Health AND Human

Nursing Facility Case Mix and Rate Methodology

Presented By Iowa Medicaid

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Nursing Facility Case Mix Workgroup

- In 2021, the Iowa Legislature directed Iowa Medicaid to evaluate the technical aspects of the case mix reimbursement system and rebasing processes.

- A workgroup was established in July 2021, to review existing processes and identify mechanisms to reduce or eliminate retrospective payments during the bi-annual nursing facility rebasing process.

- The workgroup identified and evaluated pros and cons associated with each of these components.

- That information was utilized to develop comprehensive recommendations to improve the nursing facility rate setting and payment process.

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Nursing Facility Case Mix Workgroup continued

The budget-neutral changes will help to modernize the case mix system and increase efficiencies in the rebasing processes. The updates will assist in stabilizing swings in nursing facility rates and significantly reduce impacts of retrospective rate processing.

The changes include:

- Updating rates semi-annually instead if quarterly.

- Moving to a day-weighted average Medicaid CMI for rates effective July 1, 2023.

- Iowa Medicaid issuing rates as review of cost reports for individual providers are completed, rather than waiting for all cost report reviews to be completed.

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Methodology used for Case Mix Classification

The Iowa Medicaid Quality Improvement Organization (QIO) Unit contracts with Department of Health and Human Services (HHS) to calculate the case mix index for Iowa nursing facilities. The case mix index (CMI) is used in the calculation of a portion of the direct care component of each facility's rate.

Each resident in the nursing facility is classified into a distinct reimbursement group called Resource Utilization Groups (RUGs). The RUGs are based on the care the resident was receiving at the time of the assessment. These groups are determined by the coding of specific MDS items related to the amount of assistance the resident received with activities of daily living and selected treatments, health conditions, diagnoses, behavior, and cognitive status. Residents are assigned to these groups and classifications based on the MDS assessment completed by the nursing facility using the Resident Assessment Instrument (RAI).

The case mix index is calculated using the MDS 3.0 Resource Utilization Group (RUG III-34 group model, version 5.20) and index maximizing methodology. Index maximizing is when the resident qualifies for multiple RUG classifications and then is assigned the classification with the highest index or weight for case mix. For example, if a resident qualifies for both the RUG-III case mix classification RAA with an index of 1.07, and SSA with an index of 1.28, the resident would be assigned the SSA classification because it has the highest index.

Purpose of a Case Mix Roster

The facility case mix roster is a report of residents residing in each Medicaid certified nursing facility during the resident roster quarter based on the Minimum Data Set (MDS) assessments and tracking forms that have been completed and transmitted electronically to the Quality Improvement Evaluation System (QIES) Assessment Submission and Processing (ASAP) System. A pre-defined CMI is assigned to each MDS assessment completed that calculates a RUG score. A day weighted CMI is created using this data.

Review of Preliminary Case Mix Roster

The preliminary case mix index roster is provided to the facility to determine if any missing or incorrect records are noted and allow a review period for facilities to make corrections as needed. Once the facility has access to the roster, they should review it for accuracy. *The following are some areas that should be reviewed but not limited to only these areas.*

- The facility should check to ensure that all residents who were present at any time during the quarter are listed on the roster.

- Review the listed assessments and tracking forms for each resident to determine that every assessment/tracking form is identified on the roster.

- Review for missing or corrected assessments that may have been completed but were either not transmitted or were not accepted by the QIES/iQIES ASAP system. Review the CMS Validation report for errors that may need corrected and retransmit, if applicable.

Review of Preliminary Case Mix Roster continued

- Any assessments that have been transmitted and accepted after the cut off dates will not be reflected on the roster.

- Ensure that each Medicaid resident is identified correctly for any non-PPS assessment by reviewing the Medicaid Number entered on MDS item A0700. If the Medicaid number has been entered incorrectly or the member was pending Medicaid and was approved for Medicaid with the effective date being the month or months prior to the assessment, you must modify that assessment(s) to correct or add the Medicaid number in A0700 and successfully transmit to the QIES/iQIES ASAP system by the cutoff date.

