji sensitivitas tidak sesu... maka terapi antibiotik dilanjutkan dengan evaluasi klinis

b. **ATS/IDSA Tahun 2007**

• **Rawat Jalan**

Outpatient treatment
1. Previously healthy and no use of antimicrobials within the previous 3 months
   A macrolide (strong recommendation; level I evidence)
   Doxycyline (weak recommendation; level III evidence)
2. Presence of comorbidities such as chronic heart, lung, liver or renal disease; diabetes mellitus; alcoholism; malignancies; asplenia; immunosuppressing conditions or use of immunosuppressing drugs; or use of antimicrobials within the previous 3 months (in which case an alternative from a different class should be selected)
   A respiratory fluoroquinolone (moxifloxacin, gemifloxacin, or levofloxacin [750 mg]) (strong recommendation; level I evidence)
   A β-lactam **plus** a macrolide (strong recommendation; level I evidence)
3. In regions with a high rate (>25%) of infection with high-level (MIC ≥16 µg/mL) macrolide-resistant *Streptococcus pneumoniae*, consider use of alternative agents listed above in (2) for patients without comorbidities (moderate recommendation; level III evidence)

- **Rawat Inap**

Inpatients, non-ICU treatment

 A respiratory fluoroquinolone (strong recommendation; level I evidence)

 A β-lactam **plus** a macrolide (strong recommendation; level I evidence)

Inpatients, ICU treatment

 A β-lactam (cefotaxime, ceftriaxone, or ampicillin-sulbactam) **plus** either azithromycin (level II evidence) **or** a respiratory fluoroquinolone (level I evidence) (strong recommendation) (for penicillin-allergic patients, a respiratory fluoroquinolone and aztreonam are recommended)

Special concerns

 If *Pseudomonas* is a consideration

  An antipneumococcal, antipseudomonal β-lactam (piperacillin-tazobactam, cefepime, imipenem, or meropenem) plus either ciprofloxacin or levofloxacin (750 mg)

  or

 The above β-lactam plus an aminoglycoside and azithromycin

  or

 The above β-lactam plus an aminoglycoside and an antipneumococcal fluoroquinolone (for penicillin-allergic patients, substitute aztreonam for above β-lactam)

 (moderate recommendation; level III evidence)

 If CA-MRSA is a consideration, add vancomycin or linezolid (moderate recommendation; level III evidence)

NOTE. CA-MRSA, community-acquired methicillin-resistant *Staphylococcus aureus*; ICU, intensive care unit.

c. ATS/IDSA Tahun 2019

- Rawat jalan

	Standard Regimen
No comorbidities or risk factors for MRSA or *Pseudomonas aeruginosa**	Amoxicillin or doxycycline or macrolide (if local pneumococcal resistance is <25%)[†]
With comorbidities[‡]	Combination therapy with amoxicillin/clavulanate or cephalosporin AND macrolide or doxycycline[§] OR monotherapy with respiratory fluoroquinolone[‖]

Definition of abbreviations: ER = extended release; MRSA = methicillin-resistant *Staphylococcus aureus*.
*Risk factors include prior respiratory isolation of MRSA or *P. aeruginosa* or recent hospitalization AND receipt of parenteral antibiotics (in the last 90 d).
[†]Amoxicillin 1 g three times daily, doxycycline 100 mg twice daily, azithromycin 500 mg on first day then 250 mg daily, clarithromycin 500 mg twice daily, or clarithromycin ER 1,000 mg daily.
[‡]Comorbidities include chronic heart, lung, liver, or renal disease; diabetes mellitus; alcoholism; malignancy; or asplenia.
[§]Amoxicillin/clavulanate 500 mg/125 mg three times daily, amoxicillin/clavulanate 875 mg/125 mg twice daily, 2,000 mg/125 mg twice daily, cefpodoxime 200 mg twice daily, or cefuroxime 500 mg twice daily; AND azithromycin 500 mg on first day then 250 mg daily, clarithromycin 500 mg twice daily, clarithromycin ER 1,000 mg daily, or doxycycline 100 mg twice daily.
[‖]Levofloxacin 750 mg daily, moxifloxacin 400 mg daily, or gemifloxacin 320 mg daily.

