



Ministry of Health
Malaysia

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GUIDELINES FOR CASEMIX DATA APPLICATION IN HOSPITALS AND INSTITUTIONS OF THE MINISTRY OF HEALTH MALAYSIA



Hospital Management Services Unit
Medical Services Development Section
Medical Development Division
Ministry of Health Malaysia
2025



MINISTRY OF HEALTH MALAYSIA

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ENGLISH VERSION

The casemix data application guidelines are designed to ensure systematic, secure, and ethical management and use of the data. They provide a clear structure for data requests, ensure data quality and security, and facilitate the application process by ensuring all applicants adhere to the established regulations.

Prepared By:

Hospital Management Services Unit (Hospital Financing Subunit)

Medical Services Development Section

Medical Development Division

Ministry of Health Malaysia

Email: casemix@moh.gov.my

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DEFINITIONS & ABBREVIATIONS

DEFINITION

- Casemix Data : *Health information that includes data / information related to the Casemix System*
- Research Application : *All requests for information used for research purposes whether from within or outside the Ministry of Health*
- Non-Research Applications : *All required information requests are not for research purposes (example: preparation of reports/ speeches/ analysis/ etc.) either from within or outside the Ministry of Health*

ABBREVIATIONS

- MREC : Medical Ethics & Research Committee
- NMRR : National Medical Research Register
- ALOS : Average Length of Stay
- SOI : Severity of Illness
- CGW : Case Group Weight
- PPC : Price Per Case
- BR : Base Rate
- CMI : Casemix Index

1.0 BACKGROUND

The Casemix system of the Ministry of Health Malaysia was developed in 2010 to:

- a. Assist policymakers in planning and improving the performance of the healthcare delivery system by optimizing allocation, resource management, and patient care.
- b. Provide information on the quality of patient care through health expenditures for research purposes.

By December 2023, all 149 hospitals and institutions had implemented Casemix. The data source for the Ministry of Health Malaysia's Casemix system is derived from the Sistem Maklumat Rawatan Pelanggan (SMRP), which is obtained through daily integration between the two system.

Casemix data includes clinical and financial information for each patient treatment such as demographic, encounter, clinical, financial data, etc.

In addition, Casemix, through the Executive Information System (EIS) module, generates published data that provide value and impact, assisting top management in planning and implementing future health policies. Among these data are:

- i. Case Group Weight (CGW)
- ii. Diagnosis Related Group (DRG)
- iii. Price per Case (PPC)
- iv. Severity of Illness (SOI)
- v. Casemix Index (CMI)
- vi. Base Rate (BR)

Through this Executive Information System (EIS) module, Casemix report and published data can be accessed by users across various levels and department from anywhere, as the modules operates in a web-based platform.

2.0 OBJECTIVE

2.1 GENERAL OBJECTIVES

- Outline the application procedure of Casemix data at various user levels
- Facilitating stakeholders such as policymakers, researchers, and the public to obtain the necessary and appropriate information within the specified time frame.
- Promote the use of Casemix data by stakeholders.

2.2 SPECIFIC OBJECTIVE

To ensure Casemix data management at various levels is orderly and systematic by:

- Designing work processes and application procedures for Casemix data.
- Check and monitor the types and relevance of data released based on intended purpose of the application

3.0 SCOPE OF DATA APPLICATION

The scope of data application that serve as the basis of consideration approval includes categories, levels, types and uses of data.

3.1 APPLICATION CATEGORY

Casemix data application categories are divided according to the purpose of the application, which is either for research or non-research purposes.

Table 1: Casemix Data Application Categories

Application Category			
1. Research		2. Non- Research	
a. Local	b. International	a. Local	b. International
Research by individuals, agencies, organizations or local institutions.	Full or collaborative research at the level of an individual, agency, organization or international institution	Applications from individuals, agencies, organizations or local institutions	Applications from individuals, agencies, organizations or international institutions

3.2 APPLICATION LEVEL

The application is divided into three (3) levels: hospital / institution, state or national.

Table 2: Application Level

Level	Detail			
	Information	Officer Incharge/ Secretariat	Approver	
			Category 1a, 2a	Category 1b, 2b
National	The requested information involves several hospitals across the state	Hospital Financing Subunit, Ministry of Health Headquarters	Director of the Medical Development Division	Director - General MOH
State	The information requested involves several hospitals in the same state only	State Casemix Coordinator	Deputy Director of State Health (Medicine)	
Hospital/ Institution	Information requested involves one hospital/institution only	Hospital Casemix Coordinator	Hospital Director	

For categories 1b and 2b, applicants need to obtain approval from the Director General of Health before sending the data application form to the Officer In charge / Secretariat either at the hospital, state, or national level.