- If a resident is listed on the roster for more days during the quarter than they should have been, ensure that a discharge assessment and or death in facility record was completed, transmitted, and accepted to the QIES/iQIES ASAP system.

- If a resident has days missing on the roster, ensure that an entry tracking form were completed, submitted, and accepted to QIES/iQIES ASAP system upon readmission.

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Review of Preliminary Case Mix Roster continued

- All corrections to the preliminary case mix index roster must be done by completing a modification, inactivation and/or transmission of the MDS assessment and tracking record (in accordance with Chapter 5 of the RAI manual and CMS correction policy) on or before the cutoff date for preliminary corrections.

- Important Case Mix Dates for quarterly cutoffs are available on the HHS website or on IMPA

- No manual alterations of the resident roster are considered.

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Table of RUG-III Classifications

RUG-III 34 Grouper		
Classification		**CMI**
Extensive Services	SE3	2.10
	SE2	1.79
	SE1	1.54
Rehabilitation	RAD	1.66
	RAC	1.31
	RAB	1.24
	RAA	1.07
Special Care	SSC	1.44
	SSB	1.33
	SSA	1.28
Clinically Complex	CC2	1.42
	CC1	1.25
	CB2	1.15
	CB1	1.07
	CA2	1.06
	CA1	0.95
Impaired Cognition	IB2	0.88
	IB1	0.85
	IA2	0.72
	IA1	0.67
Behavior Problems	BB2	0.86
	BB1	0.82
	BA2	0.71
	BA1	0.60
Reduced Physical Function	PE2	1.00
	PE1	0.97
	PD2	0.91
	PD1	0.89
	PC2	0.83
	PC1	0.81
	PB2	0.65
	PB1	0.63
	PA2	0.62
	PA1	0.59
Inactive/Expired Assessment	BC1	0.59

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Reporting Periods for Day-Weighted CMI

The day weighted case mix index rosters will be by uploaded to IMPA on a quarterly basis for nursing facility providers to access.

Day-Weighted CMI Schedule		
Quarterly	Quarter 1	January 1 - March 31
	Quarter 2	April 1 - June 30
	Quarter 3	July 1 - September 30
	Quarter 4	October 1 - December 31

General Calculation Guidelines for Day Weighted CMI

- Inactivated assessments at time of pull are not counted in the case mix roster.

- The most current modification/correction of the assessment at time of pull is counted.

- Death in facility records and discharge assessments are only used to obtain the date of discharge and discharge status.

- Calculation of days include the day of admission. The day of discharge is not included.

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- Days are counted from the entry date if the resident entered the facility during the quarter, or the first day of the quarter if the resident had a previous RUG assessment. Days will be counted until the assessment reference date (ARD) (A2300) of the next assessment, the end of the quarter or until the resident is discharged, whichever comes first, unless the maximum number of days for the assessment has been reached.

Example
In this example, the Annual assessment was transmitted with the following:

- Assessment reference date (A2300) 10/4/21

The next Quarterly assessment was transmitted with the following:

- Assessment reference date (A2300) 1/3/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NC/03/99/99	1/1/22	10/4/21	1/3/22	RAD	1.66	2	3.32	Medicaid
NQ/02/99/99	1/3/22	1/3/22	4/1/22	SSC	1.44	88	126.72	Medicaid

The Annual assessment from the previous quarter was used to begin counting on the first day of the quarter until the ARD (A2300) of the Quarterly assessment. The Quarterly assessment began counting days on the ARD (A2300) until the end of the quarter.

