



KEMENTERIAN KESIHATAN MALAYSIA
HOSPITAL SUNGAI BULOH

MEMO PEJABAT PENGARAH

Rujukan Kami : Bil. (9) dlm. HSB/770/7/13/Jilid 13

Tarikh : 17 Oktober 2023

KEPADA	Ketua Jabatan Klinikal	SALINAN KEPADA : Jabatan Farmasi
DARIPADA	Pengarah Hospital Sungai Buloh	
PERKARA	Pengemaskinian Prosedur Kerja Pembekalan Carbapenem dan Pengisian Borang <i>Carbapenem Initiation & Review at 72 Hours</i>	

Tuan,

Dengan hormatnya saya merujuk kepada perkara seperti di atas.

2. Berikutan peningkatan penggunaan Carbapenem secara empirikal, pasukan *Antimicrobial Stewardship (AMS)* Hospital Sungai Buloh akan menjalankan satu langkah proaktif untuk membendung peningkatan kerintangan antimikrobial di Hospital Sungai Buloh. Selaras dengan polisi Antimikrobial Hospital Sungai Buloh berkaitan pembekalan Carbapenem, pengemaskinian prosedur kerja pembekalan dan penguatkuasaan had bekalan (*controlled supply*) ke atas semua preskripsi Carbapenem akan dilaksanakan bermula 19 Oktober 2023.


3. Untuk makluman, borang ***Carbapenem Initiation*** hendaklah diisi oleh preskriber semasa Carbapenem dipreskrib. Sekiranya borang tersebut tidak diisi, ini akan mengganggu pembekalan Carbapenem kepada pesakit. Untuk makluman, **durasi semua preskripsi Carbapenem telah ditetapkan 'default' selama 4 hari di dalam sistem.** Semua kes-kes empirikal Carbapenem akan dibekalkan selama **maksimum 4 hari sahaja** oleh Farmasi. **Bagi kes-kes *definitive* Carbapenem, doktor perlu menukar durasi kepada 7 hari di dalam sistem agar pembekalan tidak terputus.**

4. Kes-kes empirikal Carbapenem hendaklah di'review' oleh Pakar atau Pakar Perunding selepas 72 jam rawatan Carbapenem dimulakan, sama ada rawatan Carbapenem perlu disambung atau tidak berdasarkan keadaan klinikal dan keputusan C&S semasa pesakit.

5. Bagi kes-kes empirikal yang hendak disambung selepas 72 jam, borang **Review at 72 Hours WAJIB** diisi dan **doktor perlu mempreskrib semula Carbapenem di dalam sistem mengikut durasi rawatan yang telah ditetapkan** agar pihak Farmasi boleh menyambung bekalan Carbapenem kepada pesakit.

6. Borang **Carbapenem Initiation & Review at 72 Hours** boleh didapati di dalam sistem eHIS, di bawah *Clinical Notes*. Dilampirkan proses kerja pembekalan Carbapenem terkini seperti yang terdapat di dalam Polisi Antimikrobial Hospital Sungai Buloh.

Sekian terima kasih,

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(DR JASMEET SINGH A/L SUCHA SINGH)

Samb.4000

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SENARAI EDARAN:

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2	Dr. Nik Nor AnizabintiNikMohd Zain Timbalan Pengarah (Perubatan)	30	Dr. Rusdianna binti Alip Ketua Unit Pengurusan Kualiti
3	Encik Mohd Rizal bin Abdullah Timbalan Pengarah (Pengurusan)	31	Dr. Rachel Reena Ranakumar Ketua Unit Pegawai Perubatan Siswazah
4	Dr. Izreen binti Ramli PYM Direktorat Perubatan, Wanita Dan Kanak-Kanak	32	Dr. Mas Ayu Izzati Binti Izhar Ketua Unit Casemix
5	Dr. HarsheilabintiHasnan PYM Direktorat Pembedahan Dan Kecemasan	33	Dr. Imran bin Abd. Jamil Ketua Unit Kluster
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9	Dr. Siti Suhaila binti Hamzah Ketua Jabatan Kecemasan & Trauma	37	Encik Maruthamuthu Sankar A/L Angappan Ketua BahagianTeknologi Maklumat
10	Dr. Seet Sok Noi Ketua Jabatan Anestesiologi & Rawatan Rapi		
11	Dr. Saiful Azli bin Mat Nayan Ketua Jabatan Neurosurgeri		
12	Dr. Amir Fariz bin Zakaria Ketua Jabatan Ortopedik &Traumatologi		
13	Dr. See Kwee Ching Ketua Jabatan Pediatrik		
14	Dr. Shamala a/p Retnasabapathy Ketua Jabatan Oftalmologi		
15	Dr. Chooi Lai Kuan Ketua Jabatan BedahPlastik		
16	Dr. Mohd. Razali bin Ibrahim Ketua Jabatan Pembedahan Am		
17	Dr. Fadzilah binti Ismail Ketua Jabatan Otorinolaringologi(ORL)		
18	Dr. Sahlawati binti Mustakim Ketua Jabatan Patologi		
19	Dr. Darminder Singh Chopra Ketua Jabatan Obstetrik & Ginekologi		
20	Dr. Wan Nor Aziani binti Mohd Azmi Ketua Jabatan Pergigian Pediatrik		
21	Dr. Syed Iqbal bin Syed Husman Ketua Jabatan Bedah Mulut & Maksilofasial		
22	Dr. AkmallHafizahbintiZamli Ketua Jabatan Rehabilitasi Perubatan		
23	Dr. Uma a/p Visvalingam Ketua Jabatan Psikiatri & Kesihatan Mental		
24	Dr. Norli Marwyne binti Mohammed Noor Ketua Jabatan Dermatologi		
25	Dr. Dang Siew Bing Ketua Jabatan Kesihatan Awam		
26	Dr. Mohd. Hafizuddin bin Azman PYM Pusat Kawalan Kusta Negara		
27	Puan Norharlina binti Sulaiman Ketua Jabatan Farmasi		
28	Dr. V. Shamalaa Devi a/p Vadivelu Ketua Unit Perkhidmatan Pesakit Bayar Penuh		

CARBAPENEM INITIATION & 72 HOURS REVIEW FORM

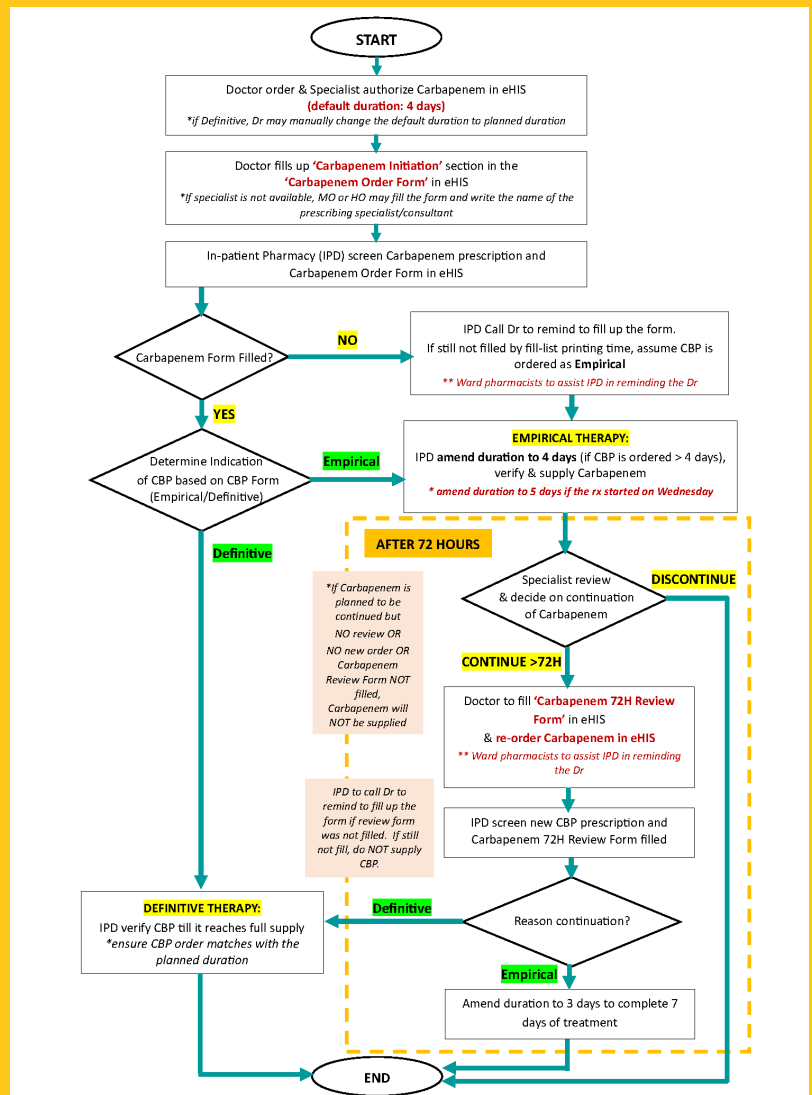
Purpose: Encourage doctors to assess Carbapenem continuation based on patient's clinical status and microbiology culture results.