3.3 TYPES OF DATA

The Casemix data can be requested in the form of either a fixed-format report or ad-hoc data. Fixed-format reports can be accessed through the Executive Information System (EIS) module, as outlined in the table in Appendix 5.

Casemix's basic data can be divided into 5 types of data as follows:

- i. Demographic
- ii. Encounter
- iii. Clinical (diagnosis and procedure)
- iv. Quality (ALOS, SOI)
- v. Financial (CGW, PPC, BR, CMI)

Data not included in the list above can be obtained through ad-hoc queries within the Executive Information System (EIS) module. The data provided is aggregated, encompassing both clinical and financial information, and does not include patient identifiers. Any requests for more detailed data should be directed to the Health Informatics Centre, Planning Division, Ministry of Health Malaysia.

4.0 DATA APPLICATION REQUIREMENTS

- 4.1 The data application is in accordance with the procedures and guidelines that have been set.
- 4.2 For research purposes, applicants must first register their research through the National Medical Research Register (NMRR) website via <https://nmrr.gov.my> and obtain the approval of the Medical Research & Ethics Committee (MREC).
- 4.3 The data application form must be completed before it is sent to the Approver.
- 4.4 Applicants in the research category must attach a complete research proposal along with the application form.
- 4.5 The requested data (variable) information should be listed and clearly stated in the dummy table
- 4.6 The requested data is non-confidential and does not involve the patient's personal information.

5.0 RESPONSIBILITIES

5.1 APPLICANT'S RESPONSIBILITIES

The applicant is responsible for ensuring that the following are complied with:

- 5.1.1 Ensure that the information provided is **ONLY** used for the purpose stated in the purpose of the application.
- 5.1.2 Data that has been obtained and received is **STRICTLY PROHIBITED** to be shared with third parties without the permission of the Ministry of Health Malaysia.
- 5.1.3 For publications resulting from the use of Casemix data, standard practices must be followed, including citing the Ministry of Health's Casemix as a data source and **ONE** copy of the publication must be handed over to the Approver.

5.1.4 The applicant is responsible for any possibility related to the evaluation of the data, the interpretation of the way the report is made, the presentation of the results, the views, the findings, and the conclusions or recommendations presented.

5.1.5 Any follow-up application from the same applicant is considered a new application. Applicants also need to include **ONE** copy of the report or document related to the previous data usage and sent it together with the new application.

5.2 RESPONSIBILITIES OF THE SECRETARIAT

5.2.1 Provide data with as specified in the application form after receiving approval from the approving officer.

5.3 RESPONSIBILITIES OF APPROVER

5.3.1 Review and approve all or part of the data requests based on an assessment of the data's

6.0 APPLICATION PROCEDURE

6.1 Identify the category of data application (refer to Table 1) to determine whether it is:

6.1.1 Research

6.1.2 Non-Research

6.2 Applicants must download the required documents from the Ministry of Health Malaysia (KKM) website (www.moh.gov.my >> Publications >> Klinikal >> Sistem Casemix)

6.3 Data requests from non-citizens must first obtain approval from the Director General of Health

6.4 Determine the application stage (refer Table 2)

6.5 Complete the required supporting documents as per the checklist (refer Appendix 2)

6.6 Submit the application to the Approver based on the level of data requested (refer to Table 2)

6.7 The list of requested data **SHOULD** be tabulated (dummy table) to facilitate the data search process from the Casemix system database

6.8 Applications received will be reviewed by the Officer Incharge/Secretariat

6.9 Feedback on the application will be given within **FIVE (5) WORKING DAYS** from the date the complete application is received by the Officer Incharge / Secretariat.

6.10 The requested data will be processed and sent to the applicant within **FOURTEEN (14) WORKING DAYS** from the date the application feedback is sent to the applicant.

6.11 Data usage applications for research must fill out the Data Usage Agreement document (Appendix 4)

7.0 WORK PROCESS

7.1 The process for Casemix data application for applicants is outlined in Table 3:

Table 3: Casemix Data Application Work Process (Applicant)

BIL	ACTION	RESPONSIBILITY	DURATION
7.1.1	Complete the application form (Appendix 1)	Applicant	
7.1.2	Complete the required supporting documents as in Appendix	Applicant	
7.1.3	Complete the Data Usage Agreement form (if relevant) in Appendix 4	Applicant	
7.1.4	Submit the completed items 7.1.1 – 7.1.3 to the approver	Applicant	
7.1.5	Receive feedback from the Officer Incharge/Secretariat (Appendix 3)	Officer Incharge/ Secretariat	5 WORKING DAYS from the date the complete application is received
7.1.6	Receive the requested data	Officer Incharge/ Secretariat	14 WORKING DAYS from the date the data application feedback form is received.