- CMS requirements allow no more than 92 days between assessments. The state of Iowa has determined that for case mix purposes each assessment is considered active for a maximum of 113 days, starting with the ARD (A2300). An assessment that has not been followed by another RUG assessment, discharge assessment, or death in facility tracking form within 113 days of the preceding RUG assessment record's ARD will not have additional days counted after day 113. The record is then considered inactive or expired. During the inactive period following an expired assessment (starting on day 114) until the start of the next assessment A2300 or the end of the quarter, whichever comes first, days are counted at the delinquent RUG classification BC1.

Example

In this example, the Annual assessment was transmitted with the following:

- Assessment reference date (A2300) 10/28/21

The next Quarterly assessment was transmitted with the following:

- Assessment reference date (A2300) 3/15/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NQ/02/99/99	1/1/22	10/28/21	2/18/22	CA1	0.95	48	46.55	Medicaid
NQ/02/99/99	2/18/22	10/28/21	3/15/22	BC1	0.59	22	14.16	Medicaid
NQ/02/99/99	3/15/22	3/15/22	4/1/22	PC1	0.81	17	13.77	Medicaid

Adding 112 days to the A2300 date of the first Quarterly assessment would result in 2/17/22, 113 days.

Starting day 114 (2/18/22) until the A2300 date of the next Quarterly assessment (3/15/22), the days are counted at a delinquent RUG III classification of BC1.

The days from the second Quarterly assessment are counted from the A2300 (3/15/22) through the last day of the quarter.

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- The RUG classification and CMI calculated on the admission assessment will begin counting days starting with the entry date. When there are more than 14 days between the admission entry date (A1600) and the ARD (A2300) of the admission assessment, the entry date or start of the quarter is used to begin counting days at the delinquent RUG classification of BC1 until the ARD (A2300). The RUG and CMI calculated from the admission assessment will then begin counting the days starting with the ARD.

Example

In this example, the Entry Tracking Form was transmitted with the following:

- Entry date (A1600) 1/10/22

The Admission assessment was transmitted with the following

- Assessment reference date (A2300) 1/25/22
- Entry date (A1600) on Admission assessment 1/10/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NT/99/99/01	1/10/22	1/10/22	1/25/22	BC1	0.59	15	8.85	Medicaid
NC/01/99/99	1/25/22	1/25/22	4/1/22	CA1	0.95	66	62.70	Medicaid

Delinquent days begin on the Entry date of 1/10/22 and continue until the A2300 date of the Admission assessment.

The Admission assessment starts with A2300 date of 1/25/22 through the end of the quarter.

- For residents that have a RUG in the previous quarter that carries forward into current quarter but then discharges in current quarter and later returns as a new admission (A1700=1), the admission assessment will start recounting days at entry date.

Example
In this example, the Quarterly assessment was transmitted with the following:
- Assessment reference date (A2300) 12/12/21

The discharge assessment (discharge return not anticipated) was transmitted with the following:
- Discharge date (A2000) 3/1/22

The Entry Tracking Form was transmitted with the following:
- Entry date (A1600) 3/3/22 and Entry Type (A1700=1) Admission

The Admission assessment was transmitted with the following:
- Assessment reference date (A2300) 3/10/22
- Entry date (A1600) 3/3/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NQ/02/99/99	1/1/22	12/12/21	3/1/22	CB1	1.07	59	63.13	Medicaid
ND/99/99/10	3/1/22	3/1/22	3/3/22					Other
NT/99/99/01	3/3/22	3/3/22	3/10/22	SSA	1.28	7	8.96	Medicaid
NC/01/99/99	3/10/22	3/10/22	4/1/22	SSA	1.28	22	28.16	Medicaid

The Quarterly assessment from the previous quarter was used to begin counting on the first day of this quarter until the day of discharge. Since this was a discharge return not anticipated, the next Admission assessment is used to count days beginning on the day of new entry (A1600).

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- For residents that have a RUG in the previous quarter that carries forward into the current quarter and then discharges in the same current quarter and later re-enters (A1700=2), the previous active assessment will be counted again starting with the day of re-entry until the ARD of the next assessment completed.

