

PROPOSALS FOR A FURTHER EXPANSION OF DAY SURGERY IN BELGIUM

SUPPLEMENT



PROPOSALS FOR A FURTHER EXPANSION OF DAY SURGERY IN BELGIUM SUPPLEMENT

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Acknowledgements:

Piet Calcoen (DKV Belgium), François Château (Cliniques Universitaires Saint-Luc, Bruxelles), Sam Cordyn (Wit-Gele Kruis van Vlaanderen), Stephan Devriese (KCE), Nicolas Fairon (KCE), Yves Genot (Cliniques Universitaires Saint-Luc, Bruxelles), Isabelle Hirtzlin (Université Paris 1), Laurence Kohn (KCE), Pierre Luysmans (UZ Leuven), Pierre Mahy (Cliniques Universitaires Saint-Luc, Bruxelles), Benoît Navez (Cliniques Universitaires Saint-Luc, Bruxelles), Christian Raftopoulos (Cliniques Universitaires Saint-Luc, Bruxelles), Bruno Ruebens (Nationaal Verbond Socialistische Mutualiteiten), Walter Sermeus (KU Leuven), Kirsten Stulens (Ethias), Daniel Sutcliffe (NHS England), Olena Talavera (NHS England), Melissa Thirion (Assuralia), Ellen Tratsaert (AG Insurance), Valérie Van Heeschvelde (Verzekeringen CM-Vlaanderen), Gigi Veereman (KCE), Leen Verleye (KCE)

Other reported interests:

All experts and stakeholders consulted within the frame of this report were selected because of their involvement in day surgery in Belgium. Therefore, by definition, they all have a certain degree of conflict of interest to the main topic of this report.

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- The external experts were consulted about a (preliminary) version of the scientific report. Their comments were discussed during meetings. They did not co-author the scientific report and did not necessarily agree with its content.
- Subsequently, a (final) version was submitted to the validators. The validation of the report results from a consensus or a voting process between the validators. The validators did not co-author the scientific report and did not necessarily all three agree with its content.
- Finally, this report has been approved by common assent by the Executive Board (see <http://kce.fgov.be/content/the-board>).
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Publication date: 31 March 2017
Domain: Health Services Research (HSR)
MeSH: Ambulatory surgical procedures; Belgium; Health Service Research; "Delivery of health care"
NLM Classification: WO 192 Ambulatory Surgical Procedures
Language: English
Format: Adobe® PDF™ (A4)
Legal depot: D/2017/10.273/10
ISSN: 2466-6459
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How to refer to this document?

Leroy R, Camberlin C, Lefèvre M, Mistiaen P, Van den Heede K, Van de Sande S, Van de Voorde C, Beguin C. Proposals for a further expansion of day surgery in Belgium – Supplement. Health Services Research (HSR) Brussels: Belgian Health Care Knowledge Centre (KCE). 2017. KCE Reports 282S. D/2017/10.273/10.

This document is available on the website of the Belgian Health Care Knowledge Centre.



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1. OECD DEFINITIONS

Surgical procedures are medical interventions involving an incision with instruments usually performed in an operating theatre and normally involving anaesthesia and/or respiratory assistance. Surgical procedures can be performed either as inpatient cases, day cases or, in certain instances, as outpatient cases. Procedures performed on an inpatient case and day case should be reported for all the procedures on the shortlist. For two procedures (i.e. cataract surgery and tonsillectomy) the number of outpatient cases in hospitals and outside hospitals should also be reported where possible.¹

Note: The method to count procedures should be based on a count of the number of patients who have received a given procedure or on a count of only one code per procedure category for each patient, in order to avoid double-counting procedures for which more than one code may be used in certain national classification systems. (For example, if a percutaneous coronary intervention with a coronary stenting is recorded as two separate codes, it should be reported as only one patient/procedure. Another example: if a cataract surgery is performed on the two eyes, only one patient/procedure should be counted. However, if a patient gets the same procedure at two different moments in a given year, then this procedure should be counted twice.)

An **inpatient discharge** is the release of a patient who was formally admitted into a hospital for treatment and/or care and who stayed for a minimum of one night.

A **day-care discharge** is the release of a patient who was formally admitted in a hospital for receiving planned medical and paramedical services, and who was discharged on the same day.

Outpatient cases (collected only for cataract surgery and tonsillectomy) are patients who had a procedure but who was not formally admitted in hospital or in any other health care facility.¹



2. NOMENCLATURE CODES INCLUDED IN GROUP 1-7 NOMINATIVE LISTS

Group 1	Group 2	Group 3	Group 4	Group 5
256874 - 256885	212111 - 212122	453154 - 453165	149170 - 149181	230252 - 230263
257294 - 257305	244370 - 244381	453176 - 453180	251591 - 251602	232094 - 232105
257316 - 257320	355751 - 355762	453235 - 453246	423010 - 423021	275273 - 275284
260271 - 260282	355950 - 355961	453272 - 453283	470013 - 470024	275892 - 275903
260293 - 260304	451813 - 451824	453294 - 453305	470271 - 470282	275936 - 275940
312336 - 312340	451894 - 451905	453316 - 453320	474331 - 474342	276290 - 276301
312351 - 312362	462814 - 462825	453552 - 453563	474655 - 474666	276312 - 276323
312373 - 312384	462895 - 462906	453574 - 453585		277756 - 277760
312395 - 312406	471811 - 471822	453596 - 453600		277771 - 277782
471715 - 471726	472091 - 472102	454016 - 454020		278530 - 278541
471730 - 471741	472172 - 472183	454031 - 454042		278552 - 278563
471752 - 471763	473174 - 473185	454053 - 454064		278574 - 278585
476652 - 476663	473211 - 473222	454075 - 454086		278596 - 278600
	473270 - 473281	464155 - 464166		278611 - 278622
	473292 - 473303	464170 - 464181		278633 - 278644
	473432 - 473443	464192 - 464203		278655 - 278666
	473535 - 473546	464236 - 464240		278714 - 278725
	473690 - 473701	464273 - 464284		278736 - 278740
	473712 - 473723	464295 - 464306		278751 - 278762
		464310 - 464421		278773 - 278784
		465010 - 465021		278795 - 278806
		465032 - 465043		278810 - 278821
		465054 - 465065		278854 - 278865
		465076 - 465080		280512 - 280523
		476276 - 476280		287276 - 287280
		476291 - 476302		287291 - 287302
		589013 - 589024		287733 - 287744
		589050 - 589061		288072 - 288083
		589131 - 589142		293414 - 293425
		589153 - 589164		471796 - 471800
		589212 - 589223		
		589374 - 589385		



Group 6		Group 7
220253 - 220264	292132 - 292143	148072 - 148083
227113 - 227124	293333 - 293344	212214 - 212225
238092 - 238103	294630 - 294641	220091 - 220102
238136 - 238140	294652 - 294663	220356 - 220360
238151 - 238162	294696 - 294700	227032 - 227043
241894 - 241905	300392 - 300403	256535 - 256546
244510 - 244521	300414 - 300425	256933 - 256944
244576 - 244580	310435 - 310446	257471 - 257482
244591 - 244602	310450 - 310461	258532 - 258543
251296 - 251300	311393 - 311404	260175 - 260186
251355 - 251366	311651 - 311662	260713 - 260724
251672 - 251683	312071 - 312082	261531 - 261542
253654 - 253665	312535 - 312546	261612 - 261623
254833 - 254844	422671	261811 - 261822
254855 - 254866	423673	262356 - 262360
256896 - 256900	424012 - 424023	262371 - 262382
258075 - 258086	424115 - 424126	276533 - 276544
260750 - 260761	431115 - 431126	287851 - 287862
261155 - 261166	431432 - 431443	300355 - 300366
275730 - 275741	431653 - 431664	310914 - 310925
276732 - 276743	432456 - 432460	311135 - 311146
277012 - 277023	589116 - 589120	311371 - 311382
277056 - 277760	589175 - 589186	311415 - 311426
277115 - 277126		312012 - 312023
277174 - 277185		312130 - 312141
277196 - 277200		355073 - 355084
277351 - 277362		431093 - 431104
279090 - 279101		431491 - 431502
279112 - 279123		431756 - 431760
280556 - 280560		432294 - 432305
280593 - 280604		432353 - 432364
280615 - 280626		532210 - 532221

Procedures in bold are operating room procedures; the interested reader can find the procedures corresponding with the nomenclature codes on <http://www.riziv.fgov.be/nl/toepassingen/Paginas/NomenSoft.aspx#.WKNHQmf2bIU>

Source: Appendix 1 of the National Agreement between hospitals and sickness funds.²



3. NOMENCLATURE CODES INCLUDED IN CHRONIC PAIN NOMINATIVE LISTS

Chronic pain 1	Chronic pain 2	Chronic pain 3
202355 - 202366	202370 - 202381	202812 - 202823
202392 - 202403	202414 - 202425	202834 - 202845
202716 - 202720	202436 - 202440	
202753 - 202764	202451 - 202462	
202775 - 202786	202473 - 202484	
	202495 - 202506	
	202510 - 202521	
	202532 - 202543	
	202576 - 202580	
	202591 - 202602	
	202635 - 202646	
	202650 - 202661	
	202694 - 202705	
	202731 - 202742	
	202790 - 202801	

The interested reader can find the procedures corresponding with the nomenclature codes on <http://www.riziv.fgov.be/nl/toepassingen/Paginas/NomenSoft.aspx#.WKNHQmf2bIU>.

Source: Appendix 2 of the National Agreement between hospitals and sickness funds.²



4. NOMENCLATURE CODES USED TO DEFINE REALISED DAY-CARE STAYS (LIST A)

Nomenclature codes included in List A					
220231	246595	256513	275553	280571	300311
220275	246610	256653	275656	280674	310354
220290	246632	256815	275671	280711	310376
220312	246654	256830	275693	280755	310391
220334	246676	256852	275715	280792	310413
221152	246772	257390	275752	284911	310575
228152	246831	257434	275811	285235	310715
229176	246912	257876	275833	285390	310774
230613	246934	257891	275855	285670	310796
232013	247575	257994	275951	285692	310811
232035	247590	258090	276275	285972	310855
235174	247612	258112	276334	287431	310951
238114	247634	258156	276356	287453	310973
238173	247656	258171	276371	287475	310995
238195	250176	258635	276452	287490	311312
238210	250191	258650	276474	287512	311334
241091	250213	258731	276496	287534	311452
241150	251274	260315	276511	287696	311835
241312	251311	260470	276555	287711	311990
241872	251370	260676	276636	287755	312314
241916	251650	260691	276776	287792	312410
241931	253153	260735	276931	287814	312432
244193	253234	260794	277034	287836	317214
244311	253256	260853	277093	291992	350512
244436	253551	260875	277152	292014	353253
244473	253573	260890	277211	292633	354056
244495	254752	260912	277233	292795	354351
244554	254774	260934	277270	292810	431056
244635	254796	260956	277476	292854	431071
245534	254811	261214	277616	293016	431513
245571	255172	261236	277631	293274	432191
245630	255194	262216	278390	293296	432213
245733	255231	262231	278832	293311	432316



245755	255253	275015	279451	293370	432434
245814	255695	275096	279473	294210	432692
245851	255894	275111	279495	294232	475996
245873	256115	275133	280055	294475	
246094	256130	275236	280070	294674	
246212	256174	275251	280092	294711	
246514	256314	275494	280136	300252	
246551	256336	275516	280151	300274	
246573	256491	275531	280534	300296	

The interested reader can find the procedures corresponding with the nomenclature codes on <http://www.riziv.fgov.be/nl/toepassingen/Paginas/NomenSoft.aspx#.WKNHQmf2bIU>.

Source: Article 9 of the Royal Decree of 12 October 2015.³



5. APR-DRGS USED TO DEFINE INAPPROPRIATE INPATIENT STAYS

Surgical and medical APR-DRGs used in the definition of inappropriate inpatient stays

026	Other nervous system & related procedures
073	Eye procedures except orbital
093	Sinus & mastoid procedures
097	Tonsil & adenoid procedures
098	Other ear, nose, mouth & throat procedures
114	<i>Dental & oral diseases & injuries</i>
115	<i>Other ear, nose, mouth, throat & cranial/facial diagnoses</i>
180	Other circulatory system procedures
226	Anal procedures
313	Knee & lower leg procedures except foot
314	Foot & toe procedures
315	Shoulder, upper arm & forearm procedures
316	Hand & wrist procedures
317	Tendon, muscle & other soft tissue procedures
320	Other musculoskeletal system & connective tissue procedures
361	Skin graft for skin & subcutaneous tissue diagnoses
364	Other skin, subcutaneous tissue & related procedures
446	Urethral & transurethral procedures
483	Testes & scrotal procedures
484	Other male reproductive system & related procedures
501	<i>Male reproductive system diagnoses except malignancy</i>
513	Uterine & adnexa procedures for non-malignancy except leiomyoma
517	Dilation & curettage for non-obstetric diagnoses
518	Other female reproductive system & related procedures
519	Uterine & adnexa procedures for leiomyoma
544	D&C, aspiration curettage or hysterotomy for obstetric diagnoses
850	Procedure with diagnosis of rehabilitation, after care or other contact with health care

Source: Article 22 (10°) of the Royal Decree of 8 January 2015⁴; APR-DRGs 114, 115 and 501 (indicated in italic) are medical APR-DRGs.



6. NOMENCLATURE CODES USED TO DEFINE INAPPROPRIATE INPATIENT STAYS (LIST B)

Nomenclature codes used in the definition of inappropriate inpatient stays (List B)				
220231 - 220242	250176 - 250180	260691 - 260702	286215 - 286226	293274 - 293285
220275 - 220286	250191 - 250202	260735 - 260746	286230 - 286241	293311 - 293322
220290 - 220301	251274 - 251285	260794 - 260805	286252 - 286263	293370 - 293381
220312 - 220323	251370 - 251381	260890 - 260901	286296 - 286300	294210 - 294221
220334 - 220345	253234 - 253245	260912 - 260923	287350 - 287361	294232 - 294243
221152 - 221163	253551 - 253562	260934 - 260945	287372 - 287383	294615 - 294626
230613 - 230624	253573 - 253584	260956 - 260960	287431 - 287442	294674 - 294685
232013 - 232024	253654 - 253665	261214 - 261225	287453 - 287464	294711 - 294722
232035 - 232046	254752 - 254763	261236 - 261240	287475 - 287486	300252 - 300263
238114 - 238125	254774 - 254785	262231 - 262242	287490 - 287501	300274 - 300285
238151 - 238162	254796 - 254800	280055 - 280066	287512 - 287523	300296 - 300300
238173 - 238184	254811 - 254822	280070 - 280081	287534 - 287545	300311 - 300322
238195 - 238206	255172 - 255183	280092 - 280103	287556 - 287560	300333 - 300344
238210 - 238221	255194 - 255205	280136 - 280140	287571 - 287582	310354 - 310365
241150 - 241161	255231 - 255242	280151 - 280162	287696 - 287700	310376 - 310380
244311 - 244322	255253 - 255264	280195 - 280206	287711 - 287722	310391 - 310402
244436 - 244440	255695 - 255706	280534 - 280545	287755 - 287766	310413 - 310424
244473 - 244484	255754 - 255765	280571 - 280582	287792 - 287803	310575 - 310586
244495 - 244506	255894 - 255905	280674 - 280685	287814 - 287825	310715 - 310726
244576 - 244580	256115 - 256126	280711 - 280722	287836 - 287840	310774 - 310785
244591 - 244602	256130 - 256141	280755 - 280766	288094 - 288105	310855 - 310866
244635 - 244646	256174 - 256185	280792 - 280803	288116 - 288120	310951 - 310962
245114 - 245125	256314 - 256325	284572 - 284583	291410 - 291421	310973 - 310984
245534 - 245545	256336 - 256340	284911 - 284922	291970 - 291981	310995 - 311006
245571 - 245582	256491 - 256502	285095 - 285106	291992 - 292003	311312 - 311323
245630 - 245641	256513 - 256524	285110 - 285121	292014 - 292025	311334 - 311345



Nomenclature codes used in the definition of inappropriate inpatient stays (List B)				
245733 - 245744	256653 - 256664	285235 - 285246	292633 - 292644	311452 - 311463
245755 - 245766	256815 - 256826	285375 - 285386	292736 - 292740	311835 - 311846
245770 - 245781	256830 - 256841	285390 - 285401	292773 - 292784	311990 - 312001
245792 - 245803	256852 - 256863	285434 - 285445	292810 - 292821	312314 - 312325
245814 - 245825	257390 - 257401	285456 - 285460	292832 - 292843	312410 - 312421
245851 - 245862	257434 - 257445	285471 - 285482	292891 - 292902	312432 - 312443
245873 - 245884	257876 - 257880	285574 - 285585	292935 - 292946	317214 - 317225
246094 - 246105	258090 - 258101	285670 - 285681	292972 - 292983	353253 - 353264
246514 - 246525	258112 - 258123	285692 - 285703	292994 - 293005	354056 - 354060
246551 - 246562	258156 - 258160	285810 - 285821	293016 - 293020	431056 - 431060
246573 - 246584	258171 - 258182	285832 - 285843	293053 - 293064	431071 - 431082
246595 - 246606	258635 - 258646	285935 - 285946	293075 - 293086	432191 - 432202
246610 - 246621	258731 - 258742	285972 - 285983	293134 - 293145	432213 - 432224
246632 - 246643	260175 - 260186	285994 - 286005	293156 - 293160	432294 - 432305
246676 - 246680	260315 - 260326	286112 - 286123	293230 - 293241	432316 - 432320
246831 - 246842	260676 - 260680	286134 - 286145	293252 - 293263	432434 - 432445
246853 - 246864				432692 - 432703

The interested reader can find the procedures corresponding with the nomenclature codes on <http://www.riziv.fgov.be/nl/toepassingen/Paginas/NomenSoft.aspx#.WKNHQmf2bIU>.

Source: Appendix 3 (6) of the Royal Decree of 26 December 2013.⁵



7. SEARCH STRATEGIES

Electronic reference databases: Medline (through OVID), EMBASE and the Cochrane Library

Table 1 – Search strategy Medline

Date	2016-02-12		
Database	Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) <1946 to Present>, Ovid MEDLINE(R) Daily Update <February 11, 2016>		
Search Strategy	#	Query	Results
	1	ambulatory surgical procedures/	10 498
	2	surgicenters/	1 815
	3	ambulatory surgery.ab,ti.	2 759
	4	outpatient surgery.ab,ti.	1 369
	5	outpatient surgeries.ab,ti.	63
	6	ambulatory surgeries.ab,ti.	41
	7	day surgeries.ab,ti.	35
	8	day surgery.ab,ti.	2 110
	9	day?care.ab,ti.	921
	10	surgicenters.ab,ti.	30
	11	day case surgery.ab,ti.	711
	12	same day surgery.ab,ti.	244
	13	"overnight stay".ab,ti.	338
	14	'single night'.ab,ti.	329
	15	'extended recovery'.ab,ti.	96
	16	outpatient? procedure?.ab,ti.	1 794
	17	ambulatory patient?.ab,ti.	4 076
	18	ambulatory procedure?.ab,ti.	293
	19	'short stay'.ab,ti.	1 593
	20	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19	22 754
	21	limit 20 to yr="2013 -Current"	2 698



22	remove duplicates from 21	2 670
23	limit 22 to systematic reviews	105
24	randomized controlled trial.pt.	406 810
25	controlled clinical trial.pt.	90 107
26	randomized.ti,ab.	360 295
27	placebo.ti,ab.	170 906
28	clinical trials as topic/	174 836
29	randomly.ti,ab.	242 834
30	trial?.ti.	197 222
31	24 or 25 or 26 or 27 or 28 or 29 or 30	1 017 904
32	exp animal/ not humans/	4 186 548
33	31 not 32	937 901
34	22 and 33	325
35	(ambulatory surgery or outpatient surgery or outpatient surgeries or ambulatory surgeries or day surgeries or day surgery or day?care or surgicenters or day case surgery or same day surgery or "overnight stay" or 'single night' or 'extended recovery' or outpatient? procedure? or ambulatory patient? or ambulatory procedure? or 'short stay').ti.	5 259
36	1 or 2 or 35	14 237
37	limit 36 to yr="2013 -Current"	1 300
38	remove duplicates from 37	1 285
39	38 not (23 or 34)	1 114

Results**Line 22: Systematic reviews 105****Line 34 : RCT 325****Line 39: Others 1 114**



Table 2 – Search strategy Embase

Date		2016-02-14	
Database	Embase		
Search Strategy	#	Query	Results
	1	'ambulatory surgery'/exp	1 1126
	2	'outpatient department'/exp/mj	12 588
	3	'ambulatory surgery':ti	1 803
	4	'outpatient surgery':ti	582
	5	'outpatient surgeries':ti	8
	6	'ambulatory surgeries':ti	5
	7	'day surgeries':ti	3
	8	'day surgery':ti	1 272
	9	'day care':ti OR 'daycare':ti	3 554
	10	surgicenters:ti	14
	11	'day case surgery':ti	365
	12	'same day surgery':ti	101
	13	'overnight stay':ti	45
	14	'single night':ti	53
	15	'extended recovery':ti	11
	16	'outpatient procedure':ti OR 'outpatient procedures':ti OR 'outpatients procedure':ti OR 'outpatients procedures':ti	280
	17	'ambulatory patient':ti OR 'ambulatory patients':ti	1 381
	18	'ambulatory procedure':ti OR 'ambulatory procedures':ti	45
	19	'short stay':ti	644
	20	#1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19	29 625
	21	#20 AND [2013-2016]/py	3121
	22	#21 AND ('meta-analysis'/exp OR 'meta-analysis' OR 'systematic review'/exp OR 'systematic review')	70
	23	#22 NOT [medline]/lim	29
	24	#21 AND (random*:ab,ti OR placebo*:de,ab,ti OR (double NEXT/1 blind*):ab,ti)	329
	25	#24 NOT ([medline]/lim OR [conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim)	80



26	'patient selection'/exp	73 009
27	'patient selection':ab,ti	23 733
28	eligibility:ab,ti	27 543
29	'patient characteristics':ab,ti	33 468
30	screening:ab,ti	500 095
31	#26 OR #27 OR #28 OR #29 OR #30	635 734
32	#21 AND #31	258
33	#32 NOT [medline]/lim	146
34	#33 NOT ([conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim)	52
35	#21 NOT [medline]/lim	1 687
36	#35 NOT ([conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim)	678

Results	Line : SR	
	Line : RCT	
	Line : Others	678



Table 3 – Search strategy Cochrane

Date		2016-02-14	
Database	Cochrane Database of Systematic Reviews		
Search Strategy	#	Query	Results
	#1	[mh "ambulatory surgical procedures"]	1 534
	#2	[mh surgicenters]	7
	#3	"ambulatory surgery":ab,ti	401
	#4	"outpatient surgery":ab,ti	261
	#5	"outpatient surgeries":ab,ti	8
	#6	"ambulatory surgeries":ab,ti	10
	#7	"day surgeries":ab,ti	2
	#8	"day surgery":ab,ti	399
	#9	daycare:ab,ti or "day care":ab,ti	738
	#10	surgicenter*:ab,ti	5
	#11	"day case surgery":ab,ti	190
	#12	"same day surgery":ab,ti	39
	#13	"overnight stay":ab,ti	62
	#14	"single night":ab,ti	125
	#15	"extended recovery":ab,ti	13
	#16	"outpatient procedure":ab,ti or "outpatient procedures":ab,ti or "outpatients procedure":ab,ti or "outpatients procedures":ab,ti	170
	#17	"ambulatory patient":ab,ti or "ambulatory patients":ab,ti	721
	#18	"ambulatory procedure":ab,ti or "ambulatory procedures":ab,ti	44
	#19	"short stay":ab,ti	117
	#20	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19	3 955
	#21	#1 or #2 or #3 or #4 or #5 or #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 Publication Year from 2013 to 2016	479
Results		CDSR: 24 NHSEED: 10 CENTRAL: 428 DARE: 8 HTA: 3	



8. LIST OF CONSULTED WEBSITES

Table 4 – List of consulted websites

Organism	URL
Agency for Healthcare Research and Quality	http://www.ahrq.gov/
Agency for Healthcare Research and Quality /Patient Safety Network	http://psnet.ahrq.gov/
Ambulatory Surgery Center Association	http://www.ascassociation.org/Home/
American Association for Accreditation of Ambulatory Surgery Facilities	http://www.aaaasf.org/
Belgian Association of Ambulatory Surgery	http://www.baas.be/fr/node/50
Blue Cross Blue Shield Association -Technology Evaluation Center	http://www.bcbs.com/
British Association of Day Surgery	http://daysurgeryuk.net/en/home/
Centers for Disease Control and Prevention	http://www.cdc.gov/
Centre for Review and Dissemination databases	http://www.york.ac.uk/inst/crd/
DaySafe	http://www.daysafe.eu/
Dutch Association of Day Care & Short Stay	http://www.nvdk.nl/
ECRI Institute	http://www.ecri.org/
GIN (Guidelines International Network)	http://www.g-i-n.net/
Haute Autorité de Santé	http://www.has-sante.fr/
King's Fund	http://www.kingsfund.org.uk/
Institute for Clinical Systems Improvement	http://www.icsi.org/
International Association for Ambulatory Surgery	http://www.iaas-med.com/
National Institute for Health and Care Excellence	http://www.nice.org.uk/
RAND Corporation	http://www.rand.org/topics/health-and-health-care.html
Scottish Intercollegiate Guidelines Network	http://www.sign.ac.uk/guidelines/published/index.html#Surgery
Agency for Healthcare Research and Quality	http://www.ahrq.gov/
Agency for Healthcare Research and Quality /Patient Safety Network	http://psnet.ahrq.gov/



Organism	URL
Ambulatory Surgery Center Association	http://www.ascassociation.org/Home/
American Association for Accreditation of Ambulatory Surgery Facilities	http://www.aaaasf.org/
Association belge pour la chirurgie ambulatoire	http://www.baas.be/fr/node/50
Blue Cross Blue Shield Association -Technology Evaluation Center	http://www.bcbs.com/
British Association of Day Surgery	http://daysurgeryuk.net/en/home/
Centers for Disease Control and Prevention	http://www.cdc.gov/
Centre for Review and Dissemination databases	http://www.york.ac.uk/inst/crd/



9. STUDY SELECTION – RESEARCH QUESTION 1

Table 5 – Review excluded based on full-text evaluation

Subcategory	Reference	Reason(s) for exclusion
RQ1	Whitley DR. Integrative Literature Review: Ascertaining Discharge Readiness for Pediatrics After Anesthesia J Perianesth Nurs 2016;31(1):23-35.	No outcomes of interest

Table 6 – Primary studies excluded based on full-text evaluation

Subcategory	Reference	Reason(s) for exclusion
RQ1	Bryson GL, et al. Patient and caregiver experience following ambulatory surgery: qualitative analysis in a cohort of patients 65 yr and older. Can J Anaesth 2014;61(11):986-94	Non-comparative study with n<1000
RQ1	Bryson GL, et al. Patient function and caregiver burden after ambulatory surgery: a cohort study of patients older than 65. Can J Anaesth 2013;60(9):864-73	Non-comparative study with n<1000
RQ1	Neville A, et al. How long is too long? Recovery time of outpatients with sleep apnea after procedural sedation. Gastroenterol Nurs 2013;36(4):260-4.	Non-comparative study with n<1000; no outcomes of interest
RQ1	Polderman JA, et al. Hyperglycemia and ambulatory surgery. Minerva Anesthesiol 2015;81(9):951-9	Non-comparative study with n<1000; no outcomes of interest



10. QUALITY ASSESSMENT

10.1. Quality appraisal tools

10.1.1. Systematic reviews

AMSTAR criteria were used to assess systematic reviews (Table 7).

Table 7 – AMSTAR checklist

Question	Answer
1. Was an 'a priori' design provided? The research question and inclusion criteria should be established before the conduct of the review.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
2. Was there duplicate study selection and data extraction? There should be at least two independent data extractors and a consensus procedure for disagreements should be in place.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
3. Was a comprehensive literature search performed? At least two electronic sources should be searched. The report must include years and databases used (e.g. Central, EMBASE, and MEDLINE). Key words and/or MESH terms must be stated and where feasible the search strategy should be provided. All searches should be supplemented by consulting current contents, reviews, textbooks, specialized registers, or experts in the particular field of study, and by reviewing the references in the studies found.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
4. Was the status of publication (i.e. grey literature) used as an inclusion criterion? The authors should state that they searched for reports regardless of their publication type. The authors should state whether or not they excluded any reports (from the systematic review), based on their publication status, language etc.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
5. Was a list of studies (included and excluded) provided? A list of included and excluded studies should be provided.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Can't answer <input type="checkbox"/> Not applicable
6. Were the characteristics of the included studies provided?	<input type="checkbox"/> Yes



In an aggregated form such as a table, data from the original studies should be provided on the participants, interventions and outcomes. The ranges of characteristics in all the studies analyzed e.g. age, race, sex, relevant socioeconomic data, disease status, duration, severity, or other diseases should be reported.

