

Nordic Casemix Centre - Case

#1013 - Use of PROCPR 99S90 Extensive procedure

2026-04-29 10:11 - Kristiina Kahur

Status:	Active	Start date:	2026-04-29
Priority:	Normal	Spent time:	0.00 h
Assignee:			
Category:			
Initiator:	Nordic Casemix Centre	Target year:	2028
MDC:	GEN	Owner / responsible:	Nordic Casemix Centre
Target Grouper:	Combined		

Description

This case concerns PROCPR 99S90 *Extensive procedure - list created during the exporting process* and how it is used across all national versions.

Use of PROCPR 99S90 was reviewed both from a clinical perspective and from the perspective of cross-country differences.

There is no clear definition of "extensive procedure". However, in casemix or DRG context one could define it as a procedure with high resource intensity that significantly increase expected costs, length of stay, complexity, and clinical risk. Its role is primarily grouping logic, not clinical description.

In the NordDRG system, PROCPR 99S90 is used to identify extensive procedures and, on that basis, to allow grouping to DRG 468/X *Rare or incorrect combination of diagnosis and extensive procedure/X*. This distinction is necessary to separate cases that are not considered extensive, which are instead grouped to DRG 477/X *Rare or incorrect combination of diagnosis and other procedures/X*.

In addition, PROCPR 99S90 is used in the rules of following DRGs:

drg_comb	drg_text_comb	nat_ver
442X	Other OR procedures for injuries, w CC	est/lat/ice/fin/nor
443M	Other major OR procedures after injuries, w MCC	swe
443C	Other major OR procedures in general anaesthesia for injuries, w CC	swe
443N	Other major OR procedures in general anaesthesia for injuries, w/o CC	swe
443X	Other OR procedures for injuries, w/o CC	est/lat/ice/fin/nor

PROCPR 99S90 with minus (-) sing is not used in any DRG rules (minus sign is used in case to avoid grouping of case with a procedure code having PROCPR 99S90).

After having a look at the used on PROCPR 99S90, here are some observations:

1. There are procedure codes which are having OR value 0 or 2, yet having PROCPR 99S90. The codes are as follows:

code_plus	text_plus	or_val	nat_ver*
JCSE35	Laposcopic operation on oesophageal atresia or congenital tracheo-oesophageal fistula	0	nor
NHSQ60	Revision of amputation or exarticulation of ankle or foot	0	ice/fin
FKSC61	Repair of mitral valve insufficiency by a transluminally inserted clip	2	fin/est
NAO10D	Termokoagulasjon i kolumna, CT-veiledet	2	nor
NAXA00	Heat coagulation of vertebral lesion	2	ice/fin/nor
NAXT60	Manipulation of the spine	2	ice/fin

*As Norwegian version is primarily maintained by Helsedirektoratet, there can be differences between the tables maintained in NDMS and HS.

2. There are cross-country differences among some codes:

code_plus	text_plus	or_val	nat_ver	Comment
LESF03	Posterior colporrhaphy	1	est/lat/ice/fin/nor	Not used in SWE version
LESF10	Colpoperineoplasty	1	est/lat/ice/fin/nor	Not used in SWE version
FZSA00	Total cardiopulmonary bypass in normothermia or moderate hypothermia at concurrent surgical procedure	1	swe	Used only in SWE version
KKSB11	Percutaneous endoscopic excision of retroperitoneal tumour	1	swe	Used only in SWE version
LESF40	Vaginal repair of enterocele	1	swe	Used only in SWE version
LESF41	Laparoscopic repair of enterocele	1	swe	Used only in SWE version
ZTXA40	Graft of synthetic skin substitute	1	swe	Used only in SWE version

Things to consider:

1. remove PROCPR 99S90 from procedure codes with OR 0 or 2, or change the OR value of procedure codes.
2. harmonise the use of PROCPR 99S90 across countries, based on the principle that identical procedure codes are interpreted consistently regardless of country, whether as "extensive" or "non-extensive".
3. Revise all procedure codes from PROCPR 99S90 perspective (see attached a table of procedure plus codes with PROCPR 99S90 in 2027PL0 version).
4. Given that PROCPR text *Extensive procedure - list created during the exporting process* was used during the transition of definition tables from FoxPro to NDMS in 2018, I suggest to change the text: *Extensive procedure - list created during the exporting process* -> *Extensive procedure*.

This case is meant to be discussed in next EG Spring meeting. Any comments or views on this issue are welcome any time.

History

#5433 - 2026-05-12 08:20 - Kristiina Kahur

- Description updated

#5436 - 2026-05-12 18:28 - Mats Fernström

Mats Fernström, the National Board of Health and Welfare, Sweden, 2026-05-12 (SWE ID C1078)

Thank you Kristiina for raising the issue with PROCPR 99S90. I've been thinking about it for years without doing anything, mostly because 99S90 has the low impact on the grouping that you describe.

It was Martti and I who many years ago invented the principle to automatically add 99S90 to certain PROCPR values and then we mostly selected the PROCPR values with the lowest numbers for all MDCs (except 18 and 23). It was somewhat of a "Quick and dirty" principle because none of us had time and energy to assess all thousands of operation codes.

The principle has worked OK in Sweden, I think, however not automated in our tool, NordDRG Admin. At least there has been no complaints from our NordDRG users, which can also be explained by the fact that 99S90 is involved in very few grouping rules. However, looking at the list of procedure codes with 99S90, there are some codes where 99S90 can be questioned.

The Swedish DRG team suggests the following:

The principle to attach 99S90 to certain fixed PROCPR values, and just those, gives us **less flexibility if we want to change the grouping logic in the future**. That is the main reason why we from now on, when new procedure codes are added to NordDRG, should abandon the principle that some PROCPRs automatically render 99S90. Instead, **all new codes should be assessed individually regarding 99S90** (#00 0000 00000000 0000 0000 methods). Therefore, we agree to change the text for 99S90 to just "Extensive procedure".

So far, existing codes with 99S90 may in principle keep that property since the system has worked OK, but some revision should be done:

- Having codes with 99S90 but without OR 1 is contradictory, existing codes with 99S90 should have OR 1. If OR 1 is not appropriate for some reason, 99S90 should be removed. This can be seen as "errors to be corrected".
- Existing codes that are missing 99S90 according to the old principle based on certain PROCPR values (7 codes in SWE version) should be assessed individually regarding 99S90 (see further down about methods).
- Further revisions: For example, percutaneous measures (about 90 codes) should be reviewed. (*We doubt that someone in the EG wants to*

review all the approximately 1 900 codes with 99S90).

Methodological aspects when assessing whether a procedure should have 99S90 or not

- We must consider costs for the whole hospital stay, not only for the operation. Even a moderately large operation can sometimes entail large costs for the whole stay. And costs are more important than medical complexity in this context, because the difference between DRG Z50/468 and Z60/477 is mainly the DRG weight, which is based on costs.
- If the cost for hospital stay with a certain procedure is known, it can be compared with the average costs for DRG Z50/468 and Z60/477. If the cost is closer to the cost for DRG Z50/468 than the cost for DRG Z60/477, then 99S90 can be added to that procedure.
- If the cost for hospital stay with a new procedure is unknown, we can look for similar procedures in the system and copy the judgement concerning 99S90.
- If the alternative above isn't possible, i.e. it is a completely new procedure without known or estimated costs, 99S90 cannot be added to that procedure. The decision about 99S90 must wait until we have cost data.

Files

Procedure_codes_with_PROCPR_99S90 (2027PL0).xlsx	100 kB	2026-04-29	Kristiina Kahur
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