

# LOW BACK PAIN AND RADICULAR PAIN: DEVELOPMENT OF A CLINICAL PATHWAY

## SUPPLEMENT





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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.**
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## 1. COMPOSITION OF EXPERTS GROUPS

### 1.1. List of participants to the working groups

Name	Field of expertise, affiliations
<b>Primary care</b>	
De Caluwé Jean-Raphael	Physiotherapist (AXXON, WVK)
Demoulin Christophe	Physiotherapist (Université de Liège, CHU de Liège)
Depreitere Bart	Neurosurgeon (UZ Leuven)
De Ruddere Lies	Psychologist (Universiteit Gent)
Dolphens Mieke	Physiotherapist (Universiteit Gent)
Dufrane Patrick	INAMI – RIZIV
Fraselle Virginie	Specialist in physical medicine and rehabilitation (UCL, Cliniques universitaires Saint-Luc)
Haelterman Greta	FOD Volksgezondheid – SPF Santé Publique
Larock Caroline	Physiotherapist (AXXON)
Orban Thomas	General practitioner (SSMG)
Paulus Yves	INAMI – RIZIV
Pauwen Nathalie	Physiotherapist (AXXON)
Sabbe Nicolas	Physiotherapist (AXXON)
Van den Abeele Michel	Osteopath (UKO)
Vanderstraeten Jacques	General practitioner (SSMG)
<b>Hospital care</b>	
Berquin Anne	Pain therapist (Cliniques universitaires Saint-Luc)
Bruneau Michael	Neurosurgeon (Hôpital Erasme ULB)
Depreitere Bart	Neurosurgeon (UZ Leuven)
Duquenne Pierre	Anaesthesiologist-algologist (CHC Liège)
Forget Patrice	Anaesthesiologist-algologist (UZ Brussel, VUB)
Fraselle Virginie	Specialist in physical medicine and rehabilitation (UCL, Cliniques universitaires Saint-Luc)



Hans Guy	Anaesthesiologist-algologist (Universitair ziekenhuis Antwerpen)
Hoste Davy	Orthopaedic surgeon (AZ Sint Lucas Brugge)
Munting Everard	Orthopaedic surgeon (Clinique St Pierre Ottignies; UCL)
Nielens Henri	Specialist in physical medicine and rehabilitation (Cliniques universitaires Saint-Luc)
Parlevliet Thierry	Specialist in physical medicine and rehabilitation (UGent) (UZ Gent)
Pirotte Benoit	Neurosurgeons (Chirec; ULB)
Roussel Nathalie	Physiotherapist (Universiteit Antwerpen)
Van Boxem Koen	Pathway coordinator (Sint-Jozef Kliniek, VAVP)
Van de Kelft Erik	Pathway coordinator (AZ Nikolaas)
Van Lerbeirghe Johan	Orthopaedic surgeon (AZ Sint-Lucas, Gent)
Van Schaeybroeck Patrick	Neurosurgeon (Imelda Ziekenhuis, RZ Tienen)
Van Wambeke Peter	Specialist in physical medicine and rehabilitation - Président GDG (UZ Leuven, GDG president)
Van Zundert Jan	Anaesthesiologist-algologist (ZOL, Genk)
Van Haute Omer	FOD Volksgezondheid – SPF Santé Publique
Verhulst Dominique	