- No
- Can't answer
- Not applicable

7. Was the scientific quality of the included studies assessed and documented?

'A priori' methods of assessment should be provided (e.g., for effectiveness studies if the author(s) chose to include only randomized, double-blind, placebo controlled studies, or allocation concealment as inclusion criteria); for other types of studies alternative items will be relevant.

- Yes
- No
- Can't answer
- Not applicable

8. Was the scientific quality of the included studies used appropriately in formulating conclusions?

The results of the methodological rigor and scientific quality should be considered in the analysis and the conclusions of the review, and explicitly stated in formulating recommendations.

- Yes
- No
- Can't answer
- Not applicable

9. Were the methods used to combine the findings of studies appropriate?

For the pooled results, a test should be done to ensure the studies were combinable, to assess their homogeneity (i.e. Chi-squared test for homogeneity, I^2). If heterogeneity exists a random effects model should be used and/or the clinical appropriateness of combining should be taken into consideration (i.e. is it sensible to combine?).

- Yes
- No
- Can't answer
- Not applicable

10. Was the likelihood of publication bias assessed?

An assessment of publication bias should include a combination of graphical aids (e.g., funnel plot, other available tests) and/or statistical tests (e.g., Egger regression test).

- Yes
- No
- Can't answer
- Not applicable

11. Was the conflict of interest stated?

Potential sources of support should be clearly acknowledged in both the systematic review and the included studies.

- Yes
 - No
 - Can't answer
 - Not applicable
-



10.1.2. Primary studies for therapeutic interventions

To assess risk of bias of randomised controlled trials, we used Cochrane Collaboration’s tool (Table 8). For the assessment of the quality of comparative observational studies the Cochrane Collaboration’s tool for assessing risk of bias was used as well, but with the addition of two extra items that account for the potential bias due to the selection of the study

cohorts or the lack of randomisation: ‘Concurrency of the intervention and comparator group’ and ‘Comparability of the intervention and comparator group’. For the first item low risk of bias was assigned if the participants in the intervention and comparator group were enrolled and followed-up concurrently (i.e. in parallel). For the second item low risk of bias was assigned in case of a matched study design and/or appropriate adjustment for confounders in the analysis.

Table 8 – Cochrane Collaboration’s tool for assessing risk of bias

Domain	Support for judgement	Review authors’ judgement
Selection bias		
Random sequence generation	Describe the method used to generate the allocation sequence in sufficient detail to allow an assessment of whether it should produce comparable groups	Selection bias (biased allocation to interventions) due to inadequate generation of a randomised sequence
Allocation concealment	Describe the method used to conceal the allocation sequence in sufficient detail to determine whether intervention allocations could have been foreseen in advance of, or during, enrolment	Selection bias (biased allocation to interventions) due to inadequate concealment of allocations prior to assignment
Performance bias		
Blinding of participants and personnel Assessments should be made for each main outcome (or class of outcomes)	Describe all measures used, if any, to blind study participants and personnel from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective	Performance bias due to knowledge of the allocated interventions by participants and personnel during the study
Detection bias		
Blinding of outcome assessment Assessments should be made for each main outcome (or class of outcomes)	Describe all measures used, if any, to blind outcome assessors from knowledge of which intervention a participant received. Provide any information relating to whether the intended blinding was effective	Detection bias due to knowledge of the allocated interventions by outcome assessors
Attrition bias		
Incomplete outcome data Assessments should be made for each main outcome (or class of outcomes)	Describe the completeness of outcome data for each main outcome, including attrition and exclusions from the analysis. State whether attrition and exclusions were reported, the numbers in each intervention group (compared with total randomized participants), reasons for attrition/exclusions where reported, and any reinclusions in analyses performed by the review authors	Attrition bias due to amount, nature or handling of incomplete outcome data



Domain	Support for judgement	Review authors' judgement
Reporting bias		
Selective reporting	State how the possibility of selective outcome reporting was examined by the review authors, and what was found	Reporting bias due to selective outcome reporting
Other bias		
Other sources of bias	State any important concerns about bias not addressed in the other domains in the tool If particular questions/entries were prespecified in the review's protocol, responses should be provided for each question/entry	Bias due to problems not covered elsewhere in the table

10.2. Quality appraisal

10.2.1. Systematic reviews

Research question 1

Table 9 – Methodological quality of the included systematic reviews (AMSTAR)

Systematic review	A priori study design	Duplicate study selection and data extraction	Comprehensive literature search	Publication status not used as inclusion criterion	List of in- and excluded studies	Characteristics of included studies provided	Study quality assessed and documented	Quality assessment used in conclusions	Appropriate methods to combine findings	Likelihood of publication bias assessed	Conflict of interest stated
Has & ANAP, 2014	Y	N	Y	Y	N	Y	Y	Y	NA	N	+/-*
Joshi et al., 2013	Y	Y	Y	Y	N	Y	?§	N	NA	N	+/-*
Joshi et al., 2012	Y	Y	Y	Y	N	Y	?§	N	NA	NA°	+/-*

NA: not applicable; °less than 10 included studies (per topic); * only for SR, not for primary studies; §: quality assessment not documented for each included study separately



11. EVIDENCE TABLES BY CLINICAL QUESTION

11.1. Research Question 1

11.1.1. Evidence tables of systematic reviews

11.1.1.1. Obesity

Table 10 – Obesity – Evidence table of systematic reviews

Joshi et al., 2013 ⁶	
Objectives	To inform practitioners of ambulatory anesthesia regarding the currently available knowledge and knowledge gaps as well as recommend future research required to guide optimal selection of obese patients scheduled for ambulatory surgery.
Methods	
Design	Systematic literature review
Source of funding and competing interest	No external funding was provided from any source
Search date/period	May 2012 (cf. infra)
Searched databases	Cochrane CENTRAL Register of Controlled Trials (May 2012), Cochrane Database of Systematic Reviews (2005–May 2012), MEDLINE (1948–May 2012) and EMBASE (1980–May 2012)
Included study designs	All randomized controlled trials, prospective observational trials, and retrospective trials if they reported intraoperative complications, postoperative complications, hospital admission, and mortality rates in adult obese patients undergoing ambulatory surgery.
Number of included studies	24 studies: <ul style="list-style-type: none"> • 1 systematic review assessing laparoscopic bariatric surgery • 13 prospective cohort studies • 10 retrospective chart reviews
Critical assessment	Included studies were graded for strength of evidence according to the Scottish Intercollegiate Guideline Network (SIGN) scale ⁷
Analysis of data	Descriptive; no meta-analysis of the results was performed 'because the included studies were too heterogeneous'
Patient characteristics	
	Adult obese patients (for more detailed patient characteristics of included studies the reader is referred to Tables 1 & 3 of the Joshi et al., 2013 publication)



Joshi et al., 2013⁶

Interventions

A wide variety of ambulatory surgical procedures and anaesthetic techniques ranging from sedation/analgesia to general anaesthesia with or without regional analgesia were included in the assessed trials (Table 2 and 4).

(for more detailed intervention details the reader is referred to Tables 2 & 4 of the Joshi et al., 2013 publication)

Results

Clinical effectiveness

Recurrence rate Not reported

Reoperation rate Not reported

Quality of life Not reported

Adverse Events

Unanticipated admissions to hospital/prolonged hospital stay Overall: no differences between the obese and non-obese cohorts

- Laparoscopic adjustable gastric banding (LAGB; 1 RCT and 5 cohort studies included in the SR):
 - 15 of 2549 (0.59%) patients had to be admitted
 - Common causes: pain, nausea, and dysphagia
- Two large studies (n>5000) that included a variety of non-bariatric surgical population receiving a variety of anaesthetic techniques:
 - Obesity is not a predictor of unplanned admission

Readmissions (after discharge home) Overall: not stated precisely

Visits to emergency room/department Not reported

Complications Overall: not stated precisely

- Some of the included studies:
 - in the obese: statistically significantly higher incidence in respiratory events (e.g. oxygen desaturation, bronchospasm, stridor/laryngospasm, airway obstruction, and need for oxygen supplementation) and increased airway complications
 - Cave:
 - these studies did not report an increase in unanticipated admission rate in the obese, hence clinical relevance can be questioned
 - not all studies reported comorbidities for two groups separately

Mortality Overall: not stated precisely

Limitations and other comments

Limitations

- Quality assessment not documented for each included study separately
- As none of the included studies were randomised, the results should be interpreted with caution since selection bias cannot be ruled out in observational studies.



Joshi et al., 2013⁶

- It is unclear if and in which way the difference in comorbidities between groups (non-obese vs. obese patients) were taken into account (as confounding factor) in the report of clinical effectiveness and adverse events.
- Within the frame of the present report: it would have been more informative if clinical effectiveness and adverse events had been assessed in obese patients undergoing elective surgery in the inpatient setting compared to the day care setting.
- Most studies included in the systematic review were performed in North America and may not reflect practices in other geographic areas.
- Only studies in English were included.

11.1.2. Evidence tables of primary studies

11.1.2.1. Malignant hyperthermia

Table 11 – Malignant hyperthermia - Evidence table of primary studies

Lu et al., 2016⁸

Objective	To estimate the prevalence of MH diagnosis and characterize factors associated with MH diagnosis recorded in a large sample of ASC discharges.
Methods	
Design	Retrospective cohort study
Source of funding and competing interest	<ul style="list-style-type: none"> • This study was supported in part by the Malignant Hyperthermia Association of the United States, Sherburne, NY, and by Grant 1 R49 CE002096 from the National Center for Injury Prevention and Control, Centers for Disease Control and Prevention to the Center for Injury Epidemiology and Prevention at Columbia University. • The 2nd author reported a conflict of interest with Eagle Pharmaceuticals (Woodcliff Lakes, NJ) and received a 1-time speaking fee from Eagle Pharmaceuticals, a company that manufactures Ryanodex, a concentrated formulation of dantrolene approved for the treatment of malignant hyperthermia. The other authors declared no conflicts of interest.
Setting	The 2002 – 2011 Healthcare Cost and Utilization Project (HCUP) State Ambulatory Surgery Databases (SASD) for New York State, which contains the New York State’s ambulatory surgery discharge records (hospital owned and non hospital-owned facilities)
Sample size	17 092 765 discharges
Duration and follow-up	NA
Statistical analysis	X ² test and Fisher exact test
Patient characteristics	
Eligibility criteria	<ul style="list-style-type: none"> • All ambulatory surgery centres (ASC) discharges in New York State from 2002 through 2011



Lu et al., 2016^b

Exclusion criteria	<ul style="list-style-type: none"> • None specified
Patient & disease characteristics	<ul style="list-style-type: none"> • Age in years: <ul style="list-style-type: none"> ○ <18: 7.1% ○ 18-44: 25.1% ○ 45-64: 38.0% ○ ≥65: 29.3% • Gender: female: 42.5% • Charlson-Deyo Comorbidity index^a (ICD-9-CM codes in the database were converted into Charlson-Deyo Comorbidity scores): <ul style="list-style-type: none"> ○ Score 0 (no comorbidities): 89% ○ Score ≥1: 11% • Anaesthesia^b: <ul style="list-style-type: none"> ○ General anaesthesia: 27.1% ○ Other anaesthesia: 45.1% ○ No anaesthesia: 21.2%

Interventions	
Both groups	Not specified
Results	
Clinical effectiveness	
Reoperation rate	NA
Quality of life	NA
Adverse Events	

^a The Charlson comorbidity index predicts the ten-year mortality for a patient who may have a range of comorbid conditions. Each condition is assigned a score of 1, 2, 3, or 6, depending on the risk of dying associated with each one. Then scores are summed to provide a total score to predict mortality.

Scores and associated clinical conditions:

1 each: Myocardial infarct, congestive heart failure, peripheral vascular disease, dementia, cerebrovascular disease, chronic lung disease, connective tissue disease, ulcer, chronic liver disease, diabetes.

2 each: Hemiplegia, moderate or severe kidney disease, diabetes with end organ damage, tumour, leukaemia, lymphoma.

3 each: Moderate or severe liver disease.

6 each: Malignant tumour, metastasis, AIDS.

Many variations of the Charlson comorbidity index have been presented, including the Charlson-Deyo index.

^b For 6.6% of discharges information on exposure to anaesthesia was missing.

**Lu et al., 2016⁸**

Unanticipated admissions to hospital/prolonged hospital stay Not reported

Readmissions (after discharge home) Not reported

Visits to emergency room/department Not reported

Complications • Malignant hyperthermia: 31/ 17 092 765 discharges (i.e. 0.18 per 100 000 discharges (95% CI: 0.12–0.25))

Mortality Not reported

Limitations and other comments**Limitations**

- Retrospective analysis of administrative datasets prohibits examination and incorporation of factors other than those provided in the dataset. More precisely, the database did not contain variables that would allow to distinguish incident MH events from visits where patients have a family history of MH or documented MH susceptibility.
- The accuracy and completeness of malignant hyperthermia diagnosis and coding may have varied across facilities.
- The prevalence of malignant hyperthermia reported in the study was based on the number of ambulatory surgery discharges, rather than unique individual patients.
- Malignant hyperthermia patients who were transferred from other health care facilities and died in the emergency room before admission to the hospital were not included in the database.

NA: not applicable



11.1.2.2. Obstructive sleep apnoea

Table 12 – OSA - Evidence tables of primary studies

Rotenberg et al., 2015 ⁹	
Objective	To examine the respiratory complication rate following OSA surgery and identify which patients benefit from monitoring after surgery
Methods	
Design	Prospective observational cohort study
Source of funding and competing interest	<ul style="list-style-type: none"> Supported by an Academic Medical Organization of Southwestern Ontario (AMOSO) Innovation Fund grant from the Province of Ontario. The authors declare they have no other funding, financial relationships, or conflicts of interest to disclose.
Setting	St. Joseph's Health Centre (London, Ontario), a tertiary care academic teaching centre
Sample size	n=50 consecutive patients, 39 males and 11 females <ul style="list-style-type: none"> same day discharge group: n= 39 admitted group: n= 11
Duration and follow-up	June 2011 - September 2013
Statistical analysis	Student's t test, chi-square test, and the Pearson correlation
Patient characteristics	
Eligibility criteria	<ul style="list-style-type: none"> Any patient undergoing upper airway surgery (i.e. septoplasty ± turbinoplasty, palatal surgery ± tonsillectomy, and tongue-base radiofrequency ablation) specifically to treat OSA All patients had a preoperative level 1 polysomnographic sleep study (demonstrating at least mild sleep apnoea) performed within 1 year of the surgery.
Exclusion criteria	<ul style="list-style-type: none"> Patients who required postoperative hospital admission for reasons other than OSA Patients undergoing major tongue-base surgery (e.g. lingual tonsillectomy, submucosal resection) who would have had a risk of postoperative lingual swelling and resultant airway compromise, and hence requiring mandatory overnight observation Patients with cardiovascular comorbidities (resistant hypertension, heart failure, cor pulmonale, arrhythmia), and hence requiring mandatory overnight observation
Patient & disease characteristics	<ul style="list-style-type: none"> Mean age: 45.46 ± 12.4 y.o. Mean BMI: 30.46 ± 5.6 Mean preoperative apnoea hypopnoea index^c (AHI): 24.46 ± 12.2. Modal American Society of Anesthesiologists (ASA) physical status classification (see Scientific Report section 4.3.2.3): 2 (Note: 9 patients had ASA score 3 based on their OSA severity, no one had ASA score 4)

^c The apnoea-hypopnea index (AHI) is an average that represents the combined number of apnoea's and hypopnoea's that occur per hour of sleep (<http://www.aasmnet.org>).

**Rotenberg et al., 2015⁹****Interventions****Both groups**

- Surgeries performed:
 - 36 palatal procedures (uvulopalatal flap or expansion sphincteroplasty)
 - 15 tonsillectomies
 - 20 septoplasties
 - 1 turbinoplasties
 - 14 radiofrequency tongue-base ablations
- Note: 11 patients had more than one procedure during the same operation
- A decision regarding overnight hospitalization versus discharge was made in the recovery room, based on the St. Joseph's OSA Risk Tool (SORT)^d:
 - n= 39 (78%) were discharged the same day (mean AHI: 24.3)
 - n= 11 (22%) were admitted (mean AHI: 28.1); all had desaturations below 90% on room air within the PACU

Results**Clinical effectiveness**

Recurrence rate	NA
------------------------	----

Reoperation rate	NA
-------------------------	----

Quality of life	NA
------------------------	----

Adverse Events

Unanticipated admissions to hospital/prolonged hospital stay	• None reported
---	-----------------

Readmissions (after discharge home)	• In same day discharge group (n= 39): 0%
--	---

Visits to emergency room/department	Not reported
--	--------------

Complications

- Surgical complications:
 - In same day discharge group (n= 39): 0%
 - In admitted group (n= 11): 0%
- OSA specific complications:
 - In same day discharge group (n= 39): 0%
 - In admitted group (n= 11): 1 patient was given continuous positive airway pressure (CPAP) after surgery as a new prescription

^d St. Joseph's OSA Risk Tool (SORT): a patient is admitted for monitoring after OSA surgery if any of the following apply: 1) unable or unwilling to wear continuous positive-airway pressure appliance (CPAP) if planned to do so, 2) while breathing room air, evidence of witnessed apnea, oxygen desaturation to less than 90%, or airway obstruction, 3) unexpectedly complex narcotic analgesic requirements.



Rotenberg et al., 2015⁹

Mortality None reported

Limitations and other comments

- Limitations**
- Small sample
 - Sample probably not representative of the OSA population as a whole
 - Limited to OSA specific surgical interventions
 - No CI provided for the complication rate
 - Unclear how long after surgery complications etc. were recorded
 - No assessment of 30-day readmission rate or visits to the emergency room
 - No control group

NA: not applicable



Baugh et al., 2013¹⁰

Objective	Determine the safety experience of adult obstructive sleep apnea patients undergoing airway surgery
Methods	
Design	Retrospective cohort study
Source of funding and competing interest	<ul style="list-style-type: none"> Funding source: none The first author's son did a summer internship at Amerigroup Corporation^e and 2 authors are employed by Amerigroup Corporation.
Setting	Administrative claims database (January 1, 2009 - January 31, 2011)
Sample size	n=452 adult Medicaid managed care patients diagnosed on claims with OSA and subsequently undergoing nasal and/or pharyngeal surgery between January 1, 2009, and June 30, 2011 <ul style="list-style-type: none"> Inpatient (i.e. staying at least 1 full day): n= 48 (10.6%) patients Outpatient: n= 404 (89.4%) patients
Duration and follow-up	Cf. supra
Statistical analysis	Student's t test, chi-square test, and Wilcoxon rank-sum test
Patient characteristics	
Eligibility criteria	<ul style="list-style-type: none"> Any patient with OSA (based on claims data) and undergoing nasal and/or pharyngeal surgery within the study period.
Exclusion criteria	<ul style="list-style-type: none"> None reported
Patient & disease characteristics	<ul style="list-style-type: none"> Median age (IQR): outpatient: 33 (26-45) y.o. vs. inpatient: 32 (24-43.5) y.o.; p= 0.47 Male gender: outpatient: n= 144 (36%) vs. inpatient: n= 25 (52%); p= 0.03 Median (IQR) age-adjusted Charlson Index Score^a: 1 (0-1) vs. inpatient: 1 (0-2); p= 0.36
Interventions	
Both groups	Inconsistently reported (location of surgery (palatal or pharyngeal) and number of interventions)
Results	
Clinical effectiveness	
Recurrence rate	NA
Reoperation rate	NA
Quality of life	NA

^e Amerigroup is a United States health insurance and managed health care provider. Amerigroup covers 2.8 million members (seniors, people with disabilities, low-income families and other state and federally sponsored beneficiaries) in about a dozen states. (http://www.hoovers.com/company-information/cs/company-profile.AMERIGROUP_Corporation.a281ac2defcba085.html)



Adverse Events	
Unanticipated admissions to hospital/prolonged hospital stay	<ul style="list-style-type: none">• None reported
Readmissions (after discharge home)	<ul style="list-style-type: none">• Readmission 1-30 days after surgery: outpatient: n= 8 (2%) vs. inpatient: n= 1 (2%)
Visits to emergency room/department	<ul style="list-style-type: none">• ER visit 1-30 days after surgery: outpatient: n= 80 (20%) vs. inpatient: n= 8 (17%)
Visits to GP	<ul style="list-style-type: none">• GP visit 1-30 days after surgery: outpatient: n= 0% vs. inpatient: n= 0%
Complications	<ul style="list-style-type: none">• Any adverse event^f: outpatient: n= 87 (22%) vs. inpatient: n= 9 (19%)<ul style="list-style-type: none">○ Pain related: 51% of adverse events○ Surgery associated adverse event (i.e. dehydration): 2 patients
Mortality	None reported
Limitations and other comments	
Limitations	<ul style="list-style-type: none">• Inconsistencies between data reported in Table 2 and in the text• Limited information on patients' medical history• Absence of clinically relevant information (e.g. polysomnography study results, severity of sleep apnoea, preoperative hypoxemia levels, continuous positive airway pressure use before or after surgery, the presence or absence of nasal packing, weight gain or loss since the diagnosis of sleep apnoea, body mass index)• No information on surgeons' experience with the performed interventions• No information on anaesthesiologists' and recovery team's experience on day surgery• Unclear on what basis certain patients stayed overnight; unclear whether this was planned or whether it should be considered as an unanticipated admission• No control group

^f Any adverse event comprises any inpatient, any ER visit, 3 or more primary care physician visits, or any observation stay between 1 and 30 days following surgery.



11.1.2.3. Obesity

Table 13 – Obesity - Evidence table of primary studies

Rosero & Joshi, 2014 ¹¹	
Objective	To compare the overall characteristics and perioperative outcomes in morbidly obese and nonobese patients undergoing ambulatory surgery in the United States.
Methods	
Design	Retrospective chart review (according to the authors: propensity-matched cohort study)
Source of funding and competing interest	<ul style="list-style-type: none"> Supported by funds from the Department of Anesthesiology and Pain Management of the University of Texas Southwestern Medical Center, and by funds from the Margaret Milam McDermott Distinguished Chair in Anesthesiology and Pain Management, UT Southwestern Medical Center, Dallas, TX. The authors declare they have no conflicts of interest related to the publication
Setting	The 2006 National Survey of Ambulatory Surgery (NSAS) database, with information representative of ambulatory surgery procedures performed in hospitals (i.e. hospital-based outpatient departments (HOPD)) and freestanding ambulatory surgery centres (ASC) in the U.S.
Sample size	Database: Non-obese: n= 31 279 375 Morbidly obese (i.e. body mass index (BMI) \geq 40 kg/m ²): n=98 106 Propensity-matched sample: Non-obese: n= 265 Morbidly obese: n= 265
Duration and follow-up	Surgical procedures performed in 2006
Statistical analysis	Because the groups were significantly unbalanced regarding most clinical and demographic characteristics, a propensity-matching technique was used to assemble a 1:1 matched cohort of morbidly obese and non-obese patients. Before analysis, continuous right-skewed data were natural log transformed. Propensity scores (conditional probability for having a diagnosis of morbid obesity) were estimated using a logistic model including the following variables: age, gender, comorbidity index, type of ambulatory facility (freestanding ASC vs HOPD), type of surgical procedure (based on the top procedures performed on morbidly obese pts), use of general anaesthesia, and anaesthesia provider. Patients were then matched using a Greedy 8 to 1 digit-matching algorithm without replacement.
Patient characteristics	
Eligibility criteria	<ul style="list-style-type: none"> Adult patients (age >18 yrs) with a diagnosis of morbid obesity, undergoing ambulatory surgery procedures during 2006, identified from the dataset using the ICD-9-CM codes 278.01 (morbid obesity) and V85.4 (body mass index 40 kg/m² and over, adult).
Exclusion criteria	<ul style="list-style-type: none"> Conditions that may be complications or that may be related to the principal diagnosis were excluded (by means of the Agency for Health Care Research and Quality (AHRQ) Comorbidity Software, a family of databases and software tools developed to create comorbidity variables from the ICD-9-CM diagnosis codes present in each ambulatory surgical visit).



Rosero & Joshi, 2014¹¹

Patient & disease characteristics

Database:

- The majority of morbidly obese were women
- The morbidly obese were significantly younger than the nonobese patients
- The morbidly obese had significantly higher Charlson comorbidity scores^a above with higher incidences of hypertension, diabetes mellitus, chronic lung disease, and neurological disorders

Interventions

Both groups

One of the following procedures:

- laparoscopic surgery
- gastrointestinal (GI) endoscopic procedures
- cataract surgery
- tubal ligation
- orthopaedic procedures

Results

Clinical effectiveness

Recurrence rate NA

Reoperation rate NA

Quality of life NA

Adverse Events

Unanticipated admissions to hospital/prolonged hospital stay

- No significant differences in incidence of unanticipated hospital admissions between the morbidly obese and non-obese patients
- No significant differences in postoperative duration of stay between groups (after adjusting for duration of surgical procedure)
- No significant differences in the rates of delayed discharge between groups (after adjusting for duration of surgical procedure)

Readmissions (after discharge home) Not reported

Visits to emergency room/department Not reported

Complications

- Significantly lower incidence of postoperative nausea and vomiting (PONV) in morbidly obese patients (1.5% vs 7.6%; $p = 0.0006$)
Cave! As recent findings suggest that most cases of PONV occur after discharge home, the true incidence of PONV may not be captured in this dataset.
- No significant differences in incidence of postoperative hypertension, hypotension and hypoxia between groups

Mortality Not reported

Limitations and other comments



Rosero & Joshi, 2014¹¹

Limitations

- Retrospective analysis of administrative datasets prohibits examination and incorporation of factors other than those provided in the dataset, e.g. the NSAS dataset does not contain information about the weight or height of the patients to confirm the true prevalence of obesity in the sample.
- It is also possible that the dataset did not capture with precision the burden of comorbidities among patients undergoing ambulatory surgery because of underreporting by physicians.

NA: not applicable

11.1.2.4. Old age

Table 14 – Old age - Evidence table of primary study

De Oliveira et al., 2015¹²

Objective	To evaluate whether age is independently associated with greater rate of unanticipated hospital admission within 30 days of ambulatory surgery.
Methods	
Design	Retrospective observational cohort (database) study
Source of funding and competing interest	<ul style="list-style-type: none"> • The journal's editor in chief determined that the authors have no financial or any other kind of personal conflicts with this paper
Setting	2012 data from the American College of Surgeons (ACS) National Surgical Quality Improvement Project (NSQIP) database, a prospectively maintained surgical outcomes data set that extracts information from more than 400 participating community and academic hospitals (acute care hospitals and freestanding surgical centres)
Sample size	53 667
Duration and follow-up	NA
Statistical analysis	Fisher exact test, X ² -test, multivariable analysis
Patient characteristics	
Eligibility criteria	<ul style="list-style-type: none"> • Individuals with "outpatient" recorded as their status in the data set, i.e. if the individual arrives and is discharged from the surgery facility on the same day as the procedure was performed • Only individuals with a total length of surgical stay of 0 days were included in the analysis (to exclude individuals scheduled as outpatients but admitted to the hospital after the procedure)
Exclusion criteria	<ul style="list-style-type: none"> • Records of subjects coded as ventilator dependent at the time of surgery • Records of subjects having had surgery on a different day than the admission date • Records of subjects having had a total recorded length of stay of more than 0 days
Patient & disease characteristics	<ul style="list-style-type: none"> • Provided stratified by hospital admission within 30 post-operative days (cf. Table S2)



De Oliveira et al., 2015 ¹²	
Interventions	
	<ul style="list-style-type: none"> • 26 different surgical procedures with 500 or more cases in 2012 (cf. Table S1)
Results	
Clinical effectiveness	
Recurrence rate	NA
Reoperation rate	NA
Quality of life	NA
Adverse Events	
Unanticipated admissions to hospital/prolonged hospital stay	<ul style="list-style-type: none"> • All cause admissions within 30 days: 1 370 patients (2.5%, 99% CI: 2.4–2.7%) <ul style="list-style-type: none"> ○ Unplanned admissions: 1 172 patients (2.2%, 99% CI: 2.0–2.4%) ○ Adjusted OR for the effect of age (<70 vs ≥ 70) on hospital admission: 1.54 (99% CI: 1.29–1.84) ○ Most frequently cited causes of hospital admission within 30 days of ambulatory surgery: <ul style="list-style-type: none"> ▪ Wound problems: 13.1% ▪ Infections: 6.2% ▪ Bleeding: 4.8% ▪ Pain: 4.7%
Readmissions (after discharge home)	Not reported
Visits to emergency room/department	Not reported
Complications	<ul style="list-style-type: none"> • Morbidity (i.e. presence of a postoperative surgical^g or medical complication^h) within 30 days: 1 090 patients (2.0%, 99% CI: 1.9–2.2%)
Mortality	Not reported
Limitations and other comments	
Limitations	<ul style="list-style-type: none"> • Completeness of sampling for any given procedure or any given hospital could not be checked • Different quality of care between institutions on the outcomes could not be controlled for • No data available on the characteristics of the hospital admission, such as duration of stay

^g A surgical complication was defined as having a superficial surgical site infection (SSI), a deep SSI, an organ or space SSI, wound disruption or dehiscence, or graft or prosthesis failure.