Empirical Carbapenem will be supplied only for **4 DAYS by default**.

Carbapenem supply on day 4 **will resume** upon the **'Carbapenem Review Form at 72 Hours'** being filled and the drug is **reordered**.

Flowchart for Carbapenem Supply



Carbapenem Forms in eHIS

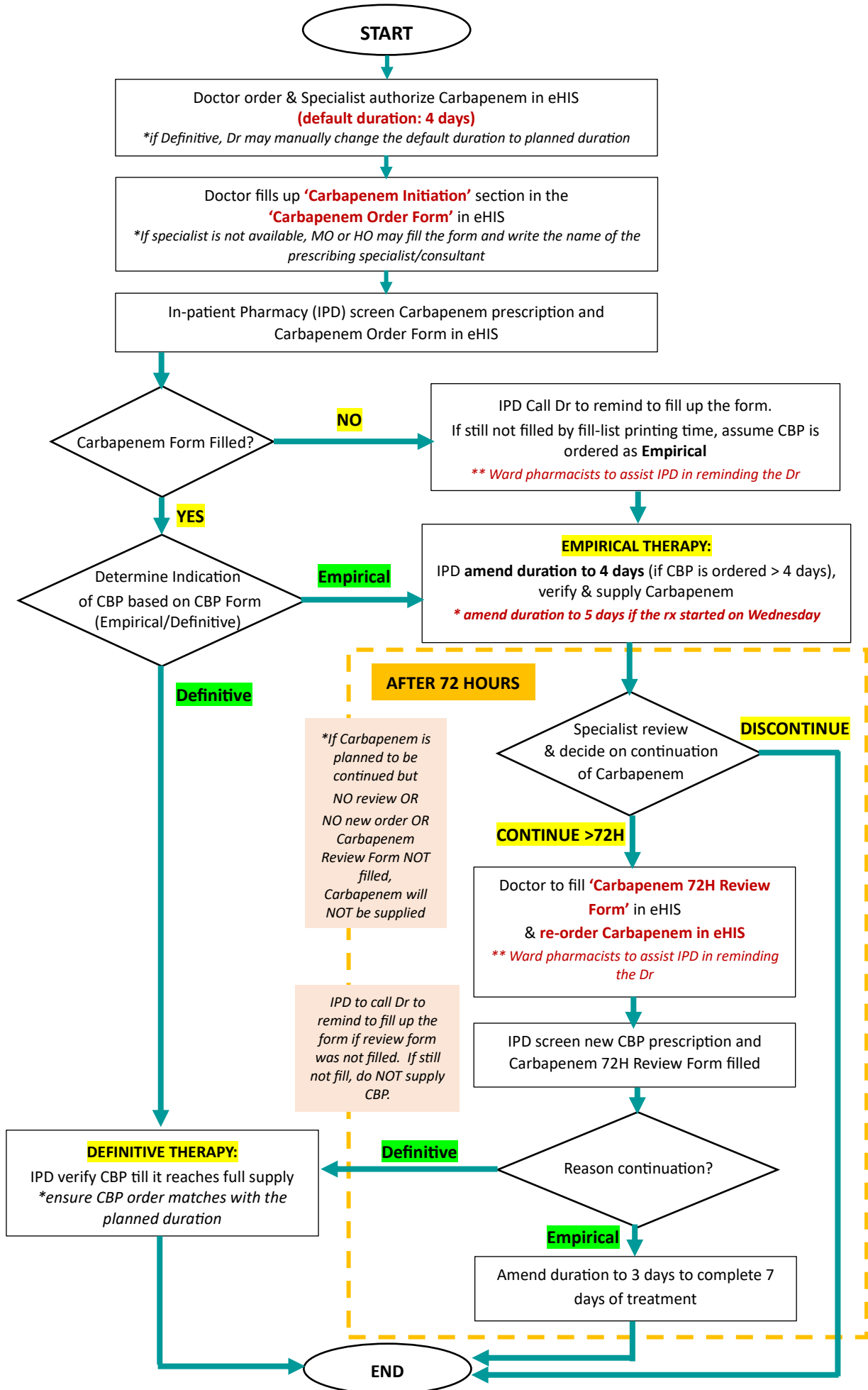
The screenshot shows the eHIS interface with three numbered steps:

- 1**: Patient Chart menu is open, and 'Clinical Notes' is selected.
- 2**: A search for 'Carbapenem Order Form' is performed, and the form is selected from the list.
- 3**: The 'Carbapenem Initiation' section is highlighted in the form view.

'Carbapenem Initiation' section:
To be filled prior to Carbapenem Initiation

'Carbapenem Review at 72H' section:
After 72 hours of therapy, if there is a need for continuation of Carbapenem, 72h review form to be filled.

FLOWCHART FOR CARBAPENEM SUPPLY FOR ADULT PATIENT IN HSgB



STEP TO FILL CARBAPENEM INITIATION & 72 HOUR REVIEW FORM

UPON INITIATION OF CARBAPENEM

1. Go to 'Clinical Notes' tab & choose 'Carbapenem Order Form'

The screenshot shows the 'Add' form with the 'Note Type' dropdown menu open. The options listed are: '---- Select ----', 'ADULT VACCINATION RECORD', 'AMS Notes', 'Carbapenem Order Form' (highlighted with a red box), 'Counseling Form', 'DOAC Counseling', 'Diabetes MTAC', and 'Geriatric MTAC'. The 'Date/Time' field is set to '01/06/2022 10:08'.

2. The form has 2 sections:
 i. **Carbapenem Initiation**
 ii. **Carbapenem Review at 72**

The screenshot shows the 'Notes View' with two sections: 'Carbapenem Initiation' and 'Carbapenem Review at 72H'. Red circles with numbers 1 and 2 point to these sections. The 'Note Type' is 'Carbapenem Order Form' and the 'Date/Time' is '01/06/2022 10:08'.

3. **Carbapenem Initiation Form** - This form needs to be **filled during initiation** of Carbapenem, before Carbapenem is prescribed in eHIS.

Carbapenem Order Form	
Carbapenem Initiation	
Type of Carbapenem <input type="text" value="---- Select ----"/>	Which Carbapenem was planned to start
Specialist / Consultant Name Discipline <input type="radio"/> Anaes/ICU <input type="radio"/> Medical/ID <input type="radio"/> Paediatrics <input type="radio"/> NICU <input type="radio"/> Others Specify <input type="text"/>	Name & discipline of the specialist or consultant who planned for the Carbapenem <i>If specialist not available, MO or HO can fill the form and write the name of the prescribing specialist / consultant</i>
Carbapenem Indication	Indication or infection that the Carbapenem was intended for
Indication Category <input type="text" value="---- Select ----"/> Please specify if Definitive	Indication category Empirical – if culture results not available / pathogen not been identified Definitive - if pathogen has been identified
Source of infection <input type="text" value="---- Select ----"/>	Infection was acquired from community or hospital?
Type of Infection <input type="text" value="---- Select ----"/> Others <input type="text"/>	Type or site of infection. <i>If unavailable in the drop-down menu, please write the infection being treated in the box below</i>

FOR EMPIRICAL THERAPY

- Carbapenem will be supplied for a maximum of 4 days.
- Carbapenem 72H Review Form is required for Pharmacy to resume the supply.