Example
In this example, the Quarterly assessment was transmitted with the following:
- Assessment reference date (A2300) 12/12/21

The discharge assessment (discharge return anticipated) was transmitted with the following:
- Discharge date (A2000) 1/17/22

The Entry Tracking Form was transmitted with the following:
- Entry date (A1600) 1/19/22 and Entry Type (A1700=2) Re-entry

The Significant change in status assessment was transmitted with the following
- Assessment reference date (A2300) 2/11/22
- Entry date (A1600) 1/19/22

The discharge assessment was transmitted with the following:
- Discharge date (A2000) 3/15/22
- Discharge status was deceased (A2100)=8)

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NQ/02/99/99	1/1/22	12/21/21	1/17/22	SSC	1.44	16	23.04	Other
ND/99/99/11	1/17/22	1/17/22	1/19/22					Other
NT/99/99/01	1/19/22	1/19/22	2/11/22	SSC	1.44	23	33.12	Other
NC/04/99/99	2/11/22	2/11/22	3/15/22	CC2	1.42	32	45.44	Other
NT/99/99/12	3/15/22	3/15/22	3/15/22					Other

(Cont'd)

(Cont'd)

The Quarterly assessment from the previous quarter was used to begin counting on the first day of this quarter until the day of discharge. When the resident returned to the facility, that previous assessment was used to begin counting on the reentry date until the A2300 date of the Significant change in status assessment. This assessment was used to count the days beginning on the A2300 date until the date of death.

- If there is more than one discharge assessment submitted with no other assessments in between, the earliest discharge date will stop the count of days.

Example

In this example, the Quarterly assessment was transmitted with the following:

- Assessment reference date (A2300) 12/31/21

First Discharge assessment (discharge return anticipated) was transmitted with the following:

- Discharge date (A2000) 1/18/22

Second Discharge assessment (discharge return not anticipated) was transmitted with the following:

- Discharge date (A2000) 2/5/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NQ/02/99/99	1/1/22	12/31/21	1/18/22	PB1	0.63	17	10.71	Medicaid
ND/99/99/11	1/18/22	1/18/22	4/1/22					Other
ND/99/99/10	2/5/22	2/5/22	4/1/22					Other

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- When an entry tracking form is submitted as a new stay in the facility (A1700=1) and it is only followed by a discharge assessment or death in facility tracking form, the RUGS III classification will be assigned based upon the discharge status (A2100) from the entry date to the day prior to discharge (A2000) up to a maximum of 14 days.

  - When discharge status was submitted as deceased (A2100=08) or discharged to hospital (A2100=03, 05, or 09), the RUG III classification will default to SSA.
  - When discharge status was submitted other than death or to the hospital (A2100= 01, 02, 04, 06, 07, or 99), the RUG III classification will default to CB1.

Example

In this example, the Entry Tracking Form was transmitted with the following:

- Entry date (A1600) 3/10/22 and Entry type (A1700=1) Admission

The discharge assessment (discharge return not anticipated) was transmitted with the following:

- Discharge date (A2000) 3/20/22
- Discharge status (A2100= 01) to the community

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NT/99/99/01	3/10/22	3/10/22	3/20/22	CB1	1.07	10	10.7	Medicaid
ND/99/99/10	3/20/22	3/20/22	4/1/22					Other

Note: If a PPS assessment has been completed, but not an OBRA admission, the PPS assessment will be used from the entry date until the day prior to discharge.

- If a resident has an admission entry tracking form (A1700=1) at the end of the quarter that is not followed by an assessment within 14 days of that same quarter, the first record in the next quarter within 14 days from the date of entry will be used to provide a RUG III classification from the date of entry to the end of the quarter.