7.2 The work process of casemix data application by the Officer Incharge/Secretariat is in Table 4:

Table 4: Casemix Data Application Work Process (Officer Incharge / Secretariat)

BIL	TINDAKAN / ACTION	TANGGUNGJAWAB / RESPONSIBILITY	TEMPOH / DURATION
7.2.1	Receive an official application	Approver	
7.2.2	Review application	Officer Incharge/ Secretariat	

BIL	TINDAKAN / ACTION	TANGGUNGJAWAB / RESPONSIBILITY	TEMPOH / DURATION
7.2.3	Register application	Officer Incharge/ Secretariat	
7.2.4	Determine the approval status of the application (pass or reject)	Approver	
7.2.5	Give feedback on the approval / rejection status to the applicant (Appendix 3)	Officer Incharge/ Secretariat	5 WORKING DAYS from the date the complete application is received
7.2.6	Provide the necessary data	Officer Incharge/ Secretariat	
7.2.7	Check and verify the data provided	Approver	
7.2.8	Submit the data to the applicant via email or handover	Officer Incharge/ Secretariat	14 WORKING DAYS from the date the data application feedback form is received.
7.2.9	Record data submission	Officer Incharge/ Secretariat	

8.0 SECURITY AND CONFIDENTIALITY

Applicants may be subject to action if violate the security and confidentiality of data and health information subject to the Personal Data Protection Act (PDPA), 2010.

Data and information generated from the Casemix System for commercial transactions must obtain special approval from the Director General of Health Malaysia

Commercial Transactions means any transaction of a commercial nature, whether contractual or not, which includes any matters relating to the supply or exchange of goods or services, agency, investments, financing, banking, and insurance, but does not include a credit reporting business carried out by a credit reporting agency under the Credit Reporting Agencies Act 2010.

(Personal Data Protection Act (PDPA), 2010)

9.0 EXPLANATION NOT SPECIFIED IN GUIDELINES

Any clarification on matters not specified in these guidelines must be submitted to the Deputy Director General of Health (Medicine) for a decision.

10.0 QUESTIONS AND FEEDBACK

Any questions and feedback regarding these guidelines should be submitted to:

Director
Medical Development Division
Ministry of Health Malaysia
Attn: Hospital Financing Subunit
Hospital Management Services Unit
Tel. Number: 03-8883 1413
Email: casemix@moh.gov.my

11.0 CONCLUSION

- 11.1 It is hoped that this guidelines can be used by applicants who wish to obtain Casemix data.
- 11.2 The MOH strongly encourages the use of Casemix data and information so that Health-related planning and decisions made to strengthen health services are comprehensively evidence-based.
- 11.3 Centralized, integrated, comprehensive, and accurate data and information is important to reflect the state of the country's health in the public and private sectors.
- 11.4 The 2nd Edition guidelines will be improved from time to time to ensure that it remain relevant according to the development of the system and user needs.

12.0 APPRECIATION

Much appreciation to those directly and indirectly involved in providing cooperation, support, and feedback in producing these guidelines.



HOSPITAL MANAGEMENT SERVICE UNIT
 MEDICAL DEVELOPMENT DIVISION
 MINISTRY OF HEALTH MALAYSIA
 Level 2, Block E1, Complex E, Precinct 1, Federal Government Administrative Centre
 62590 Putrajaya MALAYSIA

Tel Number : 03-8883 1400
 Email : casemix@moh.gov.my

CASEMIX DATA REQUEST FORM

Project /NMRR Number:

*Application Category:

1. Research

2. Non-Research

a. Local
 a. Local

b. International
 b. International

*Data level :

National
 State
 Hospital

APPLICANT'S NAME:	
ID CARD /PASSPORT NO:	TELEPHONE NO:
NAME OF AGENCY/ INSTITUTION:	
PURPOSE OF APPLICATION:	
DATA NEEDED**:	
1.	2.
FOR OFFICE USE ONLY	
APPLICATION RECEIVED BY:	DATE:
APPROVED/ NOT APPROVED:	REASON OF NON-APPROVAL:
NOTE:	
SIGNATURE & STAMP OF THE APPROVER:	DATE:

* Mark X at the relevant box

**Please attached together the tabulated (dummy) table

*I will be fully responsible for any possibility related to the evaluation of the data, interpretation of the way the report was made, presentation of the results, views, findings, and conclusions or recommendations presented.