FOR DEFINITIVE THERAPY

- Carbapenem will be supplied till it reaches full supply based on prescription duration.
- If Carbapenem was reordered for the same treatment course of infection (e.g: changed dose or frequency, expired prescription), Carbapenem Form does not need to be refilled.

AFTER 72 HOURS

4. Specialist need to **review & decide on continuation** of Carbapenem.
5. If Carbapenem is **planned to be continued**, Carbapenem 72 H Review Form need to be filled.
6. If the **72 Hours Review Form is NOT filled**, Pharmacy will **NOT** resume supply of Carbapenem after day 4.

Carbapenem Order Form

Carbapenem Review at 72H

****PLEASE FILL THIS SECTION IF CARBAPENEM WAS INITIATED AS EMPIRIC THERAPY AND CONTINUED BEYOND 72HOURS****

Carbapenem continuation at 72H :

Type of Carbapenem

Which Carbapenem was planned to continue

Specialist / Consultant Name
Discipline

Name & discipline of the specialist or consultant who planned for the Carbapenem

If specialist not available, MO or HO can fill the form and write the name of the prescribing specialist / consultant

Reason for continuing Carbapenem Therapy beyond 72H:

Choose only ONE reason

PLEASE choose ONE reason why Carbapenem was continued

: 1. Based on preliminary culture result. E.g: Blood C&S Gram Stain - GNR (Empirical)

Specify preliminary findings

Preliminary culture result shows gram stain
e.g: GNR in blood
Please write the findings in the comment box

: 2. Culture no growth but can't be deescalated (Empirical)

Specify reason

Culture result shows no growth, however Carbapenem cannot be deescalated
Please further explain the reason in the comment box

: 3. Causative pathogen sensitive to other antibiotic but can't be deescalated (Definitive)

Specify culture & reason

Culture result shows pathogen is sensitive to other antibiotics, however cannot be deescalated
e.g: Burkholderia pseudomallei in severe & complicated cases ESCAPPM (Enterobacter cloacae / Citrobacter freundii)

: 4. Causative pathogen sensitive only to Carbapenem (Definitive)

Specify culture result

Culture result shows pathogen is sensitive Carbapenem only
*e.g: ESBL E. coli
ESBL Klebsiella pneumoniae*

Canned Text

Prev Notes

Drug Remark Template during Verifying Stage

NEWLY INITIATED CARBAPENEM THERAPY:

- If CBP Initiation Form filled:
 - IF EMPIRICAL: CBP Initiation Form filled, indication is empirical. To supply for 4 days only **[until date (D4)]**.
 - IF DEFINITIVE: CBP Initiation Form filled, indication is definitive. To supply till it reaches full supply following planned duration.
- If CBP Form NOT filled (by print fill-list time ~ 11.30am & 3.30pm [applicable to ED Night shift print fill-list time]):
Please call Dr to remind!!
 - CBP Initiation Form NOT filled thus indication is assumed to be empirical. To supply for 4 days only **[until date (D4)]**.

CARBAPENEM REORDER AT 72 HOURS:

**** If CBP was reordered due to change of dose/frequency, copy the drug remark in the previous order**

- If CBP Review at 72 hr Form filled:
 - REASON NO **1 or 2** (continue as empirical): CBP 72 Hr Review Form filled, indication is empirical. To complete planned duration of therapy.
Please inform the ward pharmacist/ AMS team if total duration exceed 7 days !!
 - REASON NO **3 or 4** (continue as definitive): CBP 72 Hr Review Form filled, indication is definitive **[diagnosis (e.g: ESBL infection, Melioidosis)]**. To complete planned duration of therapy.
- If CBP Form NOT filled:
Please call Dr to remind. Do not supply until CBP Review at 72 hr Form is filled!