Example

In this example, the Entry Tracking Form was transmitted with the following:

- Entry date (A1600) 3/30/22 and Entry type (A1700=1) Admission

The Admission assessment was transmitted with the following:

- Assessment reference date (A2300) 4/15/22
- Entry date (A1600) 3/30/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NT/99/99/01	3/30/22	3/30/22	4/1/22	SE2	1.79	2	3.58	Medicare
NC/01/01/99	4/1/22	4/5/22	4/1/22	SE2				Other

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- When a quarterly assessment is completed before an admission assessment, the admission assessment only starts with the ARD instead of entry date since an admission assessment (A0310A=1) shouldn't immediately follow another OBRA assessment.

Example

In this example, the Quarterly assessment was transmitted with the following:

- Assessment reference date (A2300) 12/8/21

The Admission assessment was transmitted with the following:

- Assessment reference date (A2300) 1/31/22
- Entry date (A1600) 1/24/22

Assessment Type	Start Date	Target Date	End Date	RUG	CMI	Days	Weight	Pay Source
NQ/02/99/99	1/1/22	12/8/21	1/31/22	PD1	0.89	30	26.7	Medicaid
NC/01/99/99	1/31/22	1/31/22	4/1/22	RAB	1.24	60	74.4	Medicaid

The Quarterly assessment from the previous quarter was used to begin counting days in this quarter. The Admission assessment ARD (A2300) was used to begin counting of additional days instead of the Entry date (A1600) because this Admission assessment followed a Quarterly assessment.

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Determination of Payor Source

The payer source is identified with each assessment. There are three payer types: Medicare, Medicaid, and Other.

Payer Source Type	
Medicare	All assessments identified as PPS in A0310B or A0300 (OSA)
Medicaid	- Non-PPS assessments and had a Medicaid number entered in A0700 - The Medicaid number should be seven digits followed by a letter - Any incorrect Medicaid numbers will not be identified as Medicaid
Other	Any assessment not identified as either Medicare or Medicaid

Table Definitions for Case Mix Index Methodology

OBRA Assessment (A0310A)	MDS 3.0 Item Set Code (ISC)	A0310A
Admission	NC	01
Quarterly	NQ	02
Annual	NC	03
Significant Change in Status	NC	04
Significant Correction to Prior Comprehensive Assessment	NC	05
Significant Correction to Prior Quarterly Assessment	NQ	06

PPS/Medicare Assessments (A0310B)	MDS 3.0 Item Set Code (ISC)	A0310B
5 Day	NP	01

Optional State Assessment (A0300)	MDS 3.0 Item Set Code (ISC)	A0300
OSA	OSA	01

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Discharge Assessments and Tracking Forms

Discharge Assessments (A0310F)	MDS 3.0 Item Set Code (ISC)	A0310F
Discharge Return Not Anticipated	ND	10
Discharge Return Anticipated	ND	11

MDS Tracking Forms (A0310F)	MDS 3.0 Item Set Code (ISC)	A0310F
Entry/Re-entry	NT	01
Discharge-Death in Facility	NT	12

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Sequence of Assessment Types

MDS assessments may be combined in accordance with RAI Manual Chapter 2. For roster purposes, the sequence of assessment types will be:

- A0310A, OBRA Assessments
- A0310B, PPS/Medicare Assessments
- A0310F, Entry/Discharge Tracking Forms

For example, the record type shown on the roster report as NT/99/99/01 indicates the Entry Tracking Form and NQ/02/99/99 indicates an OBRA Quarterly not combined with a PPS assessment or tracking records. The record type NC /01/01/99 indicates a combined OBRA admission and 5-day PPS assessment.

If it is OSA, it will simply say OSA.

Definitions for Case Mix Roster

Start Date	The start date is calculated from the start of the quarter or the target Date of an assessment.
Target Date	The MDS item date from either the Assessment Reference Date (ARD) in A2300 or the discharge date in A2000 or the Entry/Re-entry date in A1600.
End Date	The end date is the day the Case Mix Index (CMI) is no longer valid for that line. It may be the day after the end of the quarter, the ARD of the next assessment, or the discharge date. The end date is not calculated into the count of days.
RUG	An assessment assigned to one of the RUGS-III 34 Groups.
CMI	A numerical score assigned to each of the RUGS-III 34 Groups or a default rate.
Days	The number of days that will be counted at the CMI listed on that line.
Weight	The weight is the CMI points assigned to the assessment multiplied by the number of days.
Pay Source	The payment source assigned to the assessment type. (See determination of payer source for further explanation.)