Signature & Stamp of the applicant:

Name:

Date:

CHECKLIST FOR CASEMIX DATA APPLICATION



Ministry of Health
Malaysia

Sila pastikan semua dokumen yang diperlukan telah dilengkapkan sebelum mengemukakan permohonan.

REQUIRED DOCUMENT	APPLICANT'S CATEGORY			
	1. RESEARCH		2. NON-RESEARCH	
	1.A LOCAL	1.B INTER- NATIONAL	2.A LOCAL	2.B INTER- NATIONAL
1. Casemix Data Application Form	√	√	√	√
2. Copy of research proposal paper	√	√	N/A	N/A
3. Copy of approval letter from Medical Research and Ethics Committee (MREC)	√	√	N/A	N/A
4. Application letter for data from the Head of Department / Research Supervisor	√	√	√	√
5. Microsoft Excel template (dummy table)	√	√	√	√
6. Approval from the Director-General of Health Malaysia*	N/A	√	N/A	√
7. Data Usage Agreement For Research Project	√	√	N/A	N/A

* For international applicant only



Y.Bhg Tan Sri/ Pn Sri/ Dato' Seri/ Datin Seri/Datuk/ Dato'/ Datin/Tuan/Puan,

CASEMIX DATA REQUEST FEEDBACK

With all due respect refer to the above and casemix data application form from dated is referred to.

1. For information, we have reviewed the application and found;

the following information cannot be supplied because:

- i)
- ii)
- iii)

information will be provided but only after the following documents are completed:

- i)
- ii)
- iii)

the data needs to be processed and will be provided within 14 working days.

- i)
- ii)
- iii)

Others, specify:

- i)
- ii)
- iii)

Thank you.

“SERVING THE NATION”

I Am Carrying Out The Trust,

DATED

(YEAR)

(RESEARCHER'S NAME) (1)

AND

MINISTRY OF HEALTH MALAYSIA (2)

DATA USAGE AGREEMENT FOR RESEARCH PROJECT

THIS AGREEMENT is effective as of _____

PARTIES

The Parties to this Agreement are:

- (1)
(RESEARCHER'S NAME)

- (2) **MINISTRY OF HEALTH MALAYSIA**

The Principal Researcher and Ministry of Health Malaysia shall be referred individually as a "Party" and collectively, as the "Parties".

WHEREAS

- I. This agreement form is signed in relation to the approval of the use of macro data, micro data, detailed data and any other data (e.g. aggregated data) issued by Ministry of Health Malaysia (MOH).

- II. I, _____ hereby agree(s) and undertake(s) that:
 - a) Macro data, micro data, detailed data and any other data (e.g. aggregated data) obtained will be used solely for the purpose of research project/thesis entitled:

 - b) To ensure the security of the raw data by taking reasonable and adequate measures to protect the data from loss, misuse, exploitation, ravage, unauthorized access, or disclosed to any unnecessary parties.

 - c) Will use data solely for the purpose referred to in paragraph II (a) only.

 - d) Will register the research project with National Medical Research Register (NMRR) at <http://nmrr.gov.my>.

e) Will obtain approval from the Director-General of Health, Malaysia for any publication(s) resulted from the use of data according to the appointed procedure before the article sent for publish.

f) Will acknowledge Director-General of Health, Malaysia for his permission to use the data and to publish the article.

e.g. The authors would like to thank the Director-General of Health, Malaysia for his permission to use the data from the National Health and Morbidity Survey 2011 and to publish this paper.

g) Will submit a copy of the final manuscript of scientific publication to:

Secretariat:

Address:

through

Deputy Director General of Health (Medical)

Director of the State Health Department

Hospital Director

(Address)

III. I am aware that the breach of this contract will lead to blacklist from obtaining and/or using any form of data from Ministry of Health, Malaysia.

IV. I have read and understood all of the above clauses and agree to abide with all the terms mentioned.

IN WITNESS WHEREOF the Parties have caused this Agreement to be executed by their duly authorized representatives on the day and year first stated above.