^h Medical complications included pneumonia, unplanned intubation, pulmonary embolism, failure to wean from a ventilator, renal insufficiency, progressive renal failure, urinary tract infection, stroke, coma, peripheral neurological deficiency, cardiac arrest, myocardial infarction, bleeding requiring a transfusion, deep venous thrombosis, and sepsis or septic shock

**De Oliveira et al., 2015¹²**

- Data collection restricted to first 30 post-operative days, which may underestimate the hospital admission rate
- No evaluation of the impact of old age on morbidity

NA: not applicable



12. EXPERT RECRUITMENT

Table 15 – Medical societies invited for participation

Name
Beroepsvereniging voor Belgische Specialisten
Belgische Vereniging van Artsensyndicaten
Association Belge des Syndicats Médicaux
Kon Ver Belg Med Genootsch. KVBMG
Ass.Roy.Soc.Méd.Belges ARSMB
Verbond der Vlaamse Medische-Wetenschappelijke Ver. (VVMV)
Belgische Vereniging voor Anesthesie en Reanimatie (B.V.A.R.)
Society for Anesthesia and Resuscitation of Belgium (S.A.R.B.)
Belgian Association for Paediatric Anaesthesiology
Belgian Association for Regional Anesthesia
Belgische beroepsvereniging van artsen-specialisten in anesthesie en reanimatie
Kon.Belg.Genootschap voor Heelkunde
Société royale belge de chirurgie
Concilium Chirurgicum Belgicum
International College of Surgeons
Beroepsvereniging der Belgische chirurgen
Belgian Professional Surgical Association
Collegium Chirurgicum Belgicum
Belgian Association of Ambulatory Surgery
Belgian Society for Surgical Oncology
Belgian Association of Pediatric Surgery
Belgian Group for Endoscopic Surgery
Belgian Society for Surgical Oncology
Koninklijke Belgische Vereniging voor Oto-Rhino-Laryngologie, Gelaat en Halschirurgie
Société royale belge d'Oto-Rhino-Laryngologie et de Chirurgie Cervico-Faciale
Koninklijke Belgische Vereniging voor Stomatologie en Maxillo-Faciale Chirurgie (KVBS)
Société royale belge de Stomatologie et de Chirurgie Maxillo-Faciale



Name
Belgische beroepsvereniging van de geneesheren-specialisten in de Stomatologie, Mond-, Kaak- en Aangezichtschirurgie
Syndicat Ophtalmologique Oftalmologisch Syndicaat (SOOS)
Beroepsvereniging van oogheekundigen (BBO)
Academia Ophthalmologica Belgica
Belgisch Oftalmologisch Gezelschap
Société Belge d'ophtalmologie-SBO
Belgian Strabismological association
Belgian Society of Cataract and Refractive Surgeons
Belgian Society of Ophthalmic Plastic and Reconstructive Surgery
Collegium Ophthalmologicum Belgicum
Retinal Surgeons of Belgium
Société Belge d'Ophtalmologie
Vlaamse vereniging voor obstetrie en gynaecologie
Groupement des Gynécologues et Obstétriciens de langue Française Belge
College van geneesheren voor het zorgprogramma "reproductieve geneeskunde"
Collège de médecins pour Le Programme de Soins "Médecine de la reproduction"
Beroepsvereniging van de Belgische Verloskundigen en Gynaecologen
Association professionnelle des obstétriciens et gynécologues belges
Belgian Section of Breast Surgery of the Royal Belgian Society of Surgery
Belgische Vereniging voor Senologie
Société Belge de Sénologie
Belg. veren. voor Cardiothoracale Heelkunde
Société Belge de chirurgie Cardiothoracique
Belgian Society of Cardiology
College van geneesheren voor de zorgprogramma's "cardiale pathologie" - Heelkundige Cardiologie
Collège de médecins pour les programmes de soins "Pathologie Cardiaque" - section cardiochirurgie
Belgische Vereniging voor Pneumologie
Société belge de Pneumologie
Société royale belge de gastroentérologie
Vlaamse Vereniging voor Gastroenterologie

**Name**

Belgian Society of Gastrointestinal Endoscopy

Belgian Section for Abdominal Wall Surgery

Belgian Section for Colorectal Surgery

Royal Belgian Surgical Society - Belgian Section for Endocrine Surgery

Belgian Section for Upper GI Surgery

Royal Belgian Surgical Society - Belgian Section of Obesity and Metabolic Surgery

Belgian Section for Hepatobiliary and Pancreatic Surgery

Belgische Vereniging voor Orthopedie en Traumatologie

Société belge de Chirurgie Orthopédique et de Traumatologie

Belgian Orthopaedic Trauma Association (BOTA)

Belgian Hand Group

Belgian Elbow and Shoulder Society

Belgian Hip Society

Belgian Foot & Ankle Society

Belgian Spine Society

Belgian Association of Pediatric Orthopaedics

Belgian Arthroscopy Association

Société belge d'Urologie

Belgische Vereniging voor Urologie

Belgian Professional Society of Urology (BBVU-APUB)

QoC Urology

Belgische vereniging voor nefrologie – BVN

Société belge de Néphrologie - SBN

European Society for Residents in Urology Belgium

Koninklijke Belgische Vereniging voor Plastische, Reconstructieve en Esthetische Chirurgie (RBSPS)

Société belge de Chirurgie Plastique Reconstructrice et Esthétique

Beroepsvereniging voor de Belgische Dermatologie en Venereologie

Belgische Vereniging voor Neurologie

Société belge de Neurologie

Vlaamse Vereniging voor Neurologie

**Name**

Belgian Brain Council

La Société Royale de Médecine Mentale de Belgique

Belgian Society of Neurosurgery

Belgian Neurosurgical Spine Society

BSN Pediatric Section

Belgian Society of Neurosurgery - Professional Section

Belgian Society for Stereotactic and Functional Neurosurgery

Belg.veren.voor Vaatheelkunde

Société belge de Chirurgie vasculaire

Belgisch Genootschap voor Vaatheelkunde (BGVH)

Société Belge de Chirurgie Vasculaire (SBCV)



13. COMPOSITION OF THE LIST OF PROCEDURES ELIGIBLE FOR A DAY-CARE APPROACH – METHODOLOGY PER SURGICAL DISCIPLINE

In the following sections a more detailed description of the applied methodology per surgical discipline is given.

13.1. Abdominal surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 6 “Diseases and disorders of the digestive system” and 7 “Diseases and disorders of the hepatobiliary system and pancreas” (Table 16):

Table 16 – All Patient Refined Diagnostic Related Groups of MDC 6 and MDC 7

Code	All Patient Refined Diagnostic Related Group
220	Major stomach, oesophageal & duodenal procedures
221	Major small & large bowel procedures
222	Other stomach, oesophageal & duodenal procedures
223	Other small & large bowel procedures
224	Peritoneal adhesiolysis
225	Appendectomy
226	Anal procedures
227	Hernia procedures except inguinal, femoral & umbilical
228	Inguinal, femoral & umbilical hernia procedures
229	Other digestive system & abdominal procedures
260	Major pancreas, liver & shunt procedures
261	Major biliary tract procedures
262	Cholecystectomy except laparoscopic
263	Laparoscopic cholecystectomy
264	Other hepatobiliary, pancreas & abdominal procedures

The APR-DRGs 260 (no day-care stays registered in 2013) and 220, 221, 223 and 261 (surgical APR-DRG with data inconsistency) were excluded as described above. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 17).


Table 17 – List of selected surgical procedures for abdominal surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Insertion of gastric banding (or other restrictive device) for bariatric surgery	2	403	4495
Revision or replacement of gastric banding (or other restrictive device)	2	403	4496
Removal of gastric banding (or other restrictive device)	2	403	4497
Adjustment of size adjustable gastric restrictive device	2	403	4498
Laparoscopic gastroplasty (vertical gastroplasty)	5	403	4468
Partial gastrectomy or gastric Sleeve surgery	5	403	4389
Appendectomy	1	225	4701 or 4709
Incision of perianal abscess	2	226	4901
Anal fissurectomy without sphincterotomy	2, 4	226	(4931 or 4939)
Anal fissurectomy with sphincterotomy	2, 4	226	(4931 or 4939) and (4951 or 4952 or 4959) (244473/484)
Anal fissurectomy with anoplasty	2, 4	226	(4931 or 4939) and 4979
Anal fissurectomy with sphincterotomy and anoplasty	2, 4	226	(4931 or 4939) and (4951 or 4952 or 4959) and 4979 (244495/506)
Anal fistulotomy	2	226	4911
Anal fistulectomy	4	226	4912
Closure of anal fistula	5	226	4973
Haemorrhoidectomy	2	226	4946
Haemorrhoids cauterization	4		4943
Haemorrhoids cryotherapy	4	226	4944
Haemorrhoids ligation	2	226	4945
Other surgery on hemorrhoids	4	226	4941 or 4942 or 4947 or 4949
Anal sphincterotomy	2, 4	226	4951 or 4952 or 4959
Surgery of pilonidal cyst	6		8603
Repair of rectal mucosal prolapse through perineum approach	6	221	4876
Repair of inguinal hernia unilateral	1, 4	228	5300 or 5301 or 5302
Repair of inguinal hernia unilateral with prosthesis (or graft)	1, 4	228	5303 or 5304 or 5305
Repair of inguinal hernia unilateral with prosthesis (or graft) (laparoscopic)	1, 4	228	1711 or 1712 or 1713



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Repair of inguinal hernia bilateral	1, 4	228	5310 or 5311 or 5312 or 5313
Repair of inguinal hernia bilateral with prosthesis (or graft)	1, 4	228	5314 or 5315 or 5316 or 5317
Repair of inguinal hernia bilateral with prosthesis (or graft) (laparoscopic)	1, 4	228	1721 or 1722 or 1723 or 1724
Repair of femoral hernia unilateral	5	228	5329
Repair of femoral hernia unilateral with prosthesis (or graft)	5	228	5321
Repair of femoral hernia bilateral	5	228	5339
Repair of femoral hernia bilateral with prosthesis (or graft)	5	228	5331
Repair of umbilical hernia without prosthesis (or graft)	1, 4	228	5343 or 5349
Repair of umbilical hernia with prosthesis (or graft)	1, 4	228	5341 or 5342
Repair of anterior abdominal wall hernia without prosthesis (or graft)	1	227	5359
Repair of anterior abdominal wall hernia with prosthesis (or graft)	1, 4	227	5363 or 5369
Repair of incisional hernia without prosthesis (or graft)	1	227	5351
Repair of incisional hernia with prosthesis (or graft)	1, 4	227	5361 or 5362
Repair of diaphragmatic hernia by laparoscopic abdominal approach	5	220	5371
Repair of diaphragmatic hernia by abdominal approach	5	220	5372 or 5375
Laparoscopic lysis of peritoneal adhesions	1	224 or 264	5451
Laparoscopic cholecystectomy	1	263	5123 or 5124
Laparoscopic adrenalectomy, partial	6	401	0729
Laparoscopic adrenalectomy, unilateral	6	401	0722
Laparoscopic adrenalectomy, bilateral	6	401	073
Laparoscopic splenectomy	6	229	4143 or 415
Excision biopsy of cervical lymph nodes	2, 4	229	4011 or 4021
Excision biopsy of axillary lymph nodes	2, 4	229	4011 or 4023
Excision biopsy of inguinal lymph nodes	2, 4	229	4011 or 4024
Percutaneous gastrojejunostomy	6	220 or 264	4432
Percutaneous jejunostomy	6		4632
Closure of colostomy	6	223	4652
Repair of pericostomy hernia	6	223	4642
Diagnostic laparoscopy	6	229 or 264	5421



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Biopsy of liver	6	229 or 264	5011 or 5012 or 5014
Biopsy of kidney	6	442 or 443	5523 or 5524
Biopsy of peritoneum	6	229 or 264	5423 or 5424
Laparoscopic fundoplication	2	222	4467

13.2. Breast surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 9 “Diseases and disorders of the skin, subcutaneous tissue and breast” (Table 18):

Table 18 – All Patient Refined Diagnostic Related Groups of MDC 9

Code	All Patient Refined Diagnostic Related Group
361	Skin graft for skin & subcutaneous tissue
362	Mastectomy procedures
363	Breast procedures except mastectomy
364	Other skin, subcutaneous tissue & and related procedures

We focused on APR-DRGs 362 and 363 as they deal with breast surgery. The APR-DRGs 361 and 364 were moved to the group of plastic surgery. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 19).

Table 19 – List of selected surgical procedures for breast surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Excision/biopsy of breast tissue	5	363	8512
Percutaneous core biopsy	5		8511
Operations on duct of breast	2	363	8521
Breast tumourectomy	2	363	8521
Breast quadrantectomy	4	363	8522
Unilateral subcutaneous mastectomy, without implant	2	362	8534
Unilateral subcutaneous mastectomy, with implant	2	362	8533
Bilateral subcutaneous mastectomy, without implant	4	362	8536
Bilateral subcutaneous mastectomy, with implant	4	362	8535



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Unilateral simple mastectomy	2	362	8541
Bilateral simple mastectomy	4	362	8542
Sentinel lymph node biopsy	5	364	4023
Reconstruction of breast nipple	2	363	8586 or 8587
Reconstruction of breast with implant	5	363	8579
Unilateral reduction mammoplasty, lipoaspiration	4	363	8531
Bilateral reduction mammoplasty, lipoaspiration	2	363	8532
Other unilateral reduction mammoplasty	4	363	8531
Other bilateral reduction mammoplasty	2	363	8532
Unilateral augmentation mammoplasty, with implant	4	363	8553
Bilateral augmentation mammoplasty, with implant	2	363	8554
Revision of breast implant	4	363	8593
Removal of breast implant	2	363	8594

13.3. Gynaecology

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 13 “Diseases and disorders of the female reproductive system” (Table 20):

Table 20 – All Patient Refined Diagnostic Related Groups of MDC 13

Code	All Patient Refined Diagnostic Related Group
510	Pelvic evisceration, radical hysterectomy & other radical gynaecological procedures
511	Uterine & adnexa procedures for ovarian & adnexal malignancy
512	Uterine & adnexa procedures for non-ovarian & non-adnexal malignancy
513	Uterine & adnexa procedures for non-malignancy except leiomyoma
514	Female reproductive system reconstructive procedures
517	Dilatation & curettage for non-obstetric diagnoses
518	Other female reproductive system & related procedures
519	Uterine & adnexa procedures for leiomyoma



The APR-DRG 510 (surgical APR-DRG with data inconsistency) was excluded as described above. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 21).

Table 21 – List of selected surgical procedures for gynaecological surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Laparoscopic ovarian aspiration biopsy (or follicular aspiration)	4	511, 512, 513, 519	6513
Simple ovarian cyst resection	2, 4	511, 512, 513, 519	6521 or 6522 or 6523 or 6524 or 6525 or 6529
Resection of ovarian endometriosis cyst	2, 4	513	6521 or 6522 or 6523 or 6524 or 6525 or 6529
Endometrial biopsy/aspiration + hysteroscopy	2	517	6816 or 6909 or 6959
Laparoscopic unilateral oophorectomy for endometriosis	5, 6	513	6531
Laparoscopic bilateral oophorectomy for endometriosis	5, 6	513	6553
Laparoscopic unilateral oophorectomy for other indication than endometriosis	5, 6	511, 512, 513, 519	6531
Laparoscopic bilateral oophorectomy for other indication than endometriosis	5, 6	511, 512, 513, 519	6553
Catheterization of Fallopian tubes by hysteroscopy	2, 5	518	6695 and 6812
Catheterization of Fallopian tubes by hysteroscopy	2, 5	511, 512, 513, 519	6696 and 6812
Insufflation of Fallopian tubes	2, 5		668
Laparoscopic unilateral salpingectomy for endometriosis	5, 6	513	664
Laparoscopic bilateral salpingectomy for endometriosis	5, 6	513	6651
Laparoscopic unilateral salpingo-oophorectomy for endometriosis	5, 6	513	6541
Laparoscopic bilateral salpingo-oophorectomy for endometriosis	5, 6	513	6563
Laparoscopic unilateral salpingectomy for other indication than endometriosis	5, 6	511, 512, 513, 519	664
Laparoscopic bilateral salpingectomy for other indication than endometriosis	5, 6	511, 512, 513, 519	6651
Conization of the cervix	2, 6		672 or 6732 or 6733
Trachelectomy	2, 6	518	674
Endometrial ablation (dilation-curettage) by hysteroscopy	2	511, 512, 513, 519	6823
Uterine polypectomy by hysteroscopy	2	511, 512, 513, 519	6829
Uterine myomectomy by hysteroscopy	2	519	6829
Uterine myomectomy by laparoscopy (myome < 2 cm)	2	519	6829 (432552/563 or 432530/541)
Uterine myomectomy by laparoscopy (myome >= 2 cm)	2	519	6829 (432611/622)
Laparoscopic subtotal hysterectomy	5	511, 512, 513, 519	6831



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Laparoscopic total hysterectomy	5	511, 512, 513, 519	6841
Vaginal (laparoscopically assisted) hysterectomy	5	511, 512, 513, 519	6851 or 6859
Vaginotomy	5	518	7014
Culdotomy	5	518	7012
Anterior colporrhaphy without graft or prosthesis	6	514	7051
Anterior colporrhaphy with graft or prosthesis	6	514	7054
Posterior colporrhaphy without graft or prosthesis	6	514	7050 or 7052
Posterior colporrhaphy with graft or prosthesis	6	514	7053 or 7055
Vaginoplasty	2	514	7062 or 7064
Vaginoplasty	2	518	7079
Repair of urinary incontinence by trans-obturator tape	2	514	5979
Repair of urinary incontinence by tension-free vaginal tape	2	514	5979
Laparoscopic sacral colpopexy	6	514	7077 or 7078
Vulvotomy	2	518	7101 or 7109
Vulvoplasty	2	518	7179
Vulvectomy, partial	2	518	7161
Vulvectomy, total	2	518	7162
Vulvectomy, total	5	510	715
Excision of endometriosis of the rectovaginal septum	6	226	4882
Radical endometriosis excision	5	513	Combination of any of the following codes: 6531; 6553; 6541; 6563; 664; 6651; 544; 5451; 5459; 6521 or 6522 or 6523 or 6524 or 6525 or 6529; 4882



13.4. Head & Neck surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 3 “Ear, nose, mouth, throat and craniofacial disease and disorders” (Table 22):

Table 22 – All Patient Refined Diagnostic Related Groups of MDC 3

Code	All Patient Refined Diagnostic Related Group
089	Major cranial/facial bone procedures
090	Major larynx & trachea procedures
091	Other major head & neck procedures
092	Facial bone procedures except major cranial/facial bone procedures
093	Sinus & mastoid procedures
095	Cleft lip & palate repair
097	Tonsil & adenoid procedures
098	Other ear, nose, mouth & throat procedures

The APR-DRGs 090 and 091 (surgical APR-DRG with data inconsistency) were excluded as described above. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 23).

Table 23 – List of selected surgical procedures for head and neck surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Complete thyroidectomy	1	404	064
Partial thyroidectomy	1	404	0639
Unilateral thyroid lobectomy	1	404	062
Lingual thyroid excision	1	404 or 098	066
Incision of the thyroid area for drainage	1	404 or 098	0601 or 0609
Secondary incision of a suture in the thyroid area	1	404	0602
Thyroglossal duct or tract excision	1	404 or 098	067
Partial parathyroidectomy	1	404 or 447	0689
Complete parathyroidectomy	1	404 or 447	0681
Biopsy of lymph node	2	098	4011
Excision of deep cervical lymph node	5	098	4021



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Unilateral radical neck dissection	5	091	4041
Bilateral radical neck dissection	5	091	4042
Surgical correction of unilateral prominent ear	2	098	185
Surgical correction of bilateral prominent ears	5	098	185
Plastic surgery repair of external ear (not prominent ear)	2, 4	098	1871 or 1872 or 1879
Myringotomy	2	098	2001 or 2009
Myringoplasty	2	098	194
Tympanoplasty	2	098	1952 or 1953 or 1954 or 1955
Excision of lesion of the middle ear	5	098	199
Mastoidectomy	5	093	2041 or 2042 or 2049
Turbinectomy	2	098	2161 or 2162 or 2169
Septoplasty / submucosal resection of nasal septum	2	098	215
Rhinoplasty	2	098	2185 or 2186 or 2187 or 2188
Endoscopy of nose and sinus	6		2121
Intranasal antrostomy	2		222
Unilateral frontal sinusotomy	3	093	2241
Bilateral frontal sinusotomy	3	093	2241
Unilateral ethmoidotomy/ethmoidectomy	2, 6	093	2251 or 2263
Bilateral ethmoidotomy/ethmoidectomy	2, 6	093	2251 or 2263
Sphenoidotomy	5	093	2252
Excision of lesion of the maxillary sinus	2, 4	093	2261 or 2262
Closure of nasal sinus fistula	2	093	2271
Laryngoscopy	2		3142
Excision of lesion of larynx (laser or other method)	2	098	3001 or 3009
Pharyngolaryngoscopy (sleep laryngoscopy)	2, 6		2911 and 3142
Pharyngoplasty	6	098	294
Adenoidectomy	1	097	286
Tonsillectomy	1	097	282
Tonsillectomy with adenoidectomy	1	097	283



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Haemorrhage control post tonsillectomy or adenoidectomy	1	097	287
Excision of lesion of the tongue (< 0,5 cm)	2, 6	098	251
Excision of lesion of the tongue (1 cm)	2, 6	098	251
Excision of lesion of the tongue (> 1 cm)	2, 6	098	251
Frenotomy or frenectomy	5		2592 or 2591
Biopsy of salivary gland	5	098	2611 or 2612
Excision of a salivary gland lesion	2	098	2621 or 2629
Partial sialoadenectomy	5	098	2631
Complete sialoadenectomy	5	098	2632
Drainage of the face or floor of the mouth	2	098	270
Local excision of tissue of the soft palate	2	098	2749
Local excision of tissue of the bony palate	2	098	2731
Excision of mucocele or noncancerous lip lesion	2, 6	098	2743
Wide excision of cancerous lesion or vascular anomaly of the lip	2, 6	098	2742
Repair of unilateral cleft lip	1	095	2754 (311474/485)
Repair of bilateral cleft lip	1	095	2754 (311496/500)
Staphyloplasty (or staphylorrhaphy) for incomplete unilateral cleft palate	1	095	2762 (310774/785 or 310811/822)
Staphyloplasty (or staphylorrhaphy) for incomplete bilateral cleft palate	1	095	2762 (310774/785 or 310811/822)
Revision of cleft palate repair	1	095	2763
Other plastic repair of palate	1	095	2769
Pharyngoplasty	6	098	294
Closure of fistula of the mouth	2	098	2753
Tooth extraction	2, 4		2301 or 2309
Surgical tooth extraction	2		2319
Surgical removal of residual tooth	4		2311
Apicectomy (and root canal treatment)	2		2372 or 2373
Excision of dental lesion of the jaw	2	098	244
Alveoloplasty	2	098	245
Excision of lesion of facial bone	2	092	762



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Mandibular osteotomy (may include bone graft)	2, 4	092	7661 or 7662 or 7663
Mandibular distraction osteogenesis	2, 4	092	7661 or 7662 or 7663
Mandibular osteoplasty	2, 4	092	7661 or 7662 or 7663
Unilateral maxillar osteotomy	2	092	7665
Unilateral maxillar osteotomy	2	089	7666
Bilateral maxillar osteotomy	2	092	7665
Bilateral maxillar osteotomy	2	089	7666
Intermaxillary disjunction	2	092	7665
Intermaxillary disjunction	2	089	7666
Unilateral malar osteotomy	2	092	7669
Bilateral malar osteotomy	2	092	7669
Facial bone graft	2	092	7691
Facial synthetic implant	2	092	7692



13.5. Neurosurgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 1 “Disease and disorders of the nervous system” (Table 24):

Table 24 – All Patient Refined Diagnostic Related Groups of MDC 1

Code	All Patient Refined Diagnostic Related Group
020	Craniotomy for trauma
021	Craniotomy except for trauma
022	Ventricular shunt procedures
023	Spinal procedures
024	Extracranial vascular procedures
026	Other nervous system & related procedures

The APR-DRGs 020 (surgical APR-DRG with a description containing the word trauma) and 021 (surgical APR-DRG with data inconsistency) were excluded as described above.

The APR-DRG 024 were moved to the vascular discipline as they are not always performed by neurosurgeons. The APR-DRG 310 (Intervertebral disc excision & decompression) was added as these procedures are performed either by neurosurgeons or by orthopaedists.

The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 25).

Table 25 – List of selected surgical procedures for neurosurgery, criteria for selection, APR-DRG and ICD-9-CM codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Insertion of ventriculoperitoneal shunt	1	022	0234
Insertion of ventricular shunt (not ventriculoperitoneal)	1	022	0231 or 0232 or 0233 or 0235 or 0239
Replacement of ventricular shunt	1	022	0242
Removal of ventricular shunt	1	022	0243
Implantation of spinal neurostimulator lead	2	023	0393
Replacement of spinal neurostimulator lead	2	023	0393
Removal of spinal neurostimulator lead	2	023	0394
Carpal tunnel release	2	026	0443



Cubital tunnel release	2	026	0449
Tarsal tunnel release	3	026	0444
Nerve decompression (not carpal, cubital or tarsal)	2	026	0449
Nerve transposition	2	026	046
Nerve excision (including neuroma)	2	026	0407
Nerve suture	2	026	043
Cervical disc hernia excision	2, 4	310	8050 or 8051
Lumbar disc hernia excision	2, 4	310	8050 or 8051

13.6. Ophthalmology

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 2 “Disease and disorders of the eye” (Table 26):

Table 26 – All Patient Refined Diagnostic Related Groups of MDC 2

Code	All Patient Refined Diagnostic Related Group
070	Orbital procedures
073	Eye procedures except orbit

The 2 APR-DRGs were taken into account. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 27).