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Roster CMI Calculations

- The calculations at the end of the roster include CMI day weighted points for each of the 3 payer types.

- For Medicaid, Medicare, and other payer types, days, weight, and CMI averages are generated separately.

- The day weighted average of each payer source is calculated by dividing the total CMI weight by the total days.

- The facility weighted average is calculated by dividing the total CMI weight across the 3 payer types by the total number of days across all payer types.

- The total resident calculation is the total number of residents that were in the facility at any time during the roster quarter identified on the roster.

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Resources

- PowerPoint Training: Case Mix Rosters in IMPA:
https://dhs.iowa.gov/sites/default/files/Training_Case_Mix_Rosters.pdf?021020221425

- Case Mix Access Request Form:
https://dhs.iowa.gov/sites/default/files/4705642.pdf?011320211444

- RUGS III Calculations:
https://dhs.iowa.gov/sites/default/files/RUG_III_Calculations.pdf?021020221428

- RAI Manual:
https://downloads.cms.gov/files/mds-3.0-rai-manual v1.17.1_october_2019.pdf

- Case Mix Email:
casemix@dhs.state.ia.us

Case Mix Rate Sheets

CURRENT PRESENTATION
CASE-MIX INFORMAITON USED IN RATE SETTING

Facility Cost Report Period CMI		Medicaid Case-Mix Used in Rate		
Quarter Ending	Facility Wide CMI	Quarter Ending	Medicaid CMI	
03/31/2022	1.0073	03/31/2022	0.9497	
06/30/2022	0.9599			
09/30/2022	0.9709			
12/31/2022	0.9614			
Average	0.9749			

PROPOSED PRESENTATION
CASE-MIX INFORMAITON USED IN RATE SETTING

Facility Cost Report Period CMI				Medicaid Case-Mix Used in Rate			
Period Ending	Total Facility Days	Total Facility Weight	Weighted Average CMI	Period Ending	Medicaid Facility Days	Total Medicaid Weight	Weighted Average CMI
03/31/2022	1,702	1705.6833	1.0022				
06/30/2022	1,650	1610.5549	0.9761	09/30/2022	815	810.5432	0.9945
09/30/2022	1,680	1699.6716	1.0117	12/31/2022	783	767.6871	0.9804
12/31/2022	1,725	1710.1234	0.9914	Average	1,598	1,578.230	0.9876
Average	6,757	6,726.0332	0.9954				

Training for Day Weight CMI

■ Iowa Medicaid will conduct virtual provider training sessions regarding the NF day-weighted CMI methodology via Zoom. The Zoom training will be conducted monthly from March through December 2022, to allow providers the opportunity to attend one or multiple training sessions.

■ Training sessions will include:
- Methodology used for case mix classification
- Purpose of the case mix roster
- How to read the case mix roster
- Review of preliminary rosters
- General calculation guidelines
- Determination of payer source

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Upcoming Training

March 30, 2022	3:00 PM – 4:00 PM
April 27, 2022	3:00 PM – 4:00 PM
May 25, 2022	3:00 PM – 4:00 PM
June 29, 2022	3:00 PM – 4:00 PM
July 27, 2022	3:00 PM – 4:00 PM
August 31, 2022	3:00 PM – 4:00 PM
September 28, 2022	3:00 PM – 4:00 PM
October 26, 2022	3:00 PM – 4:00 PM
November 30, 2022	3:00 PM – 4:00 PM
December 28, 2022	3:00 PM – 4:00 PM-CANCELLED
January 18, 2023	3:00-4:30 PM

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Questions