Nordic Casemix Centre - Development initiative

#818 - Multiple CC will lead to MCC

2022-02-17 12:06 - Mats Fernström

Status:	Active	**Start date:**	2022-02-17
Priority:	Major	**Due date:**	
Assignee:	Mats Fernström	**Spent time:**	0.00 h
Initiator:	Sweden	**Target Grouper:**	SWE
MDC:	GEN	**Owner / responsible:**	

Description

Mats Fernström, the National Board of Health and Welfare, Sweden 2022-02-17 (SWE ID C926)
It has been pointed out that I did not mention inactive complication categories with the letter J in my documents “How to read NordDRG definition tables 2021-12-20” and “How to write technical changes for NordDRG - 2021-12-21”.
The purpose of COMPL values with the letter J is that they shall be activated to a corresponding COMPL value with the letter G (= MCC level) by certain DGPROP values (similar to activation of COMPL values with the letter I) and then potentially leading to a DRG of the type “very complicated”, i.e. with MCC.
I intentionally omitted this, because inactive complication categories with the letter J are not used in any version of NordDRG and they will probably never be used in the future either. What diagnosis should have the potential to elevate a patient case from ‘not complicated’ all the way to ‘very complicated’ without already having a COMPL value with the letter G? I doubt that we will find such a diagnosis.

Then I believe more in developing NordDRG so that two or more diagnoses with CC property will generate MCC property. Something that speaks for this, is that there is a strong connection between the number of diagnoses and cost, see the enclosed file Cost_number_dx.xlsx.
A function that generates a MCC property when two or more CC properties are present cannot just count the number of diagnoses, however. It will be too blunt. We experts must be able to choose which categories that should generate MCC property. Technically, it can be done in a similar way as the present activation of inactive complication categories.

The suggested development of NordDRG demands changes in the program code for the groupers so it could preferably be done in connection with transition to ICD-11, when the groupers must be re-programmed anyhow.
If there is an interest in such a development, we can go on with the analysis and suggest some complication categories that together should lead to "MCC". Otherwise, we close the case (or continue on the sly).

History

#4099 - 2022-02-20 16:35 - Martti Virtanen

2022-02-20 Martti Virtanen

We do not have any COMPL with J. There were originally some, but in the CC-process these were turned to active major complication categoeries with M.
If I remember correctly we though that it was not logical demand an activation in cases causing major increase in resource use. Anyway, they do not exist in NDMS.

#4223 - 2022-09-30 20:13 - Kristiina Kahur

- Description updated

- Status changed from Active to Further active

2022-03-18 Expert Group

It was decided during EG meeting that this issue will be postponed since it needs thorough analysis. Sweden will do analysis (in cooperation with IT experts) and gets back to EG to discuss the results.

This case remains open.

#4276 - 2022-10-04 13:58 - Kristiina Kahur

- Attachment deleted (Cost_number_dx.xlsx)

#4277 - 2022-10-04 13:58 - Kristiina Kahur

- Attachment Cost_number_dx.xlsx added

#4397 - 2023-03-15 18:10 - Kristiina Kahur

2023-03-09 Expert Group

This case in linked to #822 .

Given that the introduction of ICD-11 and ICHI will require changes in NDMS, grouper and def.tables, this change will be done once the actions concerning the transition to ICD-11 and ICHI will be taken.

Until then, this case remains further active.

#4814 - 2025-01-22 13:22 - Kristiina Kahur

Nordic Casemix Center/Kristiina Kahur 22-1-2025

Even though this case is related to the changes concerning the transition to ICD-11, there is a need for a thorough analysis from clinical and economical point of view how two or more diagnosis codes with CC would generate MCC feature and grouping a case into DRG with MCC.

Currently, the amount of diagnosis codes with CC per case does not affect the grouping to DRG with MCC. Instead the variable COMPL with 'G' in the middle is decisive.

As this task was initiated by Sweden, I would like Swedish colleagues to have a look at this and assess the need for this change (whether in short or long run) and your capacity to conduct the analysis.

I also encourage other countries to have a look at the initial suggestion and provide your feedback if any thoughts or comments.

#4819 - 2025-01-22 16:39 - Kristiina Kahur

- Attachment ar-drg_v11.0_technical_specifications_final.docx added

Nordic Casemix Center/Kristiina Kahur 22-1-2025

Attached is a document for your information (and possibly inspiration) that describes the technical aspects of the Australian Refined DRG (AR-DRG) system, including the methodology for determining clinical complexity, known as the Episode Clinical Complexity (ECC) Model (see Chapter 4). Compared to the NordDRG system, the approach to calculating complexity levels and how they influence complexity at the DRG level is different—and more intricate.

Source of the document https://www.ihacpa.gov.au/sites/default/files/2022-08/AR-DRG%20Version%2010.0%20Technical%20Specifications_0.pdf

#4952 - 2025-03-12 14:09 - Lotta Sokka

2025-03-11 Expert group

The case was discussed in the meeting. The ticket remains further active, waiting for further analysis from Sweden.

#4961 - 2025-03-17 10:18 - Lotta Sokka

- Task type changed from Case to Development initiative

- Status changed from Further active to Active

- Target year deleted (2024)

#4973 - 2025-03-18 19:08 - Mats Fernström

- Attachment Preliminary analysis.xlsx added

Mats Fernström, the National Board of Health and Welfare, Sweden, 2025-03-18 (SWE ID C926)

We have done a rough analysis to see how the number of secondary diagnoses with CC property affects the costs of care, see the Excel file "Preliminary analysis".

The sheet "General summary" indicates that there must be at least three secondary diagnoses with CC property to make the episode as expensive as an MCC DRG. However, it is not possible to use this simple method by just counting number of diagnoses with CC property in the grouping logic, because the figures can differ from DRG to DRG, as you can see in the sheet "Summary per DRG in MDC 01".

I think that we must go on with a much deeper analysis and try to find out what combinations of complication categories (DGCAT values) that will increase the costs so much that the episode should be grouped to a MCC DRG instead of a CC DRG.

Sweden will try to do such an analysis because I think that we are the only nation that uses DRGs of the type MCC (very complicated) all over. This much deeper analysis will take months to do.

#4977 - 2025-03-24 11:00 - Kristiina Kahur

Nordic Casemix Centre/Kristiina Kahur 2025-03-24

Thank you for the preliminary analysis.

As mentioned earlier, Australian approach can be used as a reference or at least have a look at how they use the secondary diagnosis codes to determine the complexity level of each DRG depending on the secondary diagnoses codes *per* episode.

Looking forward to seeing the results of the further analysis.

#5134 - 2025-09-04 07:05 - Kristiina Kahur

2025-09-02 Expert group

This case was discussed during EG meeting. Currently MCC level DRGs are used in Sweden and Finland, very few in Estonia and Latvia and no MCC DRGs in Iceland and Norway.

There have not been any further updates from Sweden due to complexity of this issue.

This case will remain active for further updates.

Files

Preliminary analysis.xlsx	20 MB	2025-03-18	Mats Fernström
ar-drg_v11.0_technical_specifications_final.docx	1 MB	2025-01-22	Kristiina Kahur
Cost_number_dx.xlsx	20 kB	2022-10-04	Kristiina Kahur