Table 27 – List of selected surgical procedures for ophthalmologic surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Probing of nasolacrimal punctum or duct	4	073	0941 or 0942 or 0943
Stenting of the nasolacrimal duct	2	073	0944
Dacryocystorhinostomy	2	073	0981
Chalazion excision	4	073	0821
Excision of minor lesion	2	073	0822
Excision of major lesion (partial thickness)	4	073	0823
Excision of major lesion (full thickness)	4	073	0824
Repair of entropion/extropion	2, 4	073	0841 or 0842 or 0843 or 0844 or 0849
Blepharochalasis repair	2	073	0870



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Blepharoptosis repair	2, 4	073	0831 or 0832 or 0833 or 0834 or 0835 or 0836
Canthoplasty	4	073	0859
Blepharoplasty	2	073	0870 or 0871 or 0872 or 0873 or 0874
Blepharorrhaphy	2	073	0852
Pterygion excision	2, 4	073	1131 or 1132 or 1139
Corneal lesion excision	5	073	1141 or 1142 or 1143 or 1149
Conjunctival graft	5	073	1041 or 1042 or 1044
Corneal graft	5	073	1160 or 1161 or 1162 or 1163 or 1164 or 1169
Lens extraction	2	073	131* or 132 or 133 or 134* or 135*
Lens extraction with insertion of intraocular lens prosthesis	2	073	(131* or 132 or 133 or 134* or 135*) and 1371
Secondary insertion of intraocular lens prosthesis	4	073	1372
Laser treatment of secondary cataract	4	073	1364
Laser iridotomy	4	073	1212
Laser iridoplasty	4	073	1239
Cyclophotocoagulation	4	073	1273
Iridectomy	4	073	1214 or 1261 or 1262 or 1265
Laser trabeculoplasty	4	073	1269
Trabeculotomy	4	073	1279
Trabeculectomy	2	073	1264
Injection into anterior chamber	4	073	1292
Cryotherapy of chorioretinal lesion	4	073	1422
Laser photocoagulation of chorioretinal lesion	4		1424
Cryotherapy of retinal tear or detachment	4	073	1432
Laser photocoagulation of retinal tear or detachment	2, 4		1434
Vitrectomy	4	073	1471 or 1472 or 1473 or 1474
Scleral buckling	4	073	144*
Injection of vitreous substitute	2, 4	073	1475
Recession/advancement or resection of extraocular muscles	2	073	151* or 152* or 153
Transposition of oblique muscles	4	073	155



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Revision of extraocular muscle surgery	4	073	156
Retrobulbar injection	4		1691
Excision of orbital lesion	2	070	1692
Excision of lesion of eye	4	073	1693
Enucleation	5	070	1649
Enucleation with synchronous implant	5	070	1641 or 1642
Removal of ocular implant	2	070	1671

13.7. Orthopaedic surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 8 “Diseases and disorders of the musculoskeletal system and connective tissue” (Table 28):

Table 28 – All Patient Refined Diagnostic Related Groups of MDC 8

Code	All Patient Refined Diagnostic Related Group
301	Hip joint replacement
302	Knee joint replacement
303	Dorsal & lumbar fusion procedures for curvature of back
304	Dorsal & lumbar fusion procedures except for curvature of back
305	Amputation of lower limb except toes
308	Hip & femur procedures for trauma except joint replacement
309	Hip & femur procedures for non-trauma except joint replacement
310	Intervertebral disc excision & decompression
312	Skin graft, except hand, for musculoskeletal & connective tissue diagnoses
313	Knee & lower leg procedures except foot
314	Foot & toe procedures
315	Shoulder, upper arm & forearm procedures
316	Hand & wrist procedures
317	Tendon, muscle & other soft tissue procedures
320	Other musculoskeletal system & connective tissue procedures
321	Cervical spinal fusion & other back/neck procedures except disc excision/decompression



The APR-DRGs 303 (no day-care stays registered in 2013), 304 (surgical APR-DRG with data inconsistency) and 308 (surgical APR-DRG with a description containing the word trauma) were excluded as described above.

Two other APR-DRGs were moved to other disciplines as they are not always performed by orthopaedic surgeons:

- APR-DRG 312: moved to the plastic surgery & dermatology expert group;
- APR-DRG 321: moved to the neurosurgery expert group.

The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 29).

Table 29 – List of selected surgical procedures for orthopaedic surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Partial hip replacement	1	301	8152
Total hip replacement	1	301	8151
Unicompartmental knee replacement	1	302	8154
Bicompartmental knee replacement	1	302	8154
Total knee replacement	1	302	8154
Partial ankle replacement	3	313	8156
Total ankle replacement	3	313	8156
Joint replacement of foot or toe	3	314	8157
Partial shoulder replacement	3	315	8181
Total shoulder replacement	3	315	8180 or 8188
Partial elbow replacement	3	315	8184
Total elbow replacement	3	315	8184
Partial wrist replacement	3	316	8174
Total wrist replacement	3	316	8173
Arthroscopic meniscectomy	2	313	806
Arthroscopic repair of cruciate ligaments of the knee	2	313	8145
Arthroscopic repair of collateral ligaments knee	3	313	8146
Any combination of the above mentioned procedures	6	313	(806 or/and 8145 or/and 8146)
Arthroscopic patellar stabilization	4	313	8144
Arthroscopic patellar shaving	4	313	7766



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Arthroscopic mosaicplasty of the knee	6	313	8147 (300392/403)
Arthroscopic meniscectomy	2	315	8363
Rotator cuff repair	2	317	8331
Proximal biceps tendon repair	3	315	8182 (287033/044)
Recurrent shoulder dislocation repair	2	315	8183
Acromioplasty	4	309	8075
Hip synovectomy	4	313	8076
Knee synovectomy	2	313	8077
Ankle synovectomy	4	314	8078
Foot or toe synovectomy	4	315	8071
Shoulder synovectomy	4	315	8072
Elbow synovectomy	4	316	8073
Wrist synovectomy	4	316	8074
Hand or finger synovectomy	4	317	8079
Spine synovectomy	4	309	8075
Hip arthrodesis	3	309	8121
Knee arthrodesis	3	313	8122
Ankle fusion	3	313	8111
Triple arthrodesis	3	313	8112
Subtalar fusion	3	314	8113
Midtarsal fusion	3	314	8114
Tarsometatarsal fusion	3	314	8115
Shoulder arthrodesis	3	315	8123
Elbow arthrodesis	3	315	8124
Carporadial fusion	3	316	8125
Metacarpocarpal fusion	3	316	8126
Metacarpophalangeal fusion	3	316	8127
Interphalangeal fusion	2	316	8128



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Biopsy of a rib or the sternum	4, 5		7741
Biopsy of the scapula or clavicle	4, 5		7741
Biopsy of the humerus	4, 5		7742
Biopsy of the radius or ulna	4, 5		7743
Biopsy of a carpal or metacarpal	4, 5		7744
Biopsy of a vertebra	4, 5		7749
Biopsy of the pelvis	4, 5		7749
Biopsy of the femur	4, 5		7745
Biopsy of the patella	4, 5		7746
Biopsy of the tibia or fibula	4, 5		7747
Biopsy of a tarsal or metatarsal	4, 5		7748
Biopsy of a phalange	4, 5		7749
Curettage (including exostectomy) of a rib or the sternum	4	320	7761
Curettage (including exostectomy) of the scapula or clavicle	4	320	7761
Curettage (including exostectomy) of the humerus	4	315	7762
Curettage (including exostectomy) of the radius or ulna	4	315	7763
Curettage (including exostectomy) of a carpal or metacarpal	4	316	7764
Curettage (including exostectomy) of a vertebra	4	320	7769
Curettage (including exostectomy) of the pelvis	4	320	7769
Curettage (including exostectomy) of the femur	4	309	7765
Curettage (including exostectomy) of the patella	2	313	7766
Curettage (including exostectomy) of the tibia or fibula	4	313	7767
Curettage (including exostectomy) of a tarsal or metatarsal	4	314	7768
Curettage (including exostectomy) of a phalange	4	320	7769
Partial resection of a rib or sternum	4, 5	320	7781
Partial resection of the scapula or clavicle	4, 5	320	7781
Partial resection of the humerus	4, 5	315	7782
Partial resection of the radius or ulna	4, 5	315	7783



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Partial resection of a carpal or metacarpal	4, 5	316	7784
Partial resection of a vertebra	4, 5	310	7789
Partial resection of the pelvis	4, 5	309	7789
Partial resection of the femur	4, 5	309	7785
Partial resection of the patella	4, 5	313	7786
Partial resection of the tibia or fibula	4, 5	313	7787
Partial resection of a tarsal or metatarsal	4, 5	314	7788
Partial resection of a phalange	4, 5	320	7789
Total resection of a rib or sternum	4, 5	320	7791
Total resection of the scapula or clavicle	4, 5	320	7791
Total resection of the humerus	4, 5	315	7792
Total resection of the radius or ulna	4, 5	315	7793
Total resection of a carpal or metacarpal	4, 5	316	7794
Total resection of a vertebra	4, 5	310	7799
Total I resection of the pelvis	4, 5	309	7799
Total resection of the femur	4, 5	309	7795
Total resection of the patella	4, 5	313	7796
Total resection of the tibia or fibula	4, 5	313	7797
Total resection of a tarsal or metatarsal	4, 5	314	7798
Total resection of a phalange	4, 5	320	7799
Total resection of a rib or sternum	4, 5	320	7791
Hallux valgus repair	4	314	7751 or 7759
Hammer toe repair	2	314	7756
Claw toe repair	4	314	7757
Exploration of foot tendon sheath	6	317	8301
Transfer of foot tendon	6	317	8375
Advancement/recession of foot tendon	6	317	8371 or 8372
Achillotenotomy	2	314	8311



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Suture of foot tendon	6	317	8361 or 8362
Carpal tunnel release	2	316	0443
Exploration of hand tendon sheath	2	316	8201
Trigger finger repair	2	316	8221 (287696/700)
De Quervain tenosynovitis repair	3	316	8211 (287711/722)
Dupuytren's contracture repair	2	316	8235
Reconstruction of hand tendon pulley	2	316	8271
Release of hand tendon	5	316	8211
Suture of hand tendon	5	316	8241
Excision of intervertebral disc	2	310	8051
Intervertebral chemonucleolysis	4		8052
Percutaneous vertebroplasty	2	310	8165
Percutaneous vertebral augmentation	2	310	8166
Removal of orthopaedic device of a rib or sternum	4	320	7861
Removal of orthopaedic device of the scapula or clavicle	4	320	7861
Removal of orthopaedic device of the humerus	4	320	7862
Removal of orthopaedic device of the radius or ulna	2	320	7863
Removal of orthopaedic device of a carpal or metacarpal	4	320	7864
Removal of orthopaedic device of a vertebra	4	320	7869
Removal of orthopaedic device of the pelvis	4	320	7869
Removal of orthopaedic device of the femur	4	320	7865
Removal of orthopaedic device of the patella	4	320	7866
Removal of orthopaedic device of the tibia or fibula	4	320	7867
Removal of orthopaedic device a tarsals or metatarsal	4	320	7868
Removal of orthopaedic device of a phalange	4	320	7869
Removal of orthopaedic device of the hip	3	320	8005
Removal of orthopaedic device of the knee	3	320	8006
Removal of orthopaedic device of the ankle	3	320	8007



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Removal of orthopaedic device of the foot	3	320	8008
Removal of orthopaedic device of the shoulder	3	320	8001
Removal of orthopaedic device of the elbow	3	320	8002
Removal of orthopaedic device of the wrist	3	320	8003
Removal of orthopaedic device of the hand	3	320	8004
Amputation of a toe	2	314	8411
Amputation of a foot	3	305	8412
Amputation of the ankle	3	305	8413 or 8414
Amputation of a finger	3	316	8401
Amputation of a thumb	3	316	8402
Amputation of a hand	3	316	8403
Amputation of a wrist	3	316	8404

13.8. Plastic & dermatological surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 9 “Diseases and disorders of the skin, subcutaneous tissue and breast” (Table 30):

Table 30 – All Patient Refined Diagnostic Related Groups of MDC 9

Code	All Patient Refined Diagnostic Related Group
361	Skin graft for skin & subcutaneous tissue
362	Mastectomy procedures
363	Breast procedures except mastectomy
364	Other skin, subcutaneous tissue & and related procedures

The APR-DRGs 362 and 363 were moved to the group of breast surgery. The APR-DRG 73 (Eye procedures except orbit) was added as some of these procedures are performed either by the ophthalmologists either by the plastic surgeons.

The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 31).



Table 31 – List of selected surgical procedures for plastic and dermatological surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV-INAMI) Codes
Excision of skin tumour (or lesion) of the lip, with suture	2	364	2743
Excision of skin tumour (or lesion) of the face, with suture	2		863
Excision of other skin tumour (or lesion), with suture	2		863
Radical excision of skin tumour (or lesion) of the lip, with graft	4	364	2742
Radical excision of skin tumour (or lesion) of the face, with graft	2	361	864
Other radical excision of skin tumour (or lesion), with graft	2	361	864
Excision of sentinel lymph node, axillar	2	364	4023
Excision of sentinel lymph node, inguinal	4	364	4024
Excision of sentinel lymph node, supraclavicular	4	364	4029
Excision of other sentinel lymph node	4	364	4029
Preparation of skin pedicle flap (main procedure)	4	361	8671
Advancement of skin pedicle flap	4	361	8672
Attachment of skin pedicle flap to the hand	4	361	8673
Attachment of skin pedicle flap to another site	2	361	8674
Excision of minor lesion of eyelid	4	364	0822
Excision of major lesion of the eyelid (partial thickness)	4	364	0823
Excision of major lesion of eyelid (full thickness)	4	364	0824
Blepharoptosis repair		073	0831 or 0832 or 0833 or 0834 or 0835
Eyelid ptosis repair		073	0836
Excision of lesion of the external ear			1829
Surgical correction of prominent ear	2	364	185
Total nasal reconstruction	4	364	2183
Limited rhinoplasty	4	364	2186
Rhinoplasty without septoplasty	4	364	2185
Rhinoplasty with septoplasty	4	364	2188
Scar relaxation	2	364	8684
Onychoplasty	2	364	8686



Facial rhytidectomy	4	364	8682
Size reduction (liposuction)	2	364	8683
Fat graft of skin and subcutaneous tissue	4	364	8687

13.9. Thoracic surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 4 “Diseases and disorders of the respiratory system” and 5 “Diseases and disorders of the circulatory system” (Table 32):

Table 32 – All Patient Refined Diagnostic Related Groups of MDC 4 and 5

Code	All Patient Refined Diagnostic Related Group
120	Major respiratory & chest procedures
121	Other respiratory & chest procedures
160	Major cardiothoracic repair of heart anomaly
161	Cardiac defibrillator & heart assist implant
162	Cardiac valve procedures with cardiac catheterization
163	Cardiac valve procedures without cardiac catheterization
165	Coronary bypass with cardiac catheterization or percutaneous cardiac procedure
166	Coronary bypass without cardiac catheterization or percutaneous cardiac procedure
167	Other cardiothoracic procedures
169	Major thoracic & abdominal vascular procedures
170	Permanent cardiac pacemaker implant with acute myocardial infarct, heart failure or shock
171	Permanent cardiac pacemaker implant without acute myocardial infarct, heart failure or shock
173	Other vascular procedures
174	Percutaneous cardiovascular procedures with acute myocardial infarct
175	Percutaneous cardiovascular procedures without acute myocardial infarct
176	Cardiac pacemaker & defibrillator device replacement
177	Cardiac pacemaker & defibrillator revision except device replacement
180	Other circulatory system procedures



The APR-DRGs 160, 162, 163, 165 and 166 (no day-care stays registered in 2013), 161, 167 (surgical APR-DRG with data inconsistency) and 170, 174 (surgical APR-DRG with a description containing the words acute myocardial infarct, heart failure or shock) were excluded as described above. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 33).

Table 33 – List of selected surgical procedures for thoracic surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Thoracoscopic lung biopsy	3	121	3320
Thoracoscopic excision of lesion of lung	4	121	3220 or 3225
Thoracoscopic segmental lung resection	4	120	3230
Thoracoscopic lobectomy	4	120	3241
Thoracoscopic pneumonectomy	4	120	3250
Thoracoscopic pleural biopsy	3	121	3420
Thoracoscopic drainage of pleural cavity	4	121	3406
Thoracoscopic lung decortication	4	120	3452
Thoracoscopic excision of chest wall lesion	4	121	344
Lymph node biopsy by mediastinoscopy	2	121	4011
Excision of mediastinal lesion by mediastinoscopy	4	121	343
Insertion of transvenous lead into ventricle	4	171	3771 and (3780 or 3781 or 3782 or 3785 or 3786 or 3787)
Insertion of transvenous lead into atrium and ventricle	2	171	3772 and (3780 or 3783)
Insertion of transvenous lead into atrium	4	171	3773 and (3780 or 3781 or 3782 or 3785 or 3786 or 3787)
Revision or repositioning of transvenous lead	4	177	3775
Replacement of transvenous lead	2	171	3776 and (3780 or 3785 or 3786 or 3787)
Replacement of transvenous lead	2	177	3776 alone
Removal of transvenous lead	4	177	3777
Insertion of pacemaker / defibrillator	2, 4	171	3780 or 3781 or 3782 or 3783
Replacement of pacemaker / defibrillator	2, 4	171	(3785 or 3786 or 3787) et (3775 or 3776)
Replacement of pacemaker / defibrillator	2	176	3785 or 3786 or 3787
Removal of pacemaker/ defibrillator	2	177	3789
Percutaneous valvuloplasty	3	175	3596
Percutaneous aortic valvuloplasty (TAVI)	3	175	3597



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Percutaneous transluminal coronary angioplasty without stent	2	175	0066
Percutaneous transluminal coronary angioplasty with stent	4	175	3606 or 3607

13.10. Urology

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 11 “Diseases and disorders of the kidney and the urinary tract” and 12 “Diseases and disorders of the male reproductive system” (Table 34):

Table 34 – All Patient Refined Diagnostic Related Groups of MDC 11 and 12

Code	All Patient Refined Diagnostic Related Group
440	Kidney transplant
441	Major bladder procedures
442	Kidney & urinary tract procedures for malignancy
443	Kidney & urinary tract procedures for nonmalignancy
444	Renal dialysis access device procedure only
445	Other bladder procedures
446	Urethral & transurethral procedures
447	Other kidney, urinary tract & related procedures
480	Major male pelvic procedures
481	Penis procedures
482	Transurethral prostatectomy
483	Testes & scrotal procedures
484	Other male reproductive system & related procedures

The APR-DRGs 480 (surgical APR-DRG with data inconsistency) and 440 (surgical APR-DRG with a description containing the words acute myocardial infarct, heart failure, shock or transplant) were excluded as described above. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 35).


Table 35 – List of selected surgical procedures for urology, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Laparoscopic partial nephrectomy	5	442 or 443	554
Laparoscopic total nephrectomy	5	442 or 443	5551
Percutaneous nephrostomy	2	442 or 443	5502
Percutaneous pyelostomy	3	442 or 443	5512
Transurethral removal of obstruction from renal pelvis	2	446	560
Ureteral catheterization	2		598
Ureteral dilation	2		598
Transurethral removal of ureteral obstruction	2	446	560
Ureterotomy	2	442 or 443	562
Ureteral meatotomy	4	442 or 443	561
Percutaneous cystostomy	4		5717
Cystostomy (not percutaneous)	2	445	5718
Transurethral excision/destruction of bladder lesion (or tumour)	2	446	5741 or 5749
Bladder sphincterotomy	2	445	5791
Diagnostic cystoscopy	2		5732
Biopsy of the kidney	3		5523
Biopsy of the ureter	3		5632
Biopsy of the bladder	4		5733
Biopsy of the urethra	3		5823
Biopsy of the testis	3		6211
Urethrotomy	2	446	580
Urethral meatotomy	4	446	581
Urethral meatoplasty	2	446	5847
Release of urethral stricture	4	446	585
Urethral dilation	4		586
Circumcision	2	484	640
Release of chordee	2, 4	481	6442



Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Dorsal/lateral slit of prepuce	4		6491
Division of penile adhesions	2	481	6493
Repair of hypospadias or epispadias	2	446	5845
Unilateral orchidopexy	2	483	625
Bilateral orchidopexy	2	483	625
Unilateral orchidectomy	2	483	623
Bilateral orchidectomy	5	483	6241
Excision of varicocele	2	483	631
Excision of hydrocele	2	483	612
Excision of cyst of epididymis	2	483	632
Ligation of vas deferens	4		6371
Vasectomy	2		6373
Treatment of peritoneo-vaginal canal	2	483	631 or 612
Transurethral prostatectomy	2	482	6021 or 6029
Lithotripsy	6		9851
Repair of urinary incontinence by trans-obturator tape	2	445	5979
Repair of urinary incontinence by tension-free vaginal tape	2	445	5979
Laparoscopic sacral colpopexy	5	514	7077 or 7078



13.11. Vascular surgery

The APR-DRG algorithm classifies the following surgical APR-DRGs in the major diagnostic category (MDC) 5 “Diseases and disorders of the circulatory system” (Table 36):

Table 36 – All Patient Refined Diagnostic Related Groups of MDC 4 and 5

Code	All Patient Refined Diagnostic Related Group
160	Major cardiothoracic repair of heart anomaly
161	Cardiac defibrillator & heart assist implant
162	Cardiac valve procedures with cardiac catheterization
163	Cardiac valve procedures without cardiac catheterization
165	Coronary bypass with cardiac catheterization or percutaneous cardiac procedure
166	Coronary bypass without cardiac catheterization or percutaneous cardiac procedure
167	Other cardiothoracic procedures
169	Major thoracic & abdominal vascular procedures
170	Permanent cardiac pacemaker implant with acute myocardial infarct, heart failure or shock
171	Permanent cardiac pacemaker implant without acute myocardial infarct, heart failure or shock
173	Other vascular procedures
174	Percutaneous cardiovascular procedures with acute myocardial infarct
175	Percutaneous cardiovascular procedures without acute myocardial infarct
176	Cardiac pacemaker & defibrillator device replacement
177	Cardiac pacemaker & defibrillator revision except device replacement
180	Other circulatory system procedures

The selection of the APR-DRGs is described in the section dealing with thoracic surgery. For vascular surgery, we focused on APR-DRGs 173 and 180, but also on 24 and 444 as these procedures may also be performed by vascular surgeons. The next table shows the selected procedures and the criteria used in order to include the procedures in the list to be discussed with the clinical experts (Table 37).


Table 37 – List of selected surgical procedures for vascular surgery, criteria for selection, APR-DRG and ICD-9-CM (RIZIV – INAMI) codes

Procedures	Criteria	APR-DRG	ICD-9-CM (RIZIV – INAMI) Codes
Angioplasty: intracranial vessel without stent	4	024	0062
Angioplasty: intracranial vessel with stent	4	024	0062 and 0065
Angioplasty: precerebral extracranial vessel with stent	2	024	0061 and (0063 or 0064)
Angioplasty: precerebral extracranial vessel without stent	2	024	0061
Angioplasty: upper limb vessel without stent	2	173	3950
Angioplasty: upper limb vessel with stent	2	173	3950 and (3990 or 0055 or 0045 or 0046 or 0047 or 0048)
Angioplasty: abdominal artery without stent	2	173	3950
Angioplasty: abdominal artery with stent	2	173	3950 and (3990 or 0055 or 0045 or 0046 or 0047 or 0048)
Angioplasty: lower limb artery without stent	2	173	3950
Angioplasty: lower limb artery with stent	2	173	3950 and (3990 or 0055 or 0060 or 0045 or 0046 or 0047 or 0048)
Insertion of endograft into the aorta abdominal	3	173	3971 or 3973
Insertion of vena cava filter	3		387
Electro-fulguration of one varicose vein	2	180	3869 (238070/081)
Electro-fulguration of multiple varicose veins	2	180	3869 (238092/103)
Resection of external saphenous vein	2	180	3859 (238136/140)
Resection of internal saphenous vein	2	180	3859 (238151/162)
Ligation and stripping of saphenous vein, unilateral	2	180	3859 (238173/184)
Ligation and stripping of saphenous vein, bilateral	2	180	3859 (238210/221)
Arteriovenostomy (formation of fistula) for renal dialysis	2	444	3927
Revision of arteriovenous shunt	2	444	3942
Removal of arteriovenous shunt	2	444	3943
Biopsy of artery	6		3821



14. VALIDATION OF THE LIST OF PROCEDURES

14.1. Content of the online survey

Table 38 – Overview of the questions posed in the online survey

Code	Mandatory	Question	Answers	Condition
S2Q1	Yes	<p>Below you will find a list of elective surgical interventions within your field of expertise. For each intervention, we would like to know if you agree that the intervention can be considered for a day-care (and/or ambulatory/in-office) approach.</p> <p>In case you do not agree, you will be offered the possibility to explain why.</p> <p>In case you do not know or you do not have sufficient experience in a certain sub-discipline, you can indicate that by ticking the third box.</p>	<p>For each sub-question:</p> <p>A1 = I agree</p> <p>A2 = I do not agree</p> <p>A3 = I don't know / I don't have enough experience</p>	
S3Q1	Yes	<p>For the following interventions, you answered "I do not agree". Please give the reason why you did so for every intervention. Possible reasons could be: incontrollable postoperative pain, high risk of severe complications requiring clinical monitoring, slow return of solid and liquid food taken orally, postoperative care not manageable by the patient and his caretakers, ...</p>	Open	Sub-question appears only if answer to the corresponding sub-question in S2Q1 is "I do not agree"
S4Q1	No	<p>It is very well possible that you missed certain elective surgical procedures which were not included in the list before. In that case you are kindly invited to add those surgical interventions in the space below. Please, be as precise as possible (you can for instance add RIZIV/INAMI codes).</p>	Open	
S5Q1	No	<p>Do you have any additional comments with regard to the online survey or the KCE study?</p>	Open	



14.2. Results of the online survey

14.2.1. Results by expert group

14.2.1.1. Abdominal surgery

Sample characteristics

In total, 22 experts were invited to complete the survey on abdominal surgery. Among them, 20 (90.91%) actually completed the survey. More detailed characteristics of the sample are given in Table 39.

Table 39 – Sample characteristics for abdominal surgery expert group

		Invited (n=22)		Respondents (n=20)	
Speciality	Surgeon	17	77.3%	15	75.0%
	Anaesthetist	5	22.7%	5	25.0%
Language	Dutch	10	45.5%	10	50.0%
	French	12	54.6%	10	50.0%
Hospital	University	6	27.3%	6	30.0%
	Non-university	16	72.7%	14	70.0%

Interventions suggested by KCE divided in three categories

In Table 40 the 57 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 40 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	9 (16%)	0 (0%)	48 (84%)

ⁱ For these interventions, all respondents answered “I agree” (or “I don’t know/I don’t have enough experience”) to the principle question “do you agree that the intervention can be considered for a day-care (and/or ambulatory/in-office) approach”.

^j For these interventions, all respondents answered “I do not agree” (or “I don’t know/I don’t have enough experience”) to the principle question “do you agree that the intervention can be considered for a day-care (and/or ambulatory/in-office) approach”.

**Category 1: Consensus on the eligibility for a day-care approach****Table 41 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n=9)
Haemorrhoids cauterization
Haemorrhoids cryotherapy
Haemorrhoids ligation
Repair inguinal hernia unilateral
Repair inguinal hernia unilateral with prosthesis (or graft)
Repair femoral hernia unilateral
Repair femoral hernia unilateral with prosthesis (or graft)
Excision biopsy of cervical lymph nodes
Diagnostic laparoscopy

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

Category 3: No consensus on the eligibility for a day-care approach**Table 42 – Interventions for which there was no consensus on the eligibility for a day-care approach**

Interventions (n=48)	“I do not agree” ^k
Repair diaphragmatic hernia by abdominal approach	94.4%
Partial gastrectomy or gastric Sleeve surgery	94.1%
Closure of colostomy	90.0%
Laparoscopic gastroplasty (vertical gastroplasty)	85.7%
Laparoscopic adrenalectomy. bilateral	84.6%
Repair diaphragmatic hernia by laparoscopic abdominal approach	84.2%
Laparoscopic splenectomy	79.0%

^k Percentage of respondents who answered “I do not agree” among the respondents who answered either “I agree” or “I do not agree” (i.e. excluding the respondents who answered “I don’t know/I don’t have enough experience”) to the principle question “do you agree that the intervention can be considered for a day-care (and/or ambulatory/in-office) approach”.