For and on behalf of:

Researcher

Signature
Name of Principal Researcher
Designation
Date

Witnessed by:-

Signature
Name of Supervisor/Head of Department
Designation
Date

For and On Behalf of:

Ministry Of Health Malaysia

.....
Name:
Position:
Date:

Witnessed by:-

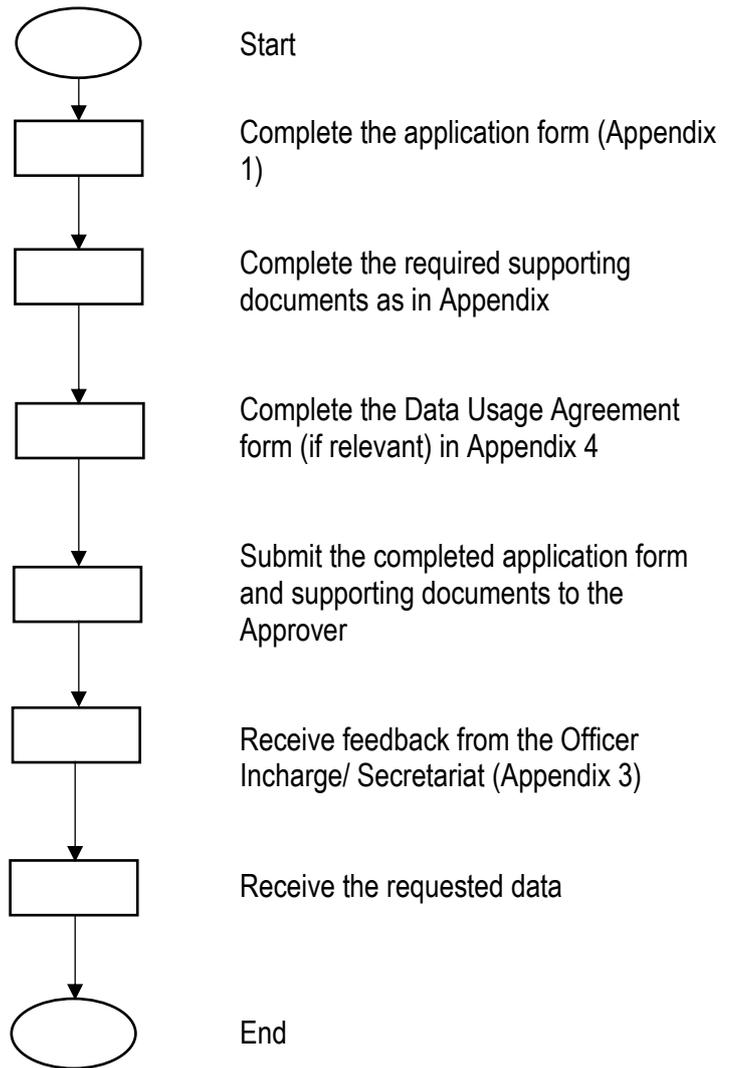
.....
Name:
Position:
Date:

List of Information Available in the Executive Information System Module (EIS)

Category	Sub-Category
1. Demography	Gender Distribution
	Age Group Distribution
	Ethnic Group Distribution
	Citizenship Distribution
	Non-Malaysian Citizen Distribution
	Mortality by Age Group
	Mortality by Gender
2. Encounter	Discharge Type Distribution
	Length of Stay by Severity of Illness
	Length of Stay Index
	Source of Referral
	Health Funding Type
3. Health Statistic	List of Major Diagnostic Category
	List of Major Diagnostic Category <18 Years Old
	List of Major Diagnostic Category ≥ 60 Years Old
	List of Diagnosis Related Group (DRG)
	List of Diagnosis Related Group (DRG) <18 Years Old
	List of Diagnosis Related Group (DRG) ≥ 60 Years Old
	DRG by Discharge Type
	DRG by Discharge Type <18 Years Old
	DRG by Discharge Type ≥ 60 Years Old
	Diagnosis By DRG
	Main Procedure by Diagnosis
	Main Procedure Class by Diagnosis
	Severity of Illness
4. Quality of Care	DRG by Length of Stay
	DRG by Discharge Type
	DRG by Main Condition
	DRG by Main Procedure
	Co-Managing Specialty Workload
	Co-Managing Specialty Workload By SOI
5. Financial	CGW Calculation: Home
	CGW Calculation: Non-Home
	Base Rate: National
	Base Rate: Hospital
	Average Cost by Service Type
	Cost Per Discharge by Specialty
	Hospital Emolument
	Hospital Expenditure by Cost Items
	Hospital Sources of Fund
Hospital Financial Statistics for Cost Per Patient Day	

Category	Sub-Category
	Hospital Financial Statistics for Cost Per Discharge
	Total Expenditures: Lab Test
	Total Expenditures: Images
	Average Pathology Service Cost
	Indeks Casemix / Casemix Index

Casemix Data Application Procedure Flow Chart (Applicants)



Casemix Data Application Management Flow Chart (Secretariat)