- Rawat inap

	Standard Regimen	Prior Respiratory Isolation of MRSA	Prior Respiratory Isolation of *Pseudomonas aeruginosa*	Recent Hospitalization and Parenteral Antibiotics and Locally Validated Risk Factors for MRSA	Recent Hospitalization and Parenteral Antibiotics and Locally Validated Risk Factors for *P. aeruginosa*
Nonsevere inpatient pneumonia*	β-Lactam + macrolide[†] or respiratory fluroquinolone[‡]	Add MRSA coverage[§] and obtain cultures/nasal PCR to allow deescalation or confirmation of need for continued therapy	Add coverage for *P. aeruginosa*[‖] and obtain cultures to allow deescalation or confirmation of need for continued therapy	Obtain cultures but withhold MRSA coverage unless culture results are positive. If rapid nasal PCR is available, withhold additional empiric therapy against MRSA if rapid testing is negative or add coverage if PCR is positive and obtain cultures	Obtain cultures but initiate coverage for *P. aeruginosa* only if culture results are positive
Severe inpatient pneumonia*	β-Lactam + macrolide[†] or β-lactam + fluroquinolone[‡]	Add MRSA coverage[§] and obtain cultures/nasal PCR to allow deescalation or confirmation of need for continued therapy	Add coverage for *P. aeruginosa*[‖] and obtain cultures to allow deescalation or confirmation of need for continued therapy	Add MRSA coverage[§] and obtain nasal PCR and cultures to allow deescalation or confirmation of need for continued therapy	Add coverage for *P. aeruginosa*[‖] and obtain cultures to allow deescalation or confirmation of need for continued therapy

Definition of abbreviations: ATS = American Thoracic Society; CAP = community-acquired pneumonia; HAP = hospital-acquired pneumonia; IDSA = Infectious Diseases Society of America; MRSA = methicillin-resistant *Staphylococcus aureus*; VAP = ventilator-associated pneumonia.

*As defined by 2007 ATS/IDSA CAP severity criteria guidelines (*see* Table 1).

[†]Ampicillin + sulbactam 1.5–3 g every 6 hours, cefotaxime 1–2 g every 8 hours, ceftriaxone 1–2 g daily, or ceftaroline 600 mg every 12 hours AND azithromycin 500 mg daily or clarithromycin 500 mg twice daily.

[‡]Levofloxacin 750 mg daily or moxifloxacin 400 mg daily.

[§]Per the 2016 ATS/IDSA HAP/VAP guidelines: vancomycin (15 mg/kg every 12 h, adjust based on levels) or linezolid (600 mg every 12 h).

[‖]Per the 2016 ATS/IDSA HAP/VAP guidelines: piperacillin-tazobactam (4.5 g every 6 h), cefepime (2 g every 8 h), ceftazidime (2 g every 8 h), imipenem (500 mg every 6 h), meropenem (1 g every 8 h), or aztreonam (2 g every 8 h). Does not include coverage for extended-spectrum β-lactamase–producing Enterobacteriaceae, which should be considered only on the basis of patient or local microbiological data.

d. BTS Tahun 2009

Pneumonia severity (based on clinical judgement supported by CURB65 severity score)	Treatment site	Preferred treatment	Alternative treatment
Low severity (eg, CURB65 = 0–1 or CRB65 score = 0, <3% mortality)	Home	Amoxicillin 500 mg tds orally	Doxycycline 200 mg loading dose then 100 mg orally or clarithromycin 500 mg bd orally
Low severity (eg, CURB65 = 0–1, <3% mortality) but admission indicated for reasons other than pneumonia severity (eg, social reasons/unstable comorbid illness)	Hospital	Amoxicillin 500 mg tds orallyIf oral administration not possible: amoxicillin 500 mg tds IV	Doxycycline 200 mg loading dose then 100 mg od orally or clarithromycin 500 mg bd orally
Moderate severity (eg, CURB65 = 2, 9% mortality)	Hospital	Amoxicillin 500 mg –1.0 g tds orally plus clarithromycin 500 mg bd orallyIf oral administration not possible: amoxicillin 500 mg tds IV or benzylpenicillin 1.2 g qds IV plus clarithromycin 500 mg bd IV	Doxycycine 200 mg loading dose then 100 mg orally or levofloxacin 500 mg od orally or moxifloxacin 400 mg od orally*
High severity (eg, CURB65 = 3–5, 15–40% mortality)	Hospital (consider critical care review)	**Antibiotics given as soon as possible**Co-amoxiclav 1.2 g tds IV plus clarithromycin 500 mg bd IV(If legionella strongly suspected, consider adding levofloxacin†)	Benzylpenicillin 1.2 g qds IV plus either levofloxacin 500 mg bd IV or ciprofloxacin 400 mg bd IVORCefuroxime 1.5 g tds IV or cefotaxime 1 g tds IV or ceftriaxone 2 g od IV, plus clarithromycin 500 mg bd IV(If legionella strongly suspected, consider adding levofloxacin†)

bd, twice daily; IV, intravenous; od, once daily; qds, four times daily; tds, three times daily.

*Following reports of an increased risk of adverse hepatic reactions associated with oral moxifloxacin, in October 2008 the European Medicines Agency (EMEA) recommended that moxifloxacin 'should be used only when it is considered inappropriate to use antibacterial agents that are commonly recommended for the initial treatment of this infection'.

†Caution – risk of QT prolongation with macrolide-quinolone combination.