Interventions (n=48)	"I do not agree" ^k
Laparoscopic adrenalectomy. partial	78.6%
Laparoscopic adrenalectomy. unilateral	78.6%
Repair of pericostomy hernia	75.0%
Laparoscopic fundoplication	61.1%
Repair incisional hernia with prosthesis (or graft)	50.0%
Laparoscopic lysis of peritoneal adhesions	47.4%
Repair of rectal mucosal prolapse through perineum approach	47.1%
Revision or replacement of gastric banding (or other restrictive device)	47.1%
Repair anterior abdominal wall hernia with prosthesis (or graft)	45.0%
Repair anterior abdominal wall hernia without prosthesis (or graft)	40.0%
Insertion of gastric banding (or other restrictive device) for bariatric surgery	38.9%
Appendectomy	35.0%
Repair incisional hernia without prosthesis (or graft)	35.0%
Anal fissurectomy with anoplasty	26.3%
Anal fissurectomy with sphincterotomy and anoplasty	26.3%
Anal fistulectomy	25.0%
Percutaneous jejunostomy	23.5%
Removal of gastric banding (or other restrictive device)	22.2%
Closure of anal fistula	20.0%
Incision of perianal abscess	20.0%
Laparoscopic cholecystectomy	20.0%
Percutaneous gastrojejunostomy	17.7%
Biopsy of liver	15.8%
Biopsy of kidney	15.4%
Anal fissurectomy with sphincterotomy	15.0%
Haemorrhoidectomy	15.0%
Repair femoral hernia bilateral	10.5%
Repair femoral hernia bilateral with prosthesis (or graft)	10.5%
Anal fissurectomy without sphincterotomy	10.0%
Anal fistulotomy	10.0%



Interventions (n=48)	"I do not agree" ^k
Other surgery on hemorrhoids	10.0%
Repair inguinal hernia bilateral	10.0%
Repair inguinal hernia bilateral with prosthesis (or graft)	10.0%
Surgery of pilonidal cyst	10.0%
Adjustment of size adjustable gastric restrictive device	6.3%
Anal sphincterotomy	5.3%
Excision biopsy of axilar lymph nodes	5.3%
Biopsy of peritoneum	5.0%
Excision biopsy of inguinal lymph nodes	5.0%
Repair umbilical hernia with prosthesis (or graft)	5.0%
Repair umbilical hernia without prosthesis (or graft)	5.0%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", pain was the most common^l (mentioned by at least one expert for 28 interventions). Other common reasons were: slow return to solid and liquid per os feeding (15 interventions), risk of complications and/or need for clinical monitoring (12 interventions), need for a post-surgical drain (11 interventions), risk of bleeding (11 interventions), risk of fistula (10 interventions) and need for a radiological examination of the gastrointestinal tract on the first post-operative day (7 interventions). For 41 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

The following additional procedures were suggested by the respondents of the online survey: closure of ileostomy (APR-DRG 223), colpopexy (APR-DRG 223), Excision of Meckel diverticula (APR-DRG 223), insertion of totally implantable vascular access device (VAD), coagulation of condyloma accuminata (anal region) (APR-DRG 226), choledochotomy (APR-DRG 264) and excision of retroperitoneal tumour (APR-DRG 264).

^l Numbers that follow should be interpreted with caution as the respondents were not asked to give all possible reasons for which the intervention cannot be considered for a day-care (and/or ambulatory/in-office) approach.



14.2.1.2. Breast surgery

Sample characteristics

In total, 19 experts were invited to complete the survey on breast surgery. Among them, 18 (94.7%) actually completed the survey. More detailed characteristics of the sample are given in Table 43.

Table 43 – Sample characteristics for breast surgery expert group

		Invited (n=19)		Respondents (n=18)	
Speciality	Surgeon	13	68.4%	13	72.2%
	Anaesthetist	6	31.6%	5	27.8%
Language	Dutch	10	52.6%	10	55.6%
	French	9	47.4%	8	44.4%
Hospital	University	9	47.4%	8	44.4%
	Non-university	10	52.6%	10	55.6%

Interventions suggested by KCE divided in three categories

In Table 44 the 22 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 44 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ⁱ	No consensus on eligibility
Number of interventions	4 (18%)	0 (0%)	18 (82%)

Category 1: Consensus on the eligibility for a day-care approach

Table 45 – Interventions for which all respondents agreed on their eligibility for a day-care approach

Interventions (n= 4)
Excision/biopsy of breast tissue
Percutaneous core biopsy
Operations on duct of breast
Reconstruction of breast nipple

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

Category 3: No consensus on the eligibility for a day-care approach

**Table 46 – Interventions for which there was no consensus on the eligibility for a day-care approach**

Interventions (n= 18)	“I do not agree” ^k
Bilateral subcutaneous mammectomy, with implant	93.8%
Bilateral subcutaneous mammectomy, without implant	87.5%
Bilateral simple mastectomy	81.3%
Unilateral subcutaneous mammectomy, with implant	72.2%
Unilateral simple mastectomy	66.7%
Unilateral subcutaneous mammectomy, without implant	66.7%
Reconstruction of breast with implant	46.7%
Revision of breast implant	38.5%
Other bilateral reduction mammoplasty	33.3%
Bilateral reduction mammoplasty, lipoaspiration	23.1%
Breast quadrantectomy	22.2%
Bilateral augmentation mammoplasty, with implant	18.2%
Unilateral augmentation mammoplasty, with implant	18.2%
Other unilateral reduction mammoplasty	16.7%
Removal of breast implant	15.4%
Unilateral reduction mammoplasty, lipoaspiration	15.4%
Breast tumourectomy	5.6%
Sentinel lymph node biopsy	5.6%

Reasons for non-eligibility for day care

Amongst the reasons for answering “I don’t agree”, bleeding was the most common^l (mentioned by at least one expert for 16 interventions). Other common reasons were: the risk of seroma formation (15 interventions), risk of complications and/or need for clinical monitoring (12 interventions), need for a post-surgical drain (12 interventions), risk of pain (11 interventions), need for psychological care (8 interventions) and risk of haematoma (7 interventions). For 8 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

The following additional procedures were suggested by the respondents of the online survey: excision of breast tissue in man (gynaecomastia, APR-DRG 363), insertion of a breast tissue expander (APR-DRG 363), unilateral and bilateral breast injections for augmentation and nipple tattooing.



14.2.1.3. Gynaecology

Sample characteristics

In total, 21 experts were invited to complete the survey on gynaecology. Among them, 19 (90.5%) actually completed the survey. More detailed characteristics of the sample are given in Table 47.

Table 47 – Sample characteristics for gynaecology expert group

		Invited (n=21)		Respondents (n=19)	
Speciality	Surgeon	16	76.2%	14	73.7%
	Anaesthetist	5	23.8%	5	26.3%
Language	Dutch	16	76.2%	14	73.7%
	French	5	23.8%	5	26.3%
Hospital	University	6	28.6%	5	26.3%
	Non-university	15	71.4%	14	73.7%

Interventions suggested by KCE divided in three categories

In Table 48 the 42 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 48 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ^l	Consensus on non-eligibility ^l	No consensus on eligibility
Number of interventions	9 (21%)	2 (5%)	31 (74%)



Category 1: Consensus on the eligibility for a day-care approach

Table 49 – Interventions for which all respondents agreed on the eligibility for a day-care approach

Interventions (n=9)
Laparoscopic ovarian aspiration biopsy (or follicular aspiration)
Simple ovarian cyst resection
Endometrial biopsy/aspiration + hysteroscopy
Catheterization of Fallopian tubes by hysteroscopy
Insufflation of Fallopian tubes
Conization of the cervix
Endometrial ablation (dilation-curettage) by hysteroscopy
Uterine polypectomy by hysteroscopy
Vaginotomy

Category 2: Consensus on the non-eligibility for a day-care approach

Table 50 – Interventions for which all respondents agreed on the non-eligibility for a day-care approach

Interventions (n=2)
Vulvectomy. total
Radical endometriosis excision

Category 3: No consensus on the eligibility for a day-care approach

Table 51 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=31)	“I do not agree” ^k
Excision of endometriosis of the rectovaginal septum	94.1%
Laparoscopic sacral colpopexy	93.3%
Laparoscopic total hysterectomy	83.3%
Vaginal (laparoscopically assisted) hysterectomy	83.3%
Anterior colporrhaphy with graft or prosthesis	81.3%
Posterior colporrhaphy with graft or prosthesis	81.3%
Vulvectomy. partial	76.5%
Uterine myomectomy by laparoscopy (myome >= 2 cm)	72.2%



Interventions (n=31)	"I do not agree" ^k
Laparoscopic subtotal hysterectomy	64.7%
Trachelectomy	61.5%
Anterior colporrhaphy without graft or prosthesis	61.1%
Posterior colporrhaphy without graft or prosthesis	58.8%
Laparoscopic bilateral salpingo-oophorectomy for endometriosis	47.1%
Laparoscopic unilateral salpingo-oophorectomy for endometriosis	47.1%
Laparoscopic bilateral oophorectomy for endometriosis	44.4%
Laparoscopic unilateral oophorectomy for endometriosis	42.1%
Laparoscopic bilateral oophorectomy for other indication than endometriosis	35.3%
Laparoscopic bilateral salpingectomy for endometriosis	29.4%
Laparoscopic unilateral salpingectomy for endometriosis	26.3%
Resection of ovarian endometriosis cyst	26.3%
Culdotomy	20.0%
Vaginoplasty	18.8%
Laparoscopic unilateral oophorectomy for other indication than endometriosis	16.7%
Repair of urinary incontinence by tension-free vaginal tape	16.7%
Uterine myomectomy by laparoscopy (myome < 2 cm)	16.7%
Repair of urinary incontinence by trans-obturator tape	15.8%
Laparoscopic bilateral salpingectomy for other indication than endometriosis	11.1%
Vulvotomy	7.7%
Vulvoplasty	5.9%
Laparoscopic unilateral salpingectomy for other indication than endometriosis	5.6%
Uterine myomectomy by hysteroscopy	5.6%

**Reasons for non-eligibility for day care**

Amongst the reasons for answering “I don’t agree”, risk of bleeding was the most common^l (mentioned by at least one expert for 25 interventions). Other common reasons were: risk of complications and/or need for clinical monitoring (22 interventions), pain (19 interventions), risk of bladder/uretric/bowel problems (19 interventions), need for control of haemostasis (12 interventions), and risk of infections (10 interventions). For 27 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

The following additional procedures were suggested by the respondents of the online survey: marsupialization of Bartholin's gland (cyst), cervical cerclage (APR-DRG 518), destruction of a cervical lesion, fallopian tube ligation (APR-DRG 518), salpingotomy (APR-DRG 511, 512, 513 and 519), salpingostomy for removal of an ectopic pregnancy (APR-DRG 511, 512, 513 and 519), salpingectomy for removal of an ectopic pregnancy (APR-DRG 511, 512, 513, 518 and 519), reopening of a fallopian tube (APR-DRG 511, 512, 513 and 519), hysteroscopic septum resection (APR-DRG 517) and the excision of vaginal lesion.

*14.2.1.4. Head & Neck surgery***Sample characteristics**

In total, 18 experts were invited to complete the survey on head & neck surgery. Among them, 14 (77.8%) actually completed the survey. More detailed characteristics of the sample are given in Table 52.

Table 52 – Sample characteristics for head & neck surgery expert group

		Invited (n=18)		Respondents (n=14)	
Speciality	Surgeon	12	66.7%	9	64.3%
	Anaesthetist	6	33.3%	5	35.7%
Language	Dutch	10	55.6%	6	42.9%
	French	8	44.4%	8	57.1%
Hospital	University ^m	8	44.4%	7	50.0%
	Non-university	10	55.6%	7	50.0%

Interventions suggested by KCE divided in three categories

In Table 53 the 79 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

^m One respondent who is affiliated with both a university and a non-university hospital was categorised as “working in university hospital”.

**Table 53 – Interventions suggested by KCE divided in three categories**

	Consensus on eligibility ¹	Consensus on non-eligibility ¹	No consensus on eligibility
Number of interventions	21 (27%)	2 (3%)	56 (71%)

Category 1: Consensus on the eligibility for a day-care approach**Table 54 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n=21)
Secondary incision of a suture in the thyroid area
Biopsy of lymph node
Surgical correction of unilateral prominent ear
Surgical correction of bilateral prominent ears
Myringotomy
Myringoplasty
Excision of lesion of the middle ear
Turbinectomy
Septoplasty / submucosal resection of nasal septum
Intranasal antrostomy
Laryngoscopy
Adenoidectomy
Excision of lesion of the tongue (< 0.5 cm)
Excision of lesion of the tongue (1 cm)
Frenotomy or frenectomy
Biopsy of salivary gland
Excision of mucocele or noncancerous lip lesion
Tooth extraction
Surgical tooth extraction
Surgical removal of residual tooth
Apicectomy (and root canal treatment)



Category 2: Consensus on the non-eligibility for a day-care approach

Table 55 – Interventions for which all respondents agreed on the non-eligibility for a day-care approach

Interventions (n=2)	
Unilateral radical neck dissection	
Bilateral radical neck dissection	

Category 3: No consensus on the eligibility for a day-care approach

Table 56 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=56)	“I do not agree” ^k
Haemorrhage control post tonsillectomy or adenoidectomy	90.9%
Complete thyroidectomy	88.9%
Complete parathyroidectomy	87.5%
Revision of cleft palate repair	87.5%
Staphyloplasty (or staphylorrhaphy) for incomplete bilateral cleft palate	87.5%
Staphyloplasty (or staphylorrhaphy) for incomplete unilateral cleft palate	87.5%
Lingual thyroid excision	80.0%
Repair of bilateral cleft lip	80.0%
Repair of unilateral cleft lip	80.0%
Bilateral maxillar osteotomy	75.0%
Mandibular osteotomy (may include bone graft)	75.0%
Wide excision of cancerous lesion or vascular anomaly of the lip	71.4%
Mandibular distraction osteogenesis	70.0%
Mandibular osteoplasty	66.7%
Partial parathyroidectomy	66.7%
Pharyngoplasty	63.6%
Other plastic repair of palate	62.5%
Partial thyroidectomy	62.5%
Thyroglossal duct or tract excision	58.3%
Excision of lesion of the tongue (> 1 cm)	58.3%
Facial bone graft	57.1%



Interventions (n=56)	"I do not agree" ^k
Bilateral malar osteotomy	55.6%
Unilateral thyroid lobectomy	55.6%
Drainage of the face or floor of the mouth	50.0%
Sphenoïdotomy	50.0%
Complete sialoadenectomy	46.2%
Unilateral malar osteotomy	44.4%
Bilateral ethmoïdotomy/ethmoïdectomy	42.9%
Bilateral frontal sinusotomy	42.9%
Excision of deep cervical lymph node	42.9%
Pharyngoplasty	40.0%
Intermaxillary disjunction	37.5%
Unilateral maxillar osteotomy	37.5%
Excision of a salivary gland lesion	35.7%
Mastoidectomy	33.3%
Unilateral frontal sinusotomy	33.3%
Rhinoplasty	30.8%
Local excision of tissue of the bony palate	28.6%
Unilateral ethmoïdotomy/ethmoïdectomy	28.6%
Incision of the thyroid area for drainage	25.0%
Partial sialoadenectomy	23.1%
Plastic surgery repair of external ear (not prominent ear)	20.0%
Excision of dental lesion of the jaw	16.7%
Excision of lesion of the maxillary sinus	16.7%
Closure of fistula of the mouth	15.4%
Facial synthetic implant	14.3%
Local excision of tissue of the soft palate	14.3%
Tympanoplasty	14.3%
Excision of lesion of facial bone	12.5%
Closure of nasal sinus fistula	10.0%
Excision of lesion of larynx (laser or other method)	10.0%



Interventions (n=56)	"I do not agree" ^k
Tonsillectomy with adenoidectomy	9.1%
Alveoloplasty	8.3%
Pharyngolaryngoscopy (sleep laryngoscopy)	8.3%
Tonsillectomy	8.3%
Endoscopy of nose and sinus	7.7%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", risk of complications and/or need for clinical monitoring was the most common^l (mentioned by at least one expert for 32 interventions). Other common reasons were: pain (28 interventions), difficult homecare (22 interventions), risk of bleeding (18 interventions), need for a post-surgical drain (14 interventions) and risk of haematoma (12 interventions). For 50 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

The following 29 procedures were suggested by the respondents of the online survey: stapedectomy (APR-DRG 098), repair of semicircular canal fistula (APR-DRG 098), cochlear implant (APR-DRG 091), bone anchored hearing aid (APR-DRG 098), transseptal hypophysectomy (transsphenoidal) (APR-DRG 021), labyrinthectomy (APR-DRG 098), embryologic neck fistulae (branchial cleft) (APR-DRG 098), endoscopic Zenker diverticulotomy cricopharyngeal myotomy (APR-DRG 098), partial glossectomy (APR-DRG 098), closure of salivary fistula (APR-DRG 098), removal of internal fixation device from facial bone (APR-DRG 092), partial mandibulectomy (APR-DRG 089), temporomandibular arthroplasty (APR-DRG 098), excision cyst of facial bone (APR-DRG 092), tooth implantation, apical alveolotomy, bone graft to facial bone (APR-DRG 092), insertion of synthetic implant in facial bone (APR-DRG 092), local excision of lesion of facial bone (APR-DRG 092), graft to lip and mouth (APR-DRG 098), gingivoplasty (APR-DRG 098), control of epistaxis by cauterization, cordectomy, vocal (APR-DRG 098), cordopexy, vocal (APR-DRG 090), arytenoidectomy (APR-DRG 090), arytenoidopexy (APR-DRG 090), excision of neurinoma acoustic (APR-DRG 091), vestibular neurectomy (APR-DRG 026). Only those procedures that could be linked with an APR-DRG were further analysed.



14.2.1.5. Neurosurgery

Sample characteristics

In total, 19 experts were invited to complete the survey on neurosurgery. Among them, 14 (73.7%) actually completed the survey; one withdrew. More detailed characteristics of the sample are given in Table 57.

Table 57 – Sample characteristics for neurosurgery expert group

		Invited (n=19)		Respondents (n=14)	
Speciality	Surgeon	14	73.7%	10	71.7%
	Anaesthetist	5	26.3%	4	28.6%
Language	Dutch	10	52.6%	7	50.0%
	French	9	47.4%	7	50.0%
Hospital	University ^m	8	42.1%	6	42.9%
	Non-university	11	57.9%	8	57.1%

Interventions suggested by KCE divided in three categories

In Table 58 the 16 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 58 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	5 (31%)	0 (0%)	11 (69%)

Category 1: Consensus on the eligibility for a day-care approach

Table 59 – Interventions for which all respondents agreed on their eligibility for a day-care approach

Interventions (n=5)
Carpal tunnel release
Cubital tunnel release
Tarsal tunnel release
Nerve decompression (not carpal, cubital or tarsal)
Nerve transposition

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

**Category 3: No consensus on the eligibility for a day-care approach****Table 60 – Interventions for which there was no consensus on the eligibility for a day-care approach**

Interventions (n=11)	“I do not agree” ^k
Insertion of ventriculoperitoneal shunt	84.6%
Cervical disc hernia excision	76.9%
Insertion of ventricular shunt (not ventriculoperitoneal)	61.5%
Replacement of ventricular shunt	61.5%
Removal of ventricular shunt	46.2%
Lumbar disc hernia excision	33.3%
Nerve excision (including neuroma)	30.8%
Nerve suture	30.8%
Replacement of spinal neurostimulator lead	28.6%
Implantation of spinal neurostimulator lead	21.4%
Removal of spinal neurostimulator lead	7.1%

Reasons for non-eligibility for day care

Amongst the reasons for answering “I don’t agree”, risk of complications and/or need for clinical monitoring was the most common^l (mentioned by at least one expert for 7 interventions). Other common reasons were: risk of bleeding (6 interventions), pain (5 interventions), need for neurological follow-up (5 interventions) and need for CT follow-up (4 interventions). For 10 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Five additional procedures were suggested by the respondents of the online survey: stereotaxic biopsy (no APR-DRG), implantation of internal pulse generator (APR-DRG 026), replacement of internal pulse generator for neuromodulation (APR-DRG 026), insertion of catheter into spinal canal for drugs (no APR-DRG) and insertion of totally implantable infusion pump (APR-DRG 026).



14.2.1.6. Ophthalmology

Sample characteristics

In total, 16 experts were invited to complete the survey on ophthalmology. Among them, 15 (93.8%) actually completed the survey. More detailed characteristics of the sample are given in Table 61.

Table 61 – Sample characteristics for ophthalmology expert group

		Invited (n=16)		Respondents (n=15)	
Speciality	Surgeon	12	75.0%	11	73.3%
	Anaesthetist	4	25.0%	4	26.7%
Language	Dutch	8	50.0%	7	46.7%
	French	8	50.0%	8	53.3%
Hospital	University ^m	6	37.5%	6	40.0%
	Non-university	10	62.5%	9	60.0%

Interventions suggested by KCE divided in three categories

In Table 62 the 45 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 62 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	9 (20%)	0 (0%)	36 (80%)

Category 1: Consensus on the eligibility for a day-care approach

Table 63 – Interventions for which all respondents agreed on the eligibility for a day-care approach

Interventions (n=9)
Chalazion excision
Excision of minor lesion
Pterygion excision
Laser treatment of secondary cataract
Laser iridotomy
Laser iridoplasty
Laser trabeculoplasty



Interventions (n=9)

- Laser photocoagulation of chorioretinal lesion
- Retrobulbar injection

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

Category 3: No consensus on the eligibility for a day-care approach

Table 64 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=36)	“I do not agree” ^k
Enucleation	61.5%
Enucleation with synchronous implant	61.5%
Excision of orbital lesion	54.6%
Excision of lesion of eye	38.5%
Corneal graft	33.3%
Dacryocystorhinostomy	33.3%
Vitrectomy	33.3%
Trabeculectomy	30.8%
Scleral buckling	27.3%
Removal of ocular implant	23.1%
Cryotherapy of retinal tear or detachment	21.4%
Recession/advancement or resection of extraocular muscles	21.4%
Revision of extraocular muscle surgery	21.4%
Transposition of oblique muscles	21.4%
Excision of major lesion (full thickness)	20.0%
Blepharorrhaphy	15.4%
Canthoplasty	15.4%
Trabeculotomy	15.4%
Cryotherapy of chorioretinal lesion	13.3%
Excision of major lesion (partial thickness)	13.3%



Interventions (n=36)	"I do not agree" ^k
Secondary insertion of intraocular lens prosthesis	13.3%
Blepharoplasty	7.7%
Blepharoptosis repair	7.1%
Conjunctival graft	7.1%
Cyclophotocoagulation	7.1%
Injection of vitreous substitute	7.1%
Iridectomy	7.1%
Laser photocoagulation of retinal tear or detachment	7.1%
Stenting of the nasolacrimal duct	7.1%
Blepharochalasis repair	6.7%
Corneal lesion excision	6.7%
Injection into anterior chamber	6.7%
Lens extraction	6.7%
Lens extraction with insertion of intraocular lens prosthesis	6.7%
Probing of nasolacrimal punctum or duct	6.7%
Repair of entropion/extropion	6.7%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", bleeding and infection were the most common^l (each mentioned by at least one expert for 12 interventions). Other common reasons were: pain (8 interventions) and general anaesthesia (7 interventions). For 31 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

There were no additional interventions suggested by the respondents of the survey.



14.2.1.7. Orthopaedic surgery

Sample characteristics

In total, 29 experts were invited to complete the survey on orthopaedic surgery. Among them, 27 (93.1%) actually completed the survey. More detailed characteristics of the sample are given in Table 65.

Table 65 – Sample characteristics for orthopaedic surgery expert group

		Invited (n=29)		Respondents (n=27)	
Speciality	Surgeon	23	79.3%	21	77.8%
	Anaesthetist	6	20.7%	6	22.2%
Language	Dutch	16	55.2%	14	51.9%
	French	13	44.8%	13	48.2%
Hospital	University ^m	7	24.1%	7	25.9%
	Non-university	22	75.9%	19	74.1%

Interventions suggested by KCE divided in three categories

In Table 66 the 152 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 66 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	31 (20%)	9 (6%)	112 (74%)

**Category 1: Consensus on the eligibility for a day-care approach****Table 67 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n= 31)
Arthroscopic meniscectomy
Arthroscopic patellar shaving
Wrist synovectomy
Hand or finger synovectomy
Diagnostic hip arthroscopy
Diagnostic ankle arthroscopy
Diagnostic foot or toe arthroscopy
Diagnostic elbow arthroscopy
Diagnostic wrist arthroscopy
Diagnostic hand or finger arthroscopy
Diagnostic shoulder arthroscopy
Diagnostic knee arthroscopy
Biopsy of the humerus
Biopsy of the radius or ulna
Biopsy of a carpal or metacarpal
Biopsy of the patella
Biopsy of the tibia or fibula
Biopsy of a tarsal or metatarsal
Biopsy of a phalange
Curettage (including exostectomy) of the radius or ulna
Curettage (including exostectomy) of a carpal or metacarpal
Curettage (including exostectomy) of the patella
Hammer toe repair
Claw toe repair
Exploration of foot tendon sheath
Achillotenotomy
Exploration of hand tendon sheath

**Interventions (n= 31)**

Trigger finger repair

De Quervain tenosynovitis repair

Removal of orthopaedic device a tarsals or metatarsal

Removal of orthopaedic device of a phalange

Category 2: Consensus on the non-eligibility for a day-care approach**Table 68 – Interventions for which all respondents agreed on the non-eligibility for a day-care approach****Interventions (n= 9)**

Hip arthrodesis

Knee arthrodesis

Total resection of the scapula or clavicle

Total resection of the humerus

Total resection of the radius or ulna

Total resection of a vertebra

Total resection of the pelvis

Total resection of the femur

Total resection of the tibia or fibula

Category 3: No consensus on the eligibility for a day-care approach**Table 69 – Interventions for which there was no consensus on the eligibility for a day-care approach**

Interventions (n=112)	"I do not agree" ^k
Total knee replacement	95.5%
Bicompartmental knee replacement	95.2%
Shoulder arthrodesis	95.2%
Partial resection of a vertebra	94.4%
Total resection of a rib or sternum	94.4%
Triple arthrodesis	91.3%
Total hip replacement	90.9%
Elbow arthrodesis	90.5%
Total ankle replacement	90.5%



Interventions (n=112)	"I do not agree" ^k
Partial resection of the femur	90.0%
Partial resection of the pelvis	89.5%
Amputation of a foot	88.5%
Amputation of the ankle	88.5%
Amputation of a hand	87.5%
Ankle fusion	87.5%
Total shoulder replacement	87.5%
Amputation of a wrist	87.0%
Partial hip replacement	86.4%
Excision of intervertebral disc	83.3%
Total elbow replacement	81.8%
Partial resection of a rib or sternum	77.8%
Total wrist replacement	77.8%
Partial ankle replacement	76.2%
Subtalar fusion	76.2%
Total resection of the patella	76.2%
Spine synovectomy	75.0%
Partial shoulder replacement	73.9%
Unicompartmental knee replacement	72.7%
Midtarsal fusion	71.4%
Removal of orthopaedic device of the pelvis	70.6%
Partial resection of the humerus	70.0%
Total resection of a tarsal or metatarsal	69.6%
Total resection of a carpal or metacarpal	63.6%
Removal of orthopaedic device of a vertebra	62.5%
Carporadial fusion	61.9%
Partial elbow replacement	61.9%
Tarsometatarsal fusion	61.9%
Partial wrist replacement	61.1%
Removal of orthopaedic device of the hip	60.9%



Interventions (n=112)	"I do not agree" ^k
Intervertebral chemonucleolysis	60.0%
Partial resection of the tibia or fibula	58.3%
Removal of orthopaedic device of the femur	56.5%
Percutaneous vertebral augmentation	53.3%
Joint replacement of foot or toe	52.4%
Curettage (including exostectomy) of a vertebra	47.4%
Percutaneous vertebroplasty	46.7%
Partial resection of the radius or ulna	43.5%
Partial resection of the scapula or clavicle	43.5%
Any combination of the above mentioned procedures	41.7%
Recurrent shoulder dislocation repair	41.7%
Curettage (including exostectomy) of the pelvis	41.2%
Transfer of foot tendon	40.0%
Hip synovectomy	37.5%
Partial resection of the patella	36.4%
Hallux valgus repair	33.3%
Removal of orthopaedic device of a rib or sternum	33.3%
Rotator cuff repair	33.3%
Advancement/recession of foot tendon	32.0%
Removal of orthopaedic device of the knee	30.4%
Metacarpocarpal fusion	30.0%
Biopsy of a vertebra	27.8%
Curettage (including exostectomy) of a rib or the sternum	26.3%
Arthroscopic mosaicplast of the knee	26.1%
Joint replacement of hand or finger	25.0%
Partial resection of a tarsal or metatarsal	24.0%
Curettage (including exostectomy) of the femur	23.8%
Ankle synovectomy	22.7%
Amputation of a thumb	21.7%
Arthroscopic repair of collateral ligaments knee	21.7%



Interventions (n=112)	“I do not agree” ^k
Arthroscopic repair of cruciate ligaments of the knee	20.8%
Total resection of a phalange	20.8%
Removal of orthopaedic device of the shoulder	20.0%
Suture of foot tendon	19.2%
Knee synovectomy	18.2%
Metacarpophalangeal fusion	18.2%
Shoulder synovectomy	18.2%
Removal of orthopaedic device of the foot	14.8%
Removal of orthopaedic device of the tibia or fibula	14.8%
Removal of orthopaedic device of the ankle	14.8%
Biopsy of the pelvis	14.3%
Elbow synovectomy	13.6%
Curettage (including exostectomy) of the tibia or fibula	13.0%
Partial resection of a carpal or metacarpal	13.0%
Proximal biceps tendon repair	13.0%
Removal of orthopaedic device of the scapula or clavicle	13.0%
Arthroscopic patellar stabilization	12.5%
Reconstruction of hand tendon pulley	12.5%
Removal of orthopaedic device of the patella	12.5%
Suture of hand tendon	12.5%
Amputation of a finger	12.0%
Removal of orthopaedic device of the humerus	12.0%
Removal of orthopaedic device of the elbow	12.0%
Partial resection of a phalange	11.5%
Amputation of a toe	11.1%
Diagnostic spine arthroscopy	11.1%
Biopsy of the femur	9.1%
Curettage (including exostectomy) of the scapula or clavicle	8.7%
Interphalangeal fusion	8.7%
Release of hand tendon	8.3%



Interventions (n=112)	"I do not agree" ^k
Biopsy of a rib or the sternum	4.8%
Foot or toe synovectomy	4.8%
Curettage (including exostectomy) of the humerus	4.4%
Acromioplasty	4.2%
Biopsy of the scapula or clavicle	4.2%
Dupuytren's contracture repair	4.2%
Carpal tunnel release	4.0%
Removal of orthopaedic device of a carpal or metacarpal	4.0%
Removal of orthopaedic device of the hand	4.0%
Removal of orthopaedic device of the radius or ulna	4.0%
Removal of orthopaedic device of the wrist	4.0%
Curettage (including exostectomy) of a tarsal or metatarsal	3.9%
Curettage (including exostectomy) of a phalange	3.7%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", pain was the most common^l (mentioned by at least one expert for 114 interventions). Other common reasons were: rehabilitation (87 interventions), risk of bleeding (83 interventions), need for clinical monitoring (82 interventions), difficult homecare / post-operative management (79 interventions), risk of swelling (75 interventions), need for wound dressing and control of the wound (74 interventions), need for post-operative antibiotics/medication (67 interventions), risk of haematoma (70 interventions), need for post-surgical drain (70 interventions) and risk of complications (66 interventions). For 91 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Only two additional procedures were suggested by the surgeons: bursectomy (classified in APR-DRG 317) and arthrotomy (classified in different APR-DRGs in function of the anatomical site).

14.2.1.8. Plastic & dermatological surgery

Sample characteristics

In total, 15 experts were invited to complete the survey on plastic and dermatological surgery. Among them, 13 (86.7%) actually completed the survey. More detailed characteristics of the sample are given in Table 70.

**Table 70 – Sample characteristics for plastic and dermatological surgery expert group**

		Invited (n=15)		Respondents (n=13)	
Speciality	Surgeon	9	60.0%	7	53.9%
	Anaesthetist	6	40.0%	6	46.2%
Language	Dutch	7	46.7%	6	46.2%
	French	8	53.3%	7	53.9%
Hospital	University	6	40.0%	5	38.5%
	Non-university	9	60.0%	8	61.5%

Interventions suggested by KCE divided in three categories

In Table 71 the 30 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 71 – Interventions suggested by KCE divided in three categories

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	14 (47%)	0 (0%)	16 (53%)

Category 1: Consensus on the eligibility for a day-care approach**Table 72 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n=14)
Excision of skin tumour (or lesion) of the lip. with suture
Excision of skin tumour (or lesion) of the face. with suture
Excision of other skin tumour (or lesion). with suture
Excision of sentinel lymph node. inguinal
Excision of minor lesion of eyelid
Excision of major lesion of the eyelid (partial thickness)
Blepharoptosis repair
Eyelid ptosis repair
Excision of lesion of the external ear
Surgical correction of prominent ear
Limited rhinoplasty



Interventions (n=14)

Rhinoplasty without septoplasty

Onychoplasty

Size reduction (liposuction)

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

Category 3: No consensus on the eligibility for a day-care approach

Table 73 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=16)	“I do not agree” ^k
Total nasal reconstruction	77.8%
Attachment of skin pedicle flap to the hand	66.7%
Attachment of skin pedicle flap to another site	63.6%
Preparation of skin pedicle flap (main procedure)	60.0%
Advancement of skin pedicle flap	44.4%
Rhinoplasty with septoplasty	40.0%
Other radical excision of skin tumour (or lesion). with graft	25.0%
Radical excision of skin tumour (or lesion) of the face. with graft	25.0%
Excision of major lesion of eyelid (full thickness)	23.1%
Radical excision of skin tumour (or lesion) of the lip. with graft	23.1%
Facial rhytidectomy	20.0%
Fat graft of skin and subcutaneous tissue	20.0%
Excision of other sentinel lymph node	9.1%
Excision of sentinel lymph node. axillar	9.1%
Excision of sentinel lymph node. supraclavicular	9.1%
Scar relaxation	8.3%



Reasons for non-eligibility for day care

Amongst the reasons for answering “I don’t agree”, graft / flap surveillance was the most common^l (mentioned by at least one expert for 10 interventions). Other common reasons were: risk of bleeding (8 interventions), ischemic risk (4 interventions) and risk of haematoma (4 interventions). For 10 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Four additional procedures were suggested by the respondents of the online survey: aesthetic abdominoplasty (which was combined with “size reduction (liposuction)” – APR-DRG 634), free skin graft (APR-DRG 361), full thickness graft (APR-DRG 361) and insertion of a tissue expander (APR-DRG 361).

14.2.1.9. Thoracic surgery

Sample characteristics

In total, 12 experts were invited to complete the survey on thoracic surgery. Among them, 10 (83.3%) actually completed the survey. More detailed characteristics of the sample are given in Table 74.

Table 74 – Sample characteristics for thoracic surgery expert group

		Invited (n=12)		Respondents (n=10)	
Speciality	Surgeon	7	58.3%	6	60.0%
	Anaesthetist	5	41.7%	4	40.0%
Language	Dutch	7	58.3%	6	60.0%
	French	5	41.7%	4	40.0%
Hospital	University	6	50.0%	5	50.0%
	Non-university	6	50.0%	5	50.0%

Interventions suggested by KCE divided in three categories

In Table 75 the 24 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

Table 75 – Interventions suggested by KCE divided in three categories

		Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number interventions	of	1 (4%)	4 (17%)	19 (79%)



Category 1: Consensus on the eligibility for a day-care approach

Table 76 – Interventions for which all respondents agreed on the eligibility for a day-care approach

Interventions (n=1)	
Removal of pacemaker/ defibrillator	

Category 2: Consensus on the non-eligibility for a day-care approach

Table 77 – Interventions for which all respondents agreed on the non-eligibility for a day-care approach

Interventions (n=4)	
Thoracoscopic lobectomy	
Thoracoscopic pneumonectomy	
Thoracoscopic lung decortication	
Percutaneous aortic valvuloplasty (TAVI)	

Category 3: No consensus on the eligibility for a day-care approach

Table 78 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=19)	“I do not agree” ^k
Thoracoscopic segmental lung resection	88.9%
Thoracoscopic excision of chest wall lesion	62.5%
Thoracoscopic excision of lesion of lung	55.6%
Excision of mediastinal lesion by mediastinoscopy	50.0%
Percutaneous valvuloplasty	50.0%
Insertion of pacemaker / defibrillator	42.9%
Thoracoscopic drainage of pleural cavity	40.0%
Insertion of transvenous lead into atrium	33.3%
Insertion of transvenous lead into atrium and ventricle	33.3%
Insertion of transvenous lead into ventricle	33.3%
Percutaneous transluminal coronary angioplasty with stent	33.3%
Percutaneous transluminal coronary angioplasty without stent	33.3%
Removal of transvenous lead	33.3%



Interventions (n=19)	"I do not agree" ^k
Replacement of transvenous lead	33.3%
Revision or repositioning of transvenous lead	33.3%
Thoracoscopic lung biopsy	30.0%
Thoracoscopic pleural biopsy	20.0%
Replacement of pacemaker / defibrillator	14.3%
Lymph node biopsy by mediastinoscopy	10.0%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", risk of complications requiring clinical monitoring was the most common^l (mentioned by at least one expert for 21 interventions). Other common reasons were: risk of bleeding (16 interventions), risk of pneumothorax (14 interventions), pain (9 interventions), need for a post-surgical drain (9 interventions) and risk of air leak (8 interventions). For 15 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Three additional procedures were suggested by the respondents of the online survey: thoracoscopic sympathectomy (APR-DRG 180), thoracoscopic vagotomy (APR-DRG 220) and diagnostic mediastinotomy (APR-DRG 121).

14.2.1.10. Urology

Sample characteristics

In total, 20 experts were invited to complete the survey on urology. Among them, 14 (70%) actually completed the survey; one withdrew. More detailed characteristics of the sample are given in Table 79.

Table 79 – Sample characteristics for urology expert group

		Invited (n=20)		Respondents (n=14)	
Speciality	Surgeon	15	75.0%	10	71.4%
	Anaesthetist	5	25.0%	4	28.6%
Language	Dutch	10	50.0%	7	50.0%
	French	10	50.0%	7	50.0%
Hospital	University	8	40.0%	6	42.9%
	Non-university	12	60.0%	8	57.1%

Interventions suggested by KCE divided in three categories

In Table 80 the 45 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

**Table 80 – Interventions suggested by KCE divided in three categories**

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	15 (33%)	1 (2%)	29 (64%)

Category 1: Consensus on the eligibility for a day-care approach**Table 81 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n=15)
Ureteral catheterization
Percutaneous cystostomy
Diagnostic cystoscopy
Biopsy of the kidney
Biopsy of the testis
Urethrotomy
Urethral meatotomy
Urethral dilation
Circumcision
Dorsal/lateral slit of prepuce
Division of penile adhesions
Excision of varicocele
Excision of hydrocele
Ligation of vas deferens
Vasectomy

Category 2: Consensus on the non-eligibility for a day-care approach**Table 82 – Interventions for which all respondents agreed on the non-eligibility for a day-care approach**

Interventions (n=1)
Transurethral prostatectomy



Category 3: No consensus on the eligibility for a day-care approach

Table 83 – Interventions for which there was no consensus on the eligibility for a day-care approach

Interventions (n=29)	“I do not agree” ^k
Laparoscopic partial nephrectomy	91.7%
Laparoscopic total nephrectomy	83.3%
Repair of hypospadias or epispadias	81.8%
Transurethral excision/destruction of bladder lesion (or tumour)	76.9%
Laparoscopic sacral colpopexy	75.0%
Cystostomy (not percutaneous)	69.2%
Ureterotomy	58.3%
Bladder sphincterotomy	41.7%
Repair of urinary incontinence by tension-free vaginal tape	30.8%
Release of chordee	25.0%
Transurethral removal of obstruction from renal pelvis	23.1%
Percutaneous pyelostomy	22.2%
Release of urethral stricture	15.4%
Repair of urinary incontinence by trans-obturator tape	15.4%
Ureteral meatotomy	15.4%
Bilateral orchidectomy	14.3%
Bilateral orchidopexy	14.3%
Biopsy of the bladder	14.3%
Biopsy of the ureter	14.3%
Percutaneous nephrostomy	14.3%
Transurethral removal of ureteral obstruction	14.3%
Unilateral orchidopexy	14.3%
Treatment of peritoneo-vaginal canal	7.7%
Urethral meatoplasty	7.7%
Biopsy of the urethra	7.1%
Excision of cyst of epididymis	7.1%
Lithotripsy	7.1%



Interventions (n=29)	“I do not agree” ^k
Unilateral orchidectomy	7.1%
Ureteral dilation	7.1%

Reasons for non-eligibility for day care

Amongst the reasons for answering “I don’t agree”, risk of complications requiring clinical monitoring was the most common^l (mentioned by at least one expert for 25 interventions). Other common reasons were: risk of bleeding (15 interventions) and pain (11 interventions). For 26 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Four additional procedures were suggested by the respondents of the online survey: nephroscopy, ureteroscopy, testis prosthesis (APR-DRG 483) and treatment of condyloma acuminata (APR-DRG 481). As the first two are diagnostic procedures and no curative surgical interventions, they were considered out of scope for the present study.

14.2.1.11. Vascular surgery

Sample characteristics

In total, 16 experts were invited to complete the survey on vascular surgery. Among them, 15 (94%) actually completed the survey. More detailed characteristics of the sample are given in Table 84.

Table 84 – Sample characteristics for vascular surgery expert group

		Invited (n=16)		Respondents (n=15)	
Speciality	Surgeon	11	68.8%	10	66.7%
	Anaesthetist	5	31.3%	5	33.3%
Language	Dutch	11	68.8%	10	66.7%
	French	5	31.3%	5	33.3%
Hospital	University	5	31.3%	5	33.3%
	Non-university	11	68.3%	10	66.7%

Interventions (suggested by KCE) divided in three categories

In Table 85 the 22 interventions suggested by KCE are subdivided in three categories, depending on the answers given by the experts.

**Table 85 – Interventions suggested by KCE divided in three categories**

	Consensus on eligibility ⁱ	Consensus on non-eligibility ^j	No consensus on eligibility
Number of interventions	10 (45%)	0 (0%)	12 (55%)

Category 1: Consensus on the eligibility for a day-care approach**Table 86 – Interventions for which all respondents agreed on the eligibility for a day-care approach**

Interventions (n= 10)
Insertion of vena cava filter
Electro-fulguration of one varicose vein
Electro-fulguration of multiple varicose veins
Resection of external saphenous vein
Resection of internal saphenous vein
Ligation and stripping of saphenous vein. unilateral
Ligation and stripping of saphenous vein. bilateral
Arteriovenostomy (formation of fistula) for renal dialysis
Removal of arteriovenous shunt
Biopsy of artery

Category 2: Consensus on the non-eligibility for a day-care approach

There were no interventions for which all respondents agreed that they were not eligible for a day-care approach.

Category 3: No consensus on the eligibility for a day-care approach**Table 87 – Interventions for which there was no consensus on the eligibility for a day-care approach**

Interventions (n=12)	“I do not agree” ^k
Insertion of endograft into the aorta abdominal	85.7%
Angioplasty: intracranial vessel without stent	80.0%
Angioplasty: intracranial vessel with stent	80.0%
Angioplasty: precerebral extracranial vessel without stent	80.0%
Angioplasty: precerebral extracranial vessel with stent	70.0%



Interventions (n=12)	"I do not agree" ^k
Angioplasty: abdominal artery with stent	46.2%
Angioplasty: abdominal artery without stent	46.2%
Angioplasty: lower limb artery without stent	25.0%
Angioplasty: lower limb artery with stent	16.7%
Angioplasty: upper limb vessel without stent	16.7%
Angioplasty: upper limb vessel with stent	15.4%
Revision of arteriovenous shunt	13.3%

Reasons for non-eligibility for day care

Amongst the reasons for answering "I don't agree", risk of bleeding was the most common^l (mentioned by at least one expert for 10 interventions). Other common reasons were: anticoagulation monitoring (9 interventions), and risk of complications requiring clinical monitoring (8 interventions). For 8 interventions, additional reasons were mentioned.

Interventions suggested by the respondents of the online survey

Three additional procedures were suggested by the respondents of the online survey: venous catheterisation for renal dialysis, renal angioplasty without stent (APR-DRG 447) and renal angioplasty with stent (APR-DRG 447).



14.2.2. Exploration of the procedures considered not eligible for day care

Table 88 – Procedures considered not eligible for a day-care approach according to the respondents of the online survey, subdivided by specialty (surgeon vs. anaesthetist), mother tongue and affiliation of the expert

	Mean	Standard deviation	Min	Max
Abdominal surgery - 57 suggested procedures				
All respondents	15	9	1	37
Surgeon	16	9	1	37
Anaesthetist	11	8	2	24
Dutch	13	6	2	24
French	17	10	1	37
University	16	7	2	24
Non-university	15	9	1	37
Breast surgery - 22 suggested procedures				
All respondents	6	4	0	15
Surgeon	8	3	4	15
Anaesthetist	1	1	0	3
Dutch	7	3	2	13
French	6	5	0	15
University	7	4	0	13
Non-university	6	4	0	15
Gynaecology - 42 suggested procedures				
All respondents	14	7	0	26
Surgeon	15	6	6	25
Anaesthetist	11	8	0	26
Dutch	13	7	0	25
French	16	7	9	26
University	14	8	0	22
Non-university	14	6	6	26



	Mean	Standard deviation	Min	Max
Head & Neck surgery - 79 suggested procedures				
All respondents	19	8	4	38
Surgeon	21	8	8	38
Anaesthetist	16	7	4	23
Dutch	19	5	12	26
French	19	10	4	38
University	19	5	12	26
Non-university	19	10	4	38
Neurosurgery - 16 suggested procedures				
All respondents	5	3	0	9
Surgeon	5	2	1	9
Anaesthetist	2	2	0	5
Dutch	6	3	0	9
French	3	2	1	5
University	6	2	3	9
Non-university	4	3	0	9
Ophthalmology - 45 suggested procedures				
All respondents	6	8	0	29
Surgeon	8	8	0	29
Anaesthetist	1	1	0	3
Dutch	7	10	0	29
French	5	6	0	18
University	9	10	0	29
Non-university	4	6	0	18
Orthopaedic surgery - 152 suggested procedures				
All respondents	44	22	8	82
Surgeon	42	23	8	82
Anaesthetist	50	14	25	64
Dutch	47	19	21	81
French	41	23	8	82



	Mean	Standard deviation	Min	Max
University	45	20	25	82
Non-university	44	22	8	81
Plastic & dermatological surgery - 30 suggested procedures				
All respondents	4	4	0	12
Surgeon	4	4	0	12
Anaesthetist	4	3	0	8
Dutch	4	4	0	12
French	5	3	0	8
University	5	4	0	12
Non-university	4	3	0	8
Thoracic surgery - 24 suggested procedures				
All respondents	6	5	0	17
Surgeon	10	5	4	17
Anaesthetist	5	3	0	8
Dutch	7	5	0	17
French	10	4	5	15
University	6	4	0	10
Non-university	10	5	5	17
Urologic surgery - 45 suggested procedures				
All respondents	9	6	0	22
Surgeon	11	5	4	22
Anaesthetist	3	3	0	9
Dutch	7	4	0	14
French	10	7	2	22
University	9	5	0	16
Non-university	9	6	2	22
Vascular surgery - 22 suggested procedures				
All respondents	4	3	0	9
Surgeon	4	3	0	9
Anaesthetist	5	3	1	9



	Mean	Standard deviation	Min	Max
Dutch	3	2	0	7
French	5	3	1	9
University	4	3	2	9
Non-university	4	3	0	9

Dutch: Dutch speaking respondent; French: French speaking respondent



15. ELECTIVE SURGICAL PROCEDURES: NATIONAL DAY-CARE RATE, RESULTS OF THE ONLINE SURVEY AND COMPARISON WITH THE LIST OF INAPPROPRIATE SURGICAL INPATIENT STAYS (FOD – SPF)

15.1. Abdominal surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
220	Repair diaphragmatic hernia by laparoscopic abdominal approach	79	17	836	1.91	84.21	No
	Repair diaphragmatic hernia by abdominal approach	61	4	177	6.78	94.44	No
221	Percutaneous gastrojejunostomy	13	0	19	52.63	17.65	No
	Repair of rectal mucosal prolapse through perineum approach	86	23	666	9.01	47.06	No
222	Laparoscopic fundoplication	103	81	3 657	0.19	61.11	No
223	Closure of ileostomy	100	68	2 539	0.24	NA	No
	Closure of colostomy	104	64	1 706	0.23	90.00	No
	Excision of Meckel diverticula	80	6	342	46.20	NA	No
	Repair of pericostomy hernia	76	4	255	1.18	75.00	No
	Colopexy	20	0	21	4.76	NA	No
224	Laparoscopic lysis of peritoneal adhesions	102	48	1 402	19.26	47.37	No
225	Appendectomy	104	87	3 304	7.84	35.00	No
226	Haemorrhoidectomy	103	102	13 515	44.18	15.00	Yes
	Closure of anal fistula	87	40	1 490	58.59	20.00	Yes
	Anal sphincterotomy (neither local excision of anal lesion nor anoplasty)	83	19	530	62.83	5.26	Yes
	Anoplasty (without local excision of anal lesion)	59	9	320	19.38	NA	No
	Local excision of anal lesion and anoplasty (without sphincterectomy)	8	0	14	42.86	26.32	Yes
	Haemorrhoids cryotherapy	7	0	8	75.00	0.00	No
	Anal fistulectomy	104	99	4 972	54.61	25.00	Yes
	Haemorrhoids ligation	98	62	4 247	79.68	0.00	Yes
	Local excision of anal lesion and sphincterectomy and anoplasty	97	67	3 852	73.10	26.32	Yes



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Local excision of anal lesion (fissurectomy or condyloma accuminata (neither sphincterectomy nor anoplasty))	102	85	3 332	68.46	10.00	Yes
	Anal fistulotomy	98	54	2 797	68.72	10.00	Yes
	Other surgery on hemorrhoids	96	56	2 685	52.44	10.00	Yes
	Incision of perianal abscess	103	75	2 609	44.88	20.00	No
	Local excision of anal lesion and sphincterectomy (without anoplasty)	98	63	2 564	66.58	15.00	Yes
	Repair incisional hernia with prosthesis (or graft)	103	103	11 344	5.62	50.00	No
	Repair anterior abdominal wall hernia with prosthesis (or graft)	103	90	3 025	25.95	45.00	No
227	Repair incisional hernia without prosthesis (or graft)	103	72	2 360	20.34	35.00	No
	Repair anterior abdominal wall hernia without prosthesis (or graft)	104	73	2 264	53.89	40.00	No
	Repair of inguinal hernia, unilateral with prosthesis or graft (non laparoscopic)	103	103	22 395	36.28	0.00	No
	Unilateral repair of femoral hernia without prosthesis (or graft)	82	8	410	50.73	0.00	No
	Repair femoral hernia bilateral with prosthesis (or graft)	54	1	150	21.33	10.53	No
	Repair femoral hernia bilateral	14	0	18	44.44	10.53	No
	Repair of inguinal hernia, bilateral, with prosthesis or graft (laparoscopic)	101	90	15 032	26.64	NA	No
	Repair of inguinal hernia, unilateral with prosthesis or graft (laparoscopic)	102	89	13 909	44.97	NA	No
228	Repair of umbilical hernia with prosthesis (or graft)	104	102	9 919	37.48	5.00	No
	Repair of umbilical hernia without prosthesis (or graft)	104	102	7 572	54.71	5.00	No
	Repair of inguinal hernia, unilateral, without prosthesis or graft, or unspecified (non-laparoscopic)	104	99	7 409	56.65	0.00	No
	Repair of inguinal hernia, bilateral, with prosthesis or graft (non-laparoscopic)	104	93	5 981	14.18	10.00	No
	Repair of inguinal hernia, bilateral, without prosthesis or graft, or unspecified (non-laparoscopic)	98	51	1 712	37.50	10.00	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Unilateral repair of femoral hernia with prosthesis (or graft)	100	41	1 019	30.23	0.00	No
229	Diagnostic laparoscopy	104	47	1 486	34.45	0.00	No
	Excision of retroperitoneal tumour	93	13	562	7.65	NA	No
	Biopsy of peritoneum	87	13	467	14.99	5.00	No
	Excision biopsy of inguinal lymph nodes	76	12	396	47.73	5.00	No
	Excision biopsy of cervical lymph nodes	76	12	383	48.04	0.00	No
	Excision biopsy of axillary lymph nodes	75	13	383	48.04	5.26	No
	Biopsy of liver	40	1	76	19.74	15.79	No
	Laparoscopic splenectomy	32	0	51	0.00	78.95	No
263	Laparoscopic cholecystectomy	104	104	44 022	5.88	20.00	No
	Biopsy of liver	84	14	495	18.38	15.79	No
264	Diagnostic laparoscopy	73	7	349	13.75	0.00	No
	Biopsy of peritoneum	49	1	128	11.72	5.00	No
	Laparoscopic lysis of peritoneal adhesions	19	0	27	3.70	47.37	No
	Excision of retroperitoneal tumour	17	0	26	3.85	NA	No
	Choledochotomy	4	0	4	50.00	NA	No
401	Laparoscopic adrenalectomy, unilateral	81	14	558	0.18	78.57	No
	Laparoscopic adrenalectomy, bilateral	7	1	29	0.00	84.62	No
	Laparoscopic adrenalectomy, partial	9	0	14	0.00	78.57	No
403	Partial gastrectomy or gastric Sleeve surgery	92	68	5 993	0.03	94.12	No
	Insertion of gastric banding (or other restrictive device) for bariatric surgery	88	56	4 446	3.37	38.89	No
	Laparoscopic gastroplasty (vertical gastroplasty)	58	18	2 386	0.21	85.71	No
	Removal of gastric banding (or other restrictive device)	89	45	1 973	0.41	22.22	No
	Revision or replacement of gastric banding (or other restrictive device)	32	1	74	4.05	47.06	No
	Adjustment of size adjustable gastric restrictive device	9	2	43	60.47	6.25	No
442	Biopsy of kidney	19	2	56	0.00	15.38	No
443	Biopsy of kidney	11	0	28	0.00	15.38	No
No APR-DRG	Insertion of totally implantable vascular access device (VAD)	104	104	46 058	73.41	NA	No
	Haemorrhoids cauterization	61	19	821	76.37	0.00	No
	Surgery of pilonidal cyst	85	10	390	52.82	10.00	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Percutaneous jejunostomy	66	4	231	18.61	23.53	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.2. Breast surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
362	Unilateral simple mastectomy	100	71	3 711	0.81	66.67	No
	Unilateral subcutaneous mastectomy, without implant	84	32	1 020	23.73	66.67	No
	Bilateral subcutaneous mastectomy, without implant	75	22	636	35.38	87.50	No
	Bilateral simple mastectomy	68	7	363	1.93	81.25	No
	Unilateral subcutaneous mastectomy, with implant	42	5	164	1.22	72.22	No
	Bilateral subcutaneous mastectomy, with implant	36	1	88	0.00	93.75	No
363	Local excision of lesion of breast	103	103	25 023	34.40	NA	No
	Bilateral reduction mammoplasty	103	98	12 105	8.97	23.08	No
	Bilateral augmentation mammoplasty, with implant	97	81	7 439	38.61	18.18	No
	Breast quadrantectomy	90	51	3 560	6.04	22.22	No
	Reconstruction of breast nipple	99	53	2 559	60.92	0.00	No
	Removal of breast implant	95	52	2 331	30.42	15.38	No
	Excision/biopsy of breast tissue	94	35	1 885	29.07	0.00	No
	Unilateral reduction mammoplasty	102	55	1 742	28.59	15.38	No
	Excision of breast tissue in man (gynecomastia)	101	61	1 731	59.79	NA	No
	Unilateral augmentation mammoplasty, with implant	93	51	1 450	25.03	18.18	No
	Revision of breast implant	83	28	1 077	45.78	38.46	No
	Insertion of breast tissue expander	66	6	283	13.43	NA	No
	Reconstruction of breast with implant	45	0	94	22.34	46.67	No
	364	Sentinel lymph node biopsy	84	16	625	17.76	5.56
No APR- DRG	Unilateral injection into breast for augmentation	36	6	250	45.60	NA	No
	Bilateral injection into breast for augmentation	27	2	77	31.17	NA	No
	Tattooing nipple	52	15	646	70.59	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.3. Gynaecological surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
226	Excision of endometriosis of the rectovaginal septum	1	0	1	0.00	94.12	No
510	Vulvectomy, total	32	1	91	2.20	100.00	No
	Laparoscopic ovarian aspiration biopsy (or follicular aspiration)	54	1	127	16.54	0.00	No
	Laparoscopic subtotal hysterectomy	5	0	5	0.00	64.71	No
	Endometrial ablation (dilation-curettage) by hysteroscopy	4	0	4	25.00	0.00	No
	Simple ovarian cyst resection	36	0	46	15.22	0.00	No
	Vaginal (laparoscopically assisted) hysterectomy	21	0	35	0.00	83.33	No
	Laparoscopic total hysterectomy	18	0	32	0.00	83.33	No
511	Laparoscopic unilateral oophorectomy for other indication than endometriosis	17	0	20	15.00	16.67	No
	Laparoscopic bilateral oophorectomy for other indication than endometriosis	12	0	14	0.00	35.29	No
	Laparoscopic unilateral salpingectomy for other indication than endometriosis	8	0	11	0.00	5.56	No
	Laparoscopic bilateral salpingectomy for other indication than endometriosis	10	0	10	0.00	11.11	No
	Uterine polypectomy by hysteroscopy	7	0	8	37.50	0.00	No
	Vaginal (laparoscopically assisted) hysterectomy	90	30	767	0.13	83.33	No
	Laparoscopic unilateral oophorectomy for other indication than endometriosis	5	0	5	0.00	16.67	No
	Laparoscopic unilateral salpingectomy for other indication than endometriosis	2	0	3	0.00	5.56	No
	Salpingotomy	1	0	1	0.00	NA	No
	Laparoscopic total hysterectomy	52	7	277	0.36	83.33	No
512	Endometrial ablation (dilation-curettage) by hysteroscopy	57	6	233	75.54	0.00	No
	Uterine polypectomy by hysteroscopy	63	3	179	75.98	0.00	No
	Laparoscopic bilateral salpingectomy for other indication than endometriosis	22	0	35	0.00	11.11	No
	Laparoscopic subtotal hysterectomy	10	0	19	0.00	64.71	No
	Laparoscopic ovarian aspiration biopsy (or follicular aspiration)	10	0	13	7.69	0.00	No
	Simple ovarian cyst resection	10	0	10	20.00	0.00	No
	Laparoscopic bilateral oophorectomy for other indication than endometriosis	8	0	10	0.00	35.29	No
513	Uterine polypectomy by hysteroscopy	100	92	13 136	81.30	0.00	Yes
	Reopening of fallopian tube	69	30	892	11.55	NA	No



APR-DRG	Procedure	# Hospitals	# Hospitals_minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Laparoscopic unilateral salpingectomy for other indication than endometriosis	94	27	836	22.49	5.56	No
	Laparoscopic bilateral oophorectomy for other indication than endometriosis	96	28	731	15.46	35.29	No
	Laparoscopic bilateral salpingectomy for other indication than endometriosis	89	23	724	25.28	11.11	No
	Laparoscopic bilateral salpingo-oophorectomy for endometriosis	74	17	581	2.58	47.06	Yes
	Laparoscopic ovarian aspiration biopsy (or follicular aspiration)	78	11	391	30.95	0.00	No
	Laparoscopic unilateral salpingo-oophorectomy for endometriosis	78	5	356	9.55	47.06	Yes
	Salpingostomy for removal of ectopic pregnancy	45	3	165	31.52	NA	No
	Laparoscopic bilateral salpingectomy for endometriosis	43	0	109	3.67	29.41	Yes
	Laparoscopic unilateral oophorectomy for endometriosis	57	0	105	15.24	42.11	No
	Vaginal (laparoscopically assisted) hysterectomy	102	101	13 047	0.54	83.33	No
	Salpingotomy	41	0	80	22.50	NA	No
	Laparoscopic unilateral salpingectomy for endometriosis	34	0	59	23.73	26.32	Yes
	Laparoscopic bilateral oophorectomy for endometriosis	20	0	26	11.54	44.44	No
	Salpingectomy for removal of ectopic pregnancy	6	0	6	16.67	NA	No
	Catheterization of Fallopian tubes by hysteroscopy	3	0	3	33.33	0.00	Yes
	Endometrial ablation (dilation-curettage) by hysteroscopy	98	84	12 575	84.64	0.00	Yes
	Simple ovarian cyst resection	104	99	6 203	33.48	0.00	No
	Resection of ovarian endometriosis cyst	98	60	1 933	26.38	26.32	No
	Laparoscopic total hysterectomy	84	29	1 487	1.28	83.33	No
	Radical endometriosis excision	80	23	1 476	8.06	100.00	No
	Laparoscopic subtotal hysterectomy	58	29	1 414	0.07	64.71	No
	Laparoscopic unilateral oophorectomy for other indication than endometriosis	104	54	1 274	19.54	16.67	No
514	Repair of urinary incontinence by trans-obturator tape or tension-free vaginal tape	103	102	17 616	16.77	NA	No
	Posterior colporrhaphy without graft or prosthesis	103	85	2 884	2.95	58.82	No
	Anterior colporrhaphy without graft or prosthesis	103	77	2 565	2.26	61.11	No
	Anterior colporrhaphy with graft or prosthesis	92	58	2 105	0.43	81.25	No
	Laparoscopic sacral colpopexy	92	59	2 030	0.79	93.33	No
	Posterior colporrhaphy with graft or prosthesis	97	50	1 970	0.25	81.25	No
	Vaginoplasty	20	3	73	64.38	18.75	No
517	Endometrial biopsy/aspiration + hysteroscopy	99	91	23 203	93.43	0.00	Yes



APR-DRG	Procedure	# Hospitals	# Hospitals_minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
518	Hysteroscopic septum resection	44	9	516	89.34	NA	No
	Fallopian tubes ligation	103	100	10 367	87.35	NA	Yes
	Cerclage of cervix	29	0	75	77.33	NA	No
	Culdotomy	20	0	25	32.00	20.00	No
	Vulvoplasty	99	71	2 607	91.02	5.88	Yes
	Vaginoplasty	86	21	811	85.20	18.75	No
	Vulvectomy, partial	89	18	604	30.96	76.47	No
	Vulvectomy, total	90	12	437	59.27	100.00	No
	Vulvotomy	86	11	434	82.49	7.69	No
	Trachelectomy	67	10	367	58.04	61.54	Yes
	Catheterization of Fallopian tubes by hysteroscopy	9	2	93	37.63	0.00	Yes
	Vaginitomy	50	0	89	44.94	0.00	No
	Vaginal (laparoscopically assisted) hysterectomy	102	88	5 579	0.16	83.33	No
	519	Laparoscopic unilateral salpingectomy for other indication than endometriosis	40	1	97	0.00	5.56
Laparoscopic unilateral oophorectomy for other indication than endometriosis		27	0	40	0.00	16.67	No
Laparoscopic bilateral oophorectomy for other indication than endometriosis		24	0	31	3.23	35.29	No
Reopening of fallopian tube		6	0	12	0.00	NA	No
Laparoscopic ovarian aspiration biopsy (or follicular aspiration)		6	0	10	20.00	0.00	No
Salpingostomy for removal of ectopic pregnancy		5	0	6	16.67	NA	No
Salpingotomy		3	0	3	0.00	NA	No
Uterine polypectomy by hysteroscopy		100	60	3 653	33.34	0.00	Yes
Uterine myomectomy by hysteroscopy		96	58	2 046	78.30	5.56	Yes
Endometrial ablation (dilation-curettage) by hysteroscopy		77	31	1 231	81.15	0.00	Yes
Laparoscopic total hysterectomy		74	28	1 206	0.17	83.33	No
Laparoscopic subtotal hysterectomy		53	24	1 178	0.17	64.71	No
Uterine myomectomy by laparoscopy		73	29	1 055	12.61	NA	Yes
Laparoscopic bilateral salpingectomy for other indication than endometriosis		67	8	281	0.36	11.11	No
No APR-DRG	Simple ovarian cyst resection	61	3	202	6.44	0.00	No
	Conization of the cervix	103	102	24 749	92.65	0	No
	Destruction of lesion of cervix	101	92	14 032	93.16	NA	No
	Insufflation of Fallopian tubes	90	65	5 717	54.84	0	No
	Excision of lesion of vagina	102	70	2 201	66.33	NA	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Marsupialization of Bartholin's gland (cyst)	101	64	1 681	82.93	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.

15.4. Head & Neck surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
21	Excision of neurinoma acoustic	25	5	163	1.23	NA	No
	Transseptal hypophysectomy (transsphenoidal)	3	0	3	0.00	NA	No
26	Vestibular neurectomy	100	55	2 403	79.19	NA	Yes
89	Intermaxillary, uni- or bilateral osteoplasty (-tomy) (total)	66	35	3 410	8.15	NA	No
	Partial mandibulectomy	54	6	206	37.38	NA	No
90	Arytenoidectomy	33	3	159	6.92	NA	No
	Cordopexy, vocal or arytenoidopexy	12	0	33	12.12	NA	No
91	Cochlear implant	28	16	779	6.03	NA	No
	Unilateral radical neck dissection	62	18	508	0.39	100.00	No
	Bilateral radical neck dissection	34	3	114	0.00	100.00	No
92	Local excision of lesion or cyst of facial bone	101	85	18 162	96.75	12.50	No
	Facial bone graft	86	58	6 304	73.00	57.14	No
	Facial synthetic implant	80	40	4 657	57.16	14.29	No
	Intermaxillary, uni- or bilateral osteoplasty (-tomy) (partial)	85	53	3 411	47.67	NA	No
	Uni- or bilateral malar osteotomy	71	24	2 033	49.09	NA	No
	Mandibular osteotomy, distraction or osteoplasty	59	26	1 864	9.23	NA	No
	Removal of internal fixation device from facial bone	67	22	653	69.68	NA	No
93	Uni- or bilateral ethmoidotomy/ethmoidectomy	103	95	16 013	29.96	NA	Yes
	Excision of lesion of the maxillary sinus	104	82	7 565	39.93	16.67	Yes
	Closure of nasal sinus fistula	87	52	5 461	95.97	10.00	Yes
	Uni- or bilateral frontal sinusotomy	64	33	2 684	35.28	NA	Yes
	Mastoidectomy	82	46	2 169	9.17	33.33	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
95	Sphenoidotomy	66	32	1 970	20.20	50.00	No
	Other plastic repair of palate	97	56	2 494	35.89	62.50	No
	Staphyloplasty (or staphylorrhaphy) for incomplete uni- or bilateral cleft palate	34	13	682	6.60	87.50	No
	Repair of uni- or bilateral cleft lip	31	12	471	15.71	80.00	No
	Revision of cleft palate repair	17	5	143	18.88	87.50	No
97	Adenoidectomy	103	103	56 723	98.04	0.00	Yes
	Tonsillectomy with adenoidectomy	103	102	41 834	88.77	9.09	Yes
	Tonsillectomy	104	103	31 822	52.04	8.33	Yes
	Haemorrhage control post tonsillectomy or adenoidectomy	76	12	497	29.78	90.91	No
98	Excision of dental lesion of the jaw	103	99	101 530	98.73	16.67	Yes
	Tympanoplasty	88	59	2 869	28.51	14.29	No
	Local excision of tissue of the soft palate	100	65	2 250	74.84	14.29	Yes
	Plastic surgery repair of external ear (not prominent ear)	99	63	2 158	85.77	20.00	Yes
	Stapedectomy	66	38	1 936	8.73	NA	No
	Excision of mucocele or noncancerous lip lesion	97	56	1 673	95.52	0.00	No
	Drainage of the face or floor of the mouth	72	24	1 581	90.45	50.00	No
	Excision of lesion of the tongue (whatever the size)	97	38	1 508	82.43	NA	Yes
	Excision of a salivary gland lesion	98	50	1 261	63.84	35.71	Yes
	Partial sialoadenectomy	91	34	1 157	5.79	23.08	No
	Complete sialoadenectomy	91	33	1 147	5.67	46.15	No
	Myringotomy	104	103	54 101	98.73	0.00	Yes
	Graft to lip and mouth	88	29	1 135	80.18	NA	No
	Local excision of tissue of the bony palate	76	14	1 077	87.28	28.57	Yes
	Closure of fistula of the mouth	67	17	877	94.64	15.38	No
	Corpectomy, vocal	61	19	672	57.14	NA	Yes
	Gingivoplasty	52	10	602	91.36	NA	No
	Wide excision of cancerous lesion or vascular anomaly of the lip	65	14	496	89.31	71.43	No
	Bone anchored hearing aid	37	15	412	41.50	NA	Yes
	Cordopexy, vocal or arytenoidopexy	34	14	401	35.16	NA	No
	Pharyngoplasty	55	6	390	30.77	NA	No
	Partial glossectomy	66	11	301	25.58	NA	No
	Turbinectomy	104	98	19 578	49.19	0.00	Yes
	Temporomandibular arthroplasty	42	8	264	43.56	NA	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Excision of deep cervical lymph node	56	4	219	11.87	42.86	No
	Excision of lesion of the middle ear	48	3	214	21.03	0.00	No
	Vestibular neurectomy	43	4	179	14.53	NA	No
	Biopsy of lymph node	70	0	156	39.10	0.00	No
	Biopsy of salivary gland	48	1	148	25.00	0.00	No
	Embryologic neck fistulae (branchial cleft)	36	1	109	57.80	NA	No
	Labyrinthectomy	34	2	87	54.02	NA	No
	Repair of semicircular canal fistula	16	1	55	74.55	NA	No
	Cricopharyngeal myotomy	8	1	23	8.70	NA	No
	Rhinoplasty	103	95	16 001	38.22	30.77	Yes
	Thyroglossal duct or tract excision	10	0	11	36.36	58.33	No
	Closure of salivary fistula	7	0	7	57.14	NA	No
	Incision of the thyroid area for drainage	2	0	3	0.00	25.00	No
	Septoplasty / submucosal resection of nasal septum	89	67	8 411	36.36	0.00	Yes
	Miringoplasty	101	86	6 822	37.23	0.00	Yes
	Excision of lesion of larynx (laser or other method)	103	90	5 944	82.23	10.00	Yes
	Surgical correction of uni- or bilateral prominent ear	102	88	5 400	87.91	0.00	Yes
	Alveoloplasty	84	43	4 079	93.87	8.33	Yes
404	Complete thyroidectomy	101	90	13 035	0.05	88.89	No
	Unilateral thyroid lobectomy	98	68	3 428	1.43	55.56	No
	Partial thyroidectomy	98	47	1 943	0.82	62.50	No
	Partial parathyroidectomy	87	42	1 600	1.56	66.67	No
	Thyroglossal duct or tract excision	96	31	843	16.01	58.33	No
	Complete parathyroidectomy	47	5	200	0.50	87.50	No
	Secondary incision of a suture in the thyroid area	44	1	101	0.99	0.00	No
	Incision of the thyroid area for drainage	21	0	26	7.69	25.00	No
	Lingual thyroid excision	10	0	11	0.00	80.00	No
447	Partial parathyroidectomy	25	1	81	0.00	66.67	No
	Complete parathyroidectomy	13	0	17	0.00	87.50	No
No APR-DRG	Surgical tooth extraction	104	103	274 275	98.06	0.0	No
	Tooth implantation	80	41	1 179	95.00	NA	No
	Tooth extraction	102	92	53 643	96.54	0.0	No
	Surgical removal of residual tooth	97	70	22 756	98.08	0.0	No
	Apicectomy (and root canal treatment)	91	71	13 883	99.24	0.0	No
	Intranasal antrostomy	97	73	10 791	31.38	0.0	No
	Apical alveolotomy	91	55	7 088	97.16	NA	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Frenotomy or frenectomy	103	94	4 581	62.82	0.0	No
	Endoscopic Zenker diverticulotomy	99	65	2 656	49.74	NA	No
	Control of epistaxis by cauterization	101	55	1 741	67.09	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.5. Neurosurgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
22	Insertion of ventriculoperitoneal shunt	58	30	802	0.50	84.62	No
	Replacement of ventricular shunt	54	9	337	3.56	61.54	No
	Insertion of ventricular shunt (not ventriculoperitoneal)	33	1	99	1.01	61.54	No
	Removal of ventricular shunt	26	1	82	21.95	46.15	No
23	Implantation or replacement of spinal neurostimulator lead	53	36	1 915	10.50	NA	No
	Removal of spinal neurostimulator lead	50	16	532	27.82	7.14	No
26	Carpal tunnel release	103	103	92 526	97.92	0.00	Yes
	Peripheral nerve neurolysis NOS	103	100	14 180	83.50	0.00	Yes
	Nerve transposition	98	65	2 774	69.83	0.00	Yes
	Nerve excision (including neuroma)	99	51	1 924	78.27	30.77	Yes
	Implantation or replacement of internal pulse generator	62	32	1 881	23.55	NA	No
	Insertion of totally implantable infusion pump	53	21	828	4.95	NA	No
	Nerve suture	80	24	722	86.98	30.77	No
	Tarsal tunnel release	66	9	314	60.19	0.00	Yes
310	Cervical or lumbar disc hernia excision	100	96	29 298	0.17	NA	No
No APR-DRG	Insertion of catheter into spinal canal for drugs	88	52	15 005	13.89	NA	No
APR-DRG	Stereotaxic biopsy	47	24	923	0.76	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.6. Ophthalmologic surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
70	Enucleation with synchronous implant	22	5	228	8.33	61.54	No
	Excision of orbital lesion	36	5	149	69.13	54.55	No
	Enucleation	23	0	46	23.91	61.54	No
	Removal of ocular implant	9	1	33	66.67	23.08	No
73	Lens extraction with insertion of intraocular lens prosthesis	101	100	336 764	95.55	6.67	Yes
	Dacryocystorhinostomy	71	42	2 579	61.26	33.33	Yes
	Scleral buckling	23	16	2 095	12.70	27.27	No
	Chalazion excision	97	46	1 935	98.91	0.00	No
	Pterygion excision	89	38	1 797	98.50	0.00	No
	Injection into anterior chamber	29	14	1 750	42.57	6.67	Yes
	Probing of nasolacrimal punctum or duct	91	53	1 674	84.35	6.67	Yes
	Secondary insertion of intraocular lens prosthesis	74	26	1 641	69.84	13.33	Yes
	Corneal graft	29	15	1 290	17.83	33.33	Yes
	Stenting of the nasolacrimal duct	59	18	1 046	83.84	7.14	Yes
	Revision of extraocular muscle surgery	24	9	861	95.24	21.43	No
	Vitrectomy	61	28	16 816	33.53	33.33	Yes
	Iridectomy	60	15	817	37.94	7.14	No
	Excision of minor lesion	88	20	815	94.36	0.00	No
	Transposition of oblique muscles	28	8	680	95.59	21.43	No
	Cryotherapy of retinal tear or detachment	16	8	679	24.74	21.43	No
	Cyclophotocoagulation	16	9	598	78.26	7.14	No
	Blepharorrhaphy	35	4	407	94.10	15.38	No
	Excision of major lesion (full thickness)	68	10	383	77.28	20.00	No
	Canthoplasty	72	10	376	87.23	15.38	No
	Trabeculotomy	50	13	359	76.60	15.38	No
	Cryotherapy of chorioretinal lesion	19	9	314	54.78	13.33	Yes
	Blepharoplasty	102	86	11 391	97.91	7.69	Yes
	Excision of major lesion (partial thickness)	48	6	296	88.18	13.33	No
	Laser trabeculoplasty	13	5	267	17.60	0.00	No
	Laser iridoplasty	29	3	244	57.38	0.00	No
Corneal lesion excision	32	8	229	68.56	6.67	No	
Laser treatment of secondary cataract	26	2	139	43.88	0.00	No	
Conjunctival graft	22	3	110	86.36	7.14	No	



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Laser iridotomy	23	1	64	43.75	0.00	No
	Excision of lesion of eye	35	0	62	93.55	38.46	No
	Recession/advancement or resection of extraocular muscles	71	52	8 237	95.87	21.43	Yes
	Injection of vitreous substitute	50	28	8 157	40.17	7.14	No
	Repair of entropion/extropion	103	97	7 529	97.38	6.67	No
	Lens extraction without insertion of intraocular lens prosthesis	96	45	6 256	88.30	6.67	Yes
	Blepharoptosis repair	97	71	6 005	94.64	7.14	Yes
	Trabeculectomy	63	28	2 924	47.85	30.77	Yes
No APR-DRG	Laser photocoagulation of retinal tear or detachment	21	15	3 033	17.61	7.14	No
No APR-DRG	Laser photocoagulation of chorioretinal lesion	41	16	1 854	16.07	0.00	No
No APR-DRG	Retrobulbar injection	39	6	1 266	23.62	0.00	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.7. Orthopaedic surgery

APR-DRG	Procedure	# Hospitals	# Hospitals minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
301	Total hip replacement	103	103	48121	0.02	90.91	No
	Partial hip replacement	90	13	489	0.20	86.36	No
302	Total, bi- or unicompartmental knee replacement	103	103	57 998	0.03	NA	No
305	Amputation of a foot	76	1	202	0.99	88.46	No
	Amputation of the ankle	9	0	12	8.33	88.46	No
309	Curettage (including exostectomy) of the femur	100	39	2 288	60.05	23.81	No
	Hip synovectomy	51	12	509	18.07	37.50	No
	Arthrotomy of hip	80	5	289	15.22	NA	No
	Partial resection of the femur	39	5	240	25.83	90.00	No
	Partial resection of the pelvis	16	3	58	27.59	89.47	No
	Hip arthrodesis	13	0	18	16.67	100.00	No
	Total resection of the pelvis	5	0	5	0.00	100.00	No
310	Total resection of the femur	2	0	2	0.00	100.00	No
	Excision of intervertebral disc	100	96	28 929	0.17	83.33	No
	Percutaneous vertebral augmentation	76	34	1 209	11.75	53.33	No
	Percutaneous vertebroplasty	61	20	659	16.24	46.67	No
	Partial resection of a vertebra	50	5	457	4.81	94.44	No
	Total resection of a vertebra	24	0	41	0.00	100.00	No
313	Arthrotomy of spine	7	0	7	14.29	NA	No
	Arthroscopic meniscectomy (neither cruciate ligaments nor collateral ligaments repair)	102	101	113 948	93.77	NA	Yes
	Ankle synovectomy	92	40	2 021	75.71	22.73	Yes
	Ankle fusion	96	35	1 051	2.66	87.50	No
	Arthrotomy of ankle	84	25	819	62.64	NA	Yes
	Triple arthrodesis	63	15	547	0.55	91.30	No
	Partial resection of the patella	77	9	464	22.20	36.36	No
	Arthroscopic repair of collateral ligaments knee (neither meniscectomy nor cruciate ligaments repair)	76	13	417	22.06	NA	No
	Total or partial ankle replacement	44	9	327	0.00	NA	No
	Partial resection of the tibia or fibula	71	4	220	25.00	58.33	No
313	Total resection of the patella	24	1	48	8.33	76.19	No
	Knee arthrodesis	25	0	44	25.00	100.00	No
	Arthroscopic repair of cruciate ligaments of the knee (neither meniscectomy nor collateral ligaments repair)	102	101	16 266	9.82	NA	No
	Total resection of the tibia or fibula	12	0	12	41.67	100.00	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
314	Knee synovectomy	101	82	8 758	84.12	18.18	Yes
	Arthroscopic mosaicplast of the knee	103	82	7 990	57.50	26.09	Yes
	Arthroscopic repair of more than one location (meniscus and/or cruciate ligaments and/or collateral ligaments)	102	71	3 979	20.76	NA	Yes
	Curettage (including exostectomy) or arthroscopic shaving of the patella	98	51	3 554	84.30	0.00	Yes
	Arthrotomy of knee	102	68	3 365	69.12	NA	Yes
	Curettage (including exostectomy) of the tibia or fibula	104	63	2 719	58.88	13.04	Yes
	Arthroscopic patellar stabilization	94	57	2 180	23.76	12.50	No
	Hallux valgus repair	103	102	28 003	12.33	33.33	No
	Tarsometatarsal fusion	81	18	706	3.54	61.90	No
	Arthrotomy of foot and toe	77	8	511	42.86	NA	Yes
	Total resection of a tarsal or metatarsal	79	15	467	31.26	69.57	No
	Midtarsal fusion	59	3	269	9.29	71.43	No
	Joint replacement of foot or toe	56	5	221	23.08	52.38	No
	Hammer toe repair	102	96	10 791	46.46	0.00	Yes
	Claw toe repair	100	72	4 323	44.58	0.00	Yes
	Curettage (including exostectomy) of a tarsal or metatarsal	104	81	3 052	55.67	3.85	Yes
	315	Amputation of a toe	103	83	2 315	32.61	11.11
Achillotenotomy		91	38	1 012	45.36	0.00	Yes
Partial resection of a tarsal or metatarsal		94	37	963	31.88	24.00	No
Subtalar fusion		91	30	936	2.03	76.19	No
Foot or toe synovectomy		91	19	722	68.56	4.76	Yes
Acromioplasty		102	98	32 565	34.84	4.17	Yes
Curettage (including exostectomy) of the radius or ulna		89	16	600	51.33	0.00	Yes
Partial resection of the humerus		52	13	542	58.86	70.00	No
Curettage (including exostectomy) of the humerus		83	11	451	22.84	4.35	No
Total or partial elbow replacement		77	8	390	2.31	NA	No
Arthrotomy of shoulder		83	5	317	26.81	NA	No
Shoulder arthrodesis		52	4	179	12.29	95.24	No
Elbow arthrodesis		5	0	10	10.00	90.48	No
Total resection of the radius or ulna		6	0	9	33.33	100.00	No
Total resection of the humerus		1	0	2	0.00	100.00	No
Rotator cuff repair		103	101	30 416	15.20	33.33	No
Total shoulder replacement		103	88	6 415	0.09	87.50	No
Recurrent shoulder dislocation repair	102	85	4 735	17.30	41.67	No	
Shoulder synovectomy	82	38	1 823	26.55	18.18	No	



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
316	Arthrotomy of elbow	86	28	1 037	74.35	NA	Yes
	Elbow synovectomy	76	25	888	76.13	13.64	Yes
	Partial resection of the radius or ulna	89	21	690	50.72	43.48	Yes
	Partial shoulder replacement	91	20	628	2.55	73.91	No
	Trigger finger repair	104	103	29 683	98.63	0.00	Yes
	Interphalangeal fusion	99	43	1 450	79.72	8.70	Yes
	Total resection of a carpal or metacarpal	88	33	1 306	32.16	63.64	No
	Release of hand tendon or De Quervain tenosynovitis repair	83	24	1 217	94.58	8.33	No
	Reconstruction of hand tendon pulley	57	15	1 098	95.81	12.50	No
	Curettage (including exostectomy) of a carpal or metacarpal	94	29	998	64.43	0.00	Yes
	Metacarpocarpal fusion	85	29	815	23.19	30.00	No
	Partial resection of a carpal or metacarpal	82	22	783	42.78	13.04	Yes
	Amputation of a finger	96	14	592	76.18	12.00	Yes
	Carporadial fusion	74	16	444	11.71	61.90	No
	Metacarpophalangeal fusion	67	10	355	59.44	18.18	Yes
	Exploration of hand tendon sheath	102	94	26 166	98.11	0.00	Yes
	Arthrotomy of wrist	56	7	264	84.85	NA	No
	Arthrotomy of hand and finger	78	1	227	81.06	NA	No
	Suture of hand tendon	52	1	122	89.34	12.50	No
	Total wrist replacement	23	2	71	1.41	77.78	No
	Amputation of a thumb	35	0	66	62.12	21.74	No
	Amputation of a hand	6	0	8	50.00	87.50	No
	Amputation of a wrist	1	0	1	0.00	86.96	No
	Dupuytren's contracture repair	101	93	8 139	87.69	4.17	Yes
	Wrist synovectomy	99	61	3 559	95.76	0.00	Yes
	Partial wrist replacement	76	49	3 165	27.58	61.11	No
	De Quervain tenosynovitis repair	92	65	3 084	97.83	0.00	No
Hand or finger synovectomy	92	44	1 797	95.38	0.00	No	
Carpal tunnel release	99	42	1 554	71.75	4.00	Yes	
Joint replacement of hand or finger	84	38	1 455	47.97	25.00	Yes	
317	Bursectomy	103	101	7 146	64.57	NA	Yes
	Proximal biceps tendon repair	101	86	4 925	65.66	13.04	Yes
	Transfer of foot tendon	88	29	903	37.87	40.00	Yes
	Exploration of foot tendon sheath	91	21	682	59.82	0.00	Yes
	Suture of foot tendon	89	23	675	32.59	19.23	No
	Spine synovectomy	37	0	62	38.71	75.00	No
	Advancement/recession of foot tendon	19	0	23	26.09	32.00	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Removal of orthopaedic device of the tibia or fibula	104	102	17 815	74.18	14.81	Yes
	Curettage (including exostectomy) of a phalange, a vertebra or the pelvis	104	73	2 024	70.70	NA	Yes
	Removal of orthopaedic device of the patella	103	73	1 781	74.51	12.50	Yes
	Partial resection of a rib, the sternum, the scapula or clavicle	92	42	1 502	28.83	NA	No
	Diagnostic shoulder arthroscopy	78	17	767	36.90	0.00	No
	Partial resection of a phalange or a vertebra	85	10	384	51.56	11.54	Yes
	Curettage (including exostectomy) of a rib, the sternum, the scapula or clavicle	81	10	360	31.11	NA	No
	Diagnostic wrist arthroscopy	53	8	276	94.20	0.00	No
	Removal of orthopaedic device of the knee	66	3	222	2.70	30.43	No
	Diagnostic ankle arthroscopy	47	4	168	72.62	0.00	No
	Removal of orthopaedic device of the hip	46	3	167	0.60	60.87	No
	Removal of orthopaedic device of the radius or ulna	104	102	15 075	93.11	4.00	Yes
	Diagnostic hip arthroscopy	37	6	141	21.28	0.00	No
	Diagnostic elbow arthroscopy	28	0	57	75.44	0.00	No
	Total resection of a phalange	25	0	48	31.25	20.83	No
320	Removal of orthopaedic device of the shoulder	29	0	48	4.17	20.00	No
	Total resection of a rib, the sternum, the scapula or clavicle	22	0	40	0.00	NA	No
	Removal of orthopaedic device of the elbow	18	0	22	18.18	12.00	No
	Diagnostic hand or finger arthroscopy	16	0	20	95.00	0.00	No
	Removal of orthopaedic device of the hand	14	0	17	41.18	4.00	No
	Diagnostic spine arthroscopy	10	0	14	50.00	11.11	No
	Removal of orthopaedic device of the foot	7	0	8	50.00	14.81	No
	Removal of orthopaedic device of a vertebra, the pelvis or a phalange	104	99	7 676	67.40	NA	Yes
	Diagnostic foot or toe arthroscopy	7	0	7	57.14	0.00	No
	Removal of orthopaedic device of the ankle	7	0	7	28.57	14.81	No
	Removal of orthopaedic device of the wrist	3	0	3	33.33	4.00	No
	Removal of orthopaedic device of a carpal or metacarpal	103	101	7 405	98.51	4.00	No
	Diagnostic knee arthroscopy	103	83	7 258	92.88	0.00	Yes
	Removal of orthopaedic device of the humerus	104	101	4 742	75.94	12.00	Yes
	Removal of orthopaedic device of the femur	104	101	4 401	40.31	56.52	Yes
	Removal of orthopaedic device a tarsals or metatarsal	103	98	4 303	89.43	0.00	Yes
	Removal of orthopaedic device of a rib, the sternum, the scapula or clavicle	103	89	3 259	74.38	NA	Yes

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit.



15.8. Plastic & dermatological surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
73	Eyelid ptosis repair	95	65	3 825	94.38	0.00	Yes
	Blepharoptosis repair	71	28	2 204	94.96	0.00	No
361	Radical excision of skin tumour (or lesion) of the face, with graft	104	101	15 079	69.32	25.00	Yes
	Attachment of skin pedicle flap to another site	98	68	3 862	64.37	63.64	Yes
	Free skin graft	100	62	2 228	31.42	NA	No
	Full thickness graft	89	39	1 315	43.19	NA	No
	Attachment of skin pedicle flap to the hand	66	9	568	89.44	66.67	No
	Advancement of skin pedicle flap	48	8	438	80.82	44.44	No
	Insertion of tissue expander	37	4	133	24.06	NA	No
	Preparation of skin pedicle flap (main procedure)	50	3	128	49.22	60.00	No
	Size reduction (liposuction)	103	101	14 467	14.29	0.00	No
	Surgical correction of prominent ear	27	4	266	89.85	0.00	No
	Excision of sentinel lymph node, inguinal	67	2	263	24.71	0.00	No
	Limited rhinoplasty	51	1	149	49.66	0.00	No
	Radical excision of skin tumour (or lesion) of the lip, with graft	52	1	132	89.39	23.08	No
	Excision of sentinel lymph node, supraclavicular	59	1	123	39.02	9.09	No
	Rhinoplasty with septoplasty	37	1	89	33.71	40.00	No
Total nasal reconstruction	26	0	45	24.44	77.78	No	
364	Excision of major lesion of eyelid (full thickness)	16	1	41	92.68	23.08	No
	Excision of major lesion of the eyelid (partial thickness)	12	0	29	96.55	0.00	No
	Rhinoplasty without septoplasty	10	0	13	30.77	0.00	No
	Scar relaxation	91	46	2 312	77.51	8.33	Yes
	Facial rhytidectomy	79	36	1 677	24.63	20.00	No
	Onychoplasty	77	21	840	96.31	0.00	No
	Excision of skin tumour (or lesion) of the lip, with suture	86	21	644	89.91	0.00	No
	Excision of sentinel lymph node, axillar	84	16	625	17.76	9.09	No
	Excision of minor lesion of eyelid	72	9	334	95.81	0.00	No
	Fat graft of skin and subcutaneous tissue	48	7	273	63.37	20.00	No
No APR-DRG	Excision of skin tumour (or lesion) of the face, with suture	104	104	73 657	81.69	0.00	No
	Excision of lesion of the external ear	103	85	3 672	78.49	0.00	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.9. Thoracic surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
120	Thoracoscopic lobectomy	57	18	745	0.00	100.00	No
	Thoracoscopic segmental lung resection	62	7	349	0.00	88.89	No
	Thoracoscopic lung decortication	38	0	90	0.00	100.00	No
	Thoracoscopic pneumonectomy	11	0	22	0.00	100.00	No
121	Lymph node biopsy by mediastinoscopy	94	57	2 997	32.53	10.00	No
	Thoracoscopic pleural biopsy	94	30	962	0.52	20.00	No
	Thoracoscopic excision of lesion of lung	70	23	933	0.00	55.56	No
	Thoracoscopic drainage of pleural cavity	86	19	642	0.00	40.00	No
	Thoracoscopic lung biopsy	80	15	478	0.84	30.00	No
	Excision of mediastinal lesion by mediastinoscopy	32	2	91	2.20	50.00	No
	Thoracoscopic excision of chest wall lesion	10	0	17	17.65	62.50	No
	Diagnostic mediastinotomy	9	0	10	0.00	NA	No
171	Initial insertion of pacemaker (lead and pace)	102	101	11 625	0.66	42.86	No
	Replacement of pacemaker (lead and pace)	92	27	880	13.75	33.33	No
	Replacement of transvenous lead	91	25	827	13.78	33.33	No
175	Percutaneous transluminal coronary angioplasty with stent	74	56	35 805	13.08	33.33	No
	Percutaneous transluminal coronary angioplasty without stent	59	32	2 033	14.56	33.33	No
	Percutaneous valvuloplasty	25	13	493	4.26	50.00	No
	Percutaneous aortic valvuloplasty (TAVI)	10	1	25	0.00	100.00	No
176	Replacement of pace (only)	103	96	7 643	18.07	14.29	No
	Revision of lead (only)	92	34	961	5.31	33.33	No
177	Removal of pace	70	11	498	16.27	0.00	No
	Removal of lead	25	2	89	2.25	33.33	No
180	Thoracoscopic sympathectomy	25	1	69	4.35	NA	No
220	Thoracoscopic vagotomy	5	0	6	0.00	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit.



15.10. Urological surgery

APR-DRG	Procedure	# Hospitals	# Hospitals minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
442	Laparoscopic total nephrectomy	104	83	2 823	0.00	83.33	No
	Laparoscopic partial nephrectomy	91	36	1 270	0.00	91.67	No
	Percutaneous nephrostomy	25	0	38	18.42	14.29	No
	Ureterotomy	13	0	18	27.78	58.33	No
	Percutaneous pyelostomy	2	0	2	0.00	22.22	No
	Ureteral meatotomy	1	0	1	0.00	15.38	No
443	Laparoscopic total nephrectomy	98	36	1 049	0.19	83.33	No
	Laparoscopic partial nephrectomy	77	9	427	0.00	91.67	No
	Ureterotomy	81	4	401	35.91	58.33	No
	Percutaneous nephrostomy	82	6	332	18.98	14.29	No
	Ureteral meatotomy	25	0	34	38.24	15.38	No
	Percutaneous pyelostomy	14	0	30	26.67	22.22	No
445	Repair of urinary incontinence by trans-obturator tape or tension-free vaginal tape	97	60	2 034	17.90	15.38	No
	Bladder sphincterotomy	87	43	1 308	9.63	41.67	No
	Cystostomy (not percutaneous)	64	13	419	40.33	69.23	No
446	Transurethral excision/destruction of bladder lesion (or tumour)	104	103	25 197	12.80	76.92	No
	Transurethral removal of obstruction from renal pelvis or ureter	102	98	14 513	42.55	NA	No
	Release of urethral stricture	103	96	8 649	39.77	15.38	Yes
	Urethrotomy	94	32	1 397	47.32	0.00	Yes
	Urethral meatoplasty	88	28	1 077	73.44	7.69	Yes
	Urethral meatotomy	54	0	139	56.83	0.00	No
	Repair of hypospadias or epispadias	16	1	30	30.00	81.82	No
481	Division of penile adhesions	81	41	1 483	96.22	0.00	No
	Condyloma acuminata	102	38	1 043	66.63	NA	No
	Release of chordee	30	9	302	84.44	25.00	No
482	Transurethral prostatectomy	103	103	21 247	0.36	100.00	No
	Treatment of peritoneo-vaginal canal	104	104	9 511	69.32	NA	Yes
	Uni- or bilateral orchidopexy	104	101	6 986	84.05	14.29	Yes
483	Excision of cyst of epididymis	104	85	2 774	70.48	7.14	Yes
	Unilateral orchidectomy	104	71	1 753	27.67	7.14	No
	Testis prosthesis	85	12	422	31.52	NA	No
	Bilateral orchidectomy	61	4	200	35.00	14.29	No
484	Circumcision	104	103	69 128	98.30	0.00	Yes
514	Laparoscopic promontofixation	92	59	2 030	0.79	75.00	No



APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
	Lithotripsy	91	72	36 689	95.91	7.10	No
	Vasectomy	102	95	20 299	97.72	0.00	No
	Ureteral dilatation or catheterization	104	102	19 502	37.66	NA	No
No	Ureteroscopy	102	91	6 943	49.81	NA	No
APR-DRG	Urethral dilation	99	71	5 570	89.14	0.00	No
	Percutaneous cystostomy	98	62	3 314	20.28	0.00	No
	Dorsal/lateral slit of prepuce	73	42	3 151	96.41	0.00	No
	Ligation of vas deferens	60	31	1 759	96.82	0.00	No
	Nephroscopy	40	7	727	69.05	NA	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



15.11. Vascular surgery

APR-DRG	Procedure	# Hospitals	# Hospitals_ minimal 10	# Stays (all)	% Day care	Online Survey (% NOT in favour of DS)	Inappropriate (BMF – BFM 2015; MZG – RHM 2012)
24	Angioplasty: precerebral extracranial vessel with stent	62	20	724	1.52	70.00	No
	Angioplasty: precerebral extracranial vessel without stent	47	3	191	1.05	80.00	No
	Angioplasty: intracranial vessel with stent	14	1	68	0.00	80.00	No
	Angioplasty: intracranial vessel without stent	5	0	8	0.00	80.00	No
173	Angioplasty: abdominal or limb artery with stent	103	100	25 148	8.54	NA	No
	Angioplasty: abdominal or limb artery without stent	104	100	13 354	9.56	NA	No
	Insertion of endograft into the aorta abdominal	84	65	2 450	0.24	85.71	No
180	Electro-fulguration or ligation and stripping of lower limb vein(s)	102	102	70 727	84.66	0.00	Yes
444	Arteriovenostomy (formation of fistula) for renal dialysis	84	63	3 530	30.76	0.00	No
	Revision of arteriovenous shunt	70	43	1 427	19.83	13.33	No
	Removal of arteriovenous shunt	62	8	331	38.37	0.00	No
447	Renal angioplasty without stent	75	30	1 129	44.02	NA	No
	Renal angioplasty with stent	83	37	985	15.23	NA	No
No APR-DRG	Venous catheterisation for renal dialysis	76	48	1 767	22.92	NA	No
No APR-DRG	Insertion of vena cava filter	34	2	91	24.18	0.00	No

#: total number; # Hospitals_ minimal 10: number of hospitals which performed at least 10 of the respective procedure in the period 2011-2013; %: percentage; NA: not available (e.g. because the procedure was suggested by the consulted experts through the online survey, two procedures were combined after the online survey); Inappropriate (BMF – BFM 2015; MZG – RHM 2012): procedure for which the FOD – SPF specified for 2015 (based on the MZG – RHM data of 2012) that an inpatient stay is “inappropriate” and therefore the hospital is penalised when the patient is not treated in the surgical day-care unit; No APR-DRG: a procedure is labelled as “no APR-DRG” when the procedure that was performed during a stay did not determine the choice of the APR-DRG.



16. LIMITATIONS OF THE ADMINISTRATIVE DATA

In the following tables an overview is provided of procedures for which the interpretation of the administrative data should be performed with caution and the reason why the consulted experts suggested some prudence.

16.1. Abdominal surgery

Table 89 – APR-DRG 222

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Laparoscopic fundoplication	3 657	7	0.2	This procedure is rarely performed in Flanders (where reflux is treated in a more conservative way) and hence expertise is limited (and the tendency towards DC lower) while in the Walloon provinces it is currently performed and more expertise is present.

Table 90 – APR-DRG 226

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Anal fistulectomy	4 942	2 703	54.7	Not a homogenous group of procedures; can imply very simple (eligible for DC) to very complex procedures (not eligible for DC).
Closure of anal fistula	1 314	798	60.7	
Haemorrhoid ligation	4 247	3 384	79.7	
Haemorrhoidectomy	13 508	5 967	44.2	

Table 91 – APR-DRG 227

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Repair anterior abdominal wall hernia without prosthesis (or graft)	2 080	1 127	54.2	The magnitude of the hernia will determine whether or not the procedure can be performed in DC.
Repair anterior abdominal wall hernia with prosthesis (or graft)	2 943	772	26.2	
Repair incisional hernia without prosthesis (or graft)	2 184	441	20.2	

Table 92 – APR-DRG 229

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Diagnostic laparoscopy	1 199	430	35.9	The procedure may be performed for a variety of indications, which will determine the eligibility for a day-care approach.

**Table 93 – APR-DRG 403**

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Removal of gastric banding	1 973	8	0.4	The number of these procedures is expected to becoming less and less in the near future and will eventually disappear.

16.2. Breast surgery

Table 94 – APR-DRG 363

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Bilateral augmentation mammoplasty, with implant	7 358	2 843	38.6	This procedure is only done for aesthetic reasons and is hence not reimbursed by RIZIV-INAMI (the patient pays everything).
Bilateral reduction mammoplasty	12 085	1 073	8.9	Reimbursement rules have changed.
Excision/biopsy of breast tissue	1 636	454	27.8	Anno 2016 breast biopsies are performed in the doctor's office or in the radiologic department and no longer in the OR.
Excision of breast tissue in man (gynecomastia)	1 495	893	59.7	Not a homogenous group of procedures: can imply very simple (eligible for DC) to very complex procedures (not eligible for DC, e.g. in bariatric patients).
Local excision of breast lesion	25 023	8 607	34.4	Distinction should be made between benign and malignant tumours; if combined with sentinel lymph node dissection, not eligible for DC.
Reconstruction of breast nipple	2 359	1 431	60.7	Often performed together with other procedures (e.g. reconstruction with flap) which may not be eligible for day care.
Removal of breast implant	2 133	646	30.3	If performed for aesthetic reasons, it is not reimbursed by RIZIV-INAMI (the patient pays everything).



16.3. Gynaecological surgery

Table 95 – APR-DRG 513

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Radical endometriosis excision	1 476	119	8.1	Procedures needs an inpatient approach; the 119 cases that were performed in day care probably reflect miss-use of the nomenclature.

Table 96 – APR-DRG 519

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Uterine polypectomy by hysteroscopy	3 653	1 218	33.3	Too vague description
Endometrial ablation (dilation-curettage) by hysteroscopy	1 231	999	81.2	

Table 97 – No APR-DRG

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Insufflation of fallopian tubes	5 717	3 135	54.8	Often performed together with other procedures (e.g. endometriosis resection) which may not be eligible for day care.
Excision of vaginal lesion	2 201	1 460	66.3	Too vague description; probably the data reflect also a profitable use of the nomenclature codes.
Marsupialization of Bartholin's gland	1 681	1 394	82.9	It is not possible to unravel which proportion of these procedures is really done in a full operating room (day care) and which proportion is actually done in the doctor's office.



16.4. Head & neck surgery

Table 98 – APR-DRG 026

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Vestibular neurectomy	2 403	1 903	79.2	Not a homogenous group of procedures; can imply very simple (eligible for DC) to very complex procedures (not eligible for DC).

Table 99 – APR-DRG 089

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Intermaxillary uni- or bilateral osteoplasty	3 410	278	8.2	This code is often (mis)used for other procedures that are less lucrative (the code is e.g. used for sinus lifting, for small displacements or for the grafting of autologous bone)

Table 100 – APR-DRG 092

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Facial bone graft	6 304	4 602	73.0	Not a homogenous group of procedures; can imply very simple (eligible for DC) to very complex procedures (not eligible for DC). The donor site will also determine DC eligibility.
Uni- or bilateral malar osteotomy	2 033	998	49.1	Rarely performed as a single intervention, most often performed in combination with orthognathic surgery. In addition, the high numbers (over 3 years) raise questions among the consulted experts. According to some experts the code is used for the placement of zygoma implants (for which there is no reimbursement).
Mandibular osteotomy, distraction or osteoplasty	1 755	130	7.4	Not a homogenous group of procedures
Intermaxillary, uni- or bilateral osteoplasty (-tomy) (partial)	3 284	1 554	47.3	

**Table 101 – APR-DRG 093**

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Uni- or bilateral ethmoidotomy/ ethmoidectomy	16 013	4 797	30.0	Not a homogenous group of procedures; can imply very simple (eligible for DC) to very complex procedures (not eligible for DC).
Mastoidectomy	2 169	199	9.2	Not a homogenous group of procedures; can imply very simple (eligible for DC) to very complex (radical) procedures (not eligible for DC).
Uni- or bilateral frontal sinusotomy	2 602	927	35.6	
Sphenoidotomy	1 858	374	20.1	Obsolete descriptions
Excision of maxillary sinus lesion	7 458	2 975	39.9	

Table 102 – APR-DRG 095

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Other* plastic repair of the palate	2 331	847	36.3	This code is often (mis)used for other procedures that are less lucrative (the code is e.g. used for sinus lifting, for small displacements or for the grafting of autologous bone)

* other than staphyloplasty (or staphylorrhaphy) for incomplete uni- or bilateral cleft palate, repair of uni- or bilateral cleft lip or revision of a cleft palate repair.

Table 103 – APR-DRG 098

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Turbinectomy	19 578	9 630	49.2	Not a homogenous group of procedures; can imply very simple (e.g. radiofrequency, which is eligible for DC) to very complex procedures (e.g. surgery, which is not eligible for DC).
Stapedectomy	1 936	169	8.7	Not a homogenous group of procedures.
Septoplasty/submucosal resection of the nasal septum	8 332	3 027	36.3	Often performed in combination with e.g. orthognathic surgery.
Excision of the lesion of the larynx	5 865	4 837	82.5	The larynx consists of three zones with different pathologies, hence difficult to interpret.
Excision of a tongue lesion (whatever the size)	1 280	1 061	82.9	The size of the lesion will (also) determine whether this procedure can be done in day care.
Excision of a salivary gland lesion	1 025	653	63.7	The extent of the lesion and the location (i.e. which salivary gland) will determine whether this procedure can be done in day care.



Table 104 – No APR-DRG

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Surgical tooth extraction	274 270	268 945	98.1	It is not possible to unravel which proportion of these procedures is really done in a full operating room (day care) and which proportion is actually done in the doctor's office.
Excision of dental lesion of the jaw	101 514	100 229	98.7	
Tooth extraction	53 593	51 747	96.6	
Surgical removal of residual tooth	22 660	22 235	98.1	
Apicectomy (and root canal treatment)	13 832	13 730	99.3	
Apical alveolotomy	6 949	6 775	97.5	
Closure of nasal sinus fistula	5 316	5 131	96.5	
Alveoloplasty	3 938	3 703	94.0	
Excision of mucocele or noncancerous lip lesion	1 491	1 433	96.1	
Frenotomy or frenectomy	4 533	2 841	62.7	

16.5. Neurosurgery

Table 105 – APR-DRG 023

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Implantation or replacement of spinal neurostimulator lead	1 842	190	10.3	Big difference between implantation and replacement; they should have been evaluated separately.

Table 106 – APR-DRG 026

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Implantation or replacement of internal pulse generator	1 773	416	23.5	Big difference between implantation and replacement; they should have been evaluated separately.
Nerve transposition	2 627	1 854	70.6	
Peripheral nerve neurolysis NOS	1 4165	11 832	83.5	They share the same nomenclature codes.
Nerve excision (including neuroma)	1 709	1 343	78.6	Not a homogenous group of indications nor procedures.

Table 107 – APR-DRG 310

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Implantation or replacement of spinal neurostimulator lead	1 842	190	10.3	Big difference between implantation and replacement; they should have been evaluated separately.



16.6. Ophthalmologic surgery

Table 108 – APR-DRG 073

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Dacryocystorhinostomy	2 579	1 580	61.3	The code must be miss-used for other procedures as it was attested in 71 different hospitals while according to the experts there are only a dozen surgeons in Belgium who have sufficient expertise to perform this extremely difficult but also rare procedure.
Injection into anterior chamber	1 750	745	42.6	Too vague description; can probably be performed in office.
Injection of vitreous substitute	8 157	3 277	40.2	The graph reflects several procedures; this procedure is often done in combination with other procedures
Laser photocoagulation of retinal tear or detachment	3 033	299	23.6	If combined with another procedure (e.g. vitrectomy) an overnight stay is required, in all other cases it should be performed in day care or even in office.
Laser photocoagulation of chorioretinal tear or detachment	1 854	298	16.1	If combined with another procedure (e.g. vitrectomy) an overnight stay is required, in all other cases it should be performed in day care or even in office.
Scleral buckle	2 095	266	12.7	Most of these cases are urgent and demand one night hospitalisation; the code is miss-used for other procedures (e.g. trauma, removal of a scleral buckle) reflected in the hospitals with high day-care rates.
Secondary insertion of intraocular lens prosthesis	1 654	1 146	69.8	This procedure is often done in combination with other procedures (e.g. vitrectomy), which renders it less eligible for day care.
Trabeculectomy	2 924	1 399	47.8	The procedure (performed in case of glaucoma) will become rare because it will be replaced by implants.
Vitrectomy	16 816	5 638	33.5	The code is miss-used for other procedures as it was attested in 61 different hospitals while according to the experts there are only about 15 hospitals in Belgium, where there is sufficient expertise to treat vitrectomy.

Table 109 – No APR-DRG

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Retrobulbar injection	1 266	299	23.6	This procedure is mostly done in combination with other procedures (e.g. vitrectomy), which renders it less eligible for day care.



16.7. Orthopaedic surgeryⁿ

Table 110 – APR-DRG 309

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Curettage (including exostectomy) of the femur	2 047	1 295	63.3	Too vague description.

Table 111 – APR-DRG 310

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Percutaneous vertebral augmentation	1 046	133	12.7	Not a homogenous group of procedures.

Table 112 – APR-DRG 314

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Hallux valgus repair	28 001	3 454	12.3	Not a homogenous group of procedures.
Hammer toe repair	10 761	5 000	46.5	This procedure is often done in combination with other procedures.

Table 113 – APR-DRG 315

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Acromioplasty	32 546	11 344	34.9	This procedure is mostly done in combination with other procedures; the code is also miss-used for other procedures.
Partial wrist replacement	3 073	849	27.6	Not a homogenous group of procedures; the nomenclature has changed.
Recurrent shoulder dislocation repair	4 649	806	17.3	Not a homogenous group of procedures.
Rotator cuff repair	30 410	4 623	15.2	Data are obsolete since there is new nomenclature from January 2014 on.
Shoulder synovectomy	1 641	429	26.1	Not a homogenous group of procedures; this procedure is often done in combination with other procedures.

ⁿ Note: As orthopaedic surgery was the first expert group, the collection of information on the limitations of the administrative data was performed in a less consistent way than for the other groups. Having a second meeting with these experts only for this purpose was considered inappropriate, given the heavy workload of clinical experts.

**Table 114 – APR-DRG 316**

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Dupuytren's contracture repair	8 097	7 110	87.8	Since 2011-2013 the treatment for certain pathologies has changed, hence the data do not reflect actual clinical practice.
Total resection of a carpal or metacarpal bone	1 120	360	32.1	Not a homogenous group of procedures; the nomenclature has changed.

Table 115 – APR-DRG 317

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Proximal biceps tendon repair	4 834	3 185	65.9	The procedure is often combined with other procedures.

Table 116 – APR-DRG 320

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Curettage (including exostectomy) of a phalange, a vertebra or the pelvis	1 872	1 328	70.9	Too vague description.
Partial resection of a rib, the sternum, the scapula or clavicle	1 308	388	29.7	The nomenclature has changed; the description is too vague.
Removal of an orthopaedic device of a rib, the sternum, the scapula or clavicle	3 178	2 367	74.5	Can imply very simple procedures, eligible for DC, to very complex procedures, not eligible for DC.
Removal of orthopaedic device of the humerus	4 729	3 596	76.0	Can imply very simple procedures, eligible for DC, to very complex procedures, not eligible for DC.
Removal of orthopaedic device of the femur	4 377	1 767	40.4	Can imply very simple procedures, eligible for DC, to very complex procedures, not eligible for DC



16.8. Plastic & dermatological surgery

Table 117 – APR-DRG 361

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Attachment of skin pedicle flap	3 862	2 486	64.4	The size of the flap can vary considerably.
Full thickness graft	1 315	568	43.2	The size of the flap can vary considerably; the code is often miss-used for lipofilling for which there is no nomenclature.

Table 118 – APR-DRG 364

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Scar relaxation	2 312	1 792	77.5	The size of the scar can vary considerably; the code is often miss-used for lipofilling (e.g. in breast reconstruction) for which there is no nomenclature.
Facial rhytidectomy	1 677	413	24.6	This procedure is only done for aesthetic reasons and is hence not reimbursed by RIZIV-INAMI (the patient pays everything).
Liposuction	14 467	2 067	14.3	This procedure is often done in combination with other procedures for which day care may not be eligible; it is only done for aesthetic reasons and is hence not reimbursed by RIZIV-INAMI (the patient pays everything).

16.9. Urological surgery

Table 119 – No APR-DRG

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Urethral dilation	5 570	4965	89.1	It is not possible to unravel which proportion of these procedures is really done in a full operating room (day care) and which proportion is actually done in the doctor's office.
Ureteral dilatation or catheterisation	19 502	7 344	37.7	Not a homogenous group of procedures nor indications; often performed in combination with another procedure (e.g. from another discipline)
Ureteroscopy	6 943	3 453	49.9	Not a homogenous group of procedures nor indications.
Percutaneous cystostomy	3 314	672	20.3	Procedure that can be done in office and only needs an OR in severe cases; unclear whether office procedures have also been attested as day care.

**Table 120 – APR-DRG 446**

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Transurethral removal of obstruction from renal pelvis or ureter	14 513	6 176	42.6	Not a homogenous group of indications.
Release of urethral stricture	8 649	3 440	39.8	Not clear what the difference is between this procedure and urethral dilation.
Urethrotomy	1 397	661	47.3	Not clear what the difference is between this procedure and urethral dilation.

Table 121 – APR-DRG 482

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Transurethral prostatectomy (TURP)	21 247	77	0.4	Code is often used in case of bladder sphincterotomy as a small part of the prostate is also removed.

16.10. Vascular surgery

Table 122 – APR-DRG 444

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Revision of arteriovenous shunt	1 427	283	19.8	A distinction should be made between the intravascular approach (balloon dilatation, eligible for day care) and the surgical approach, which is not eligible for day care.

Table 123 – No APR-DRG

Intervention	# Stays	DC	% DC	Reason for a careful interpretation of the administrative data
Venous catheterisation for renal dialysis	1 767	405	22.9	These are all emergency patients and hence out of scope of the study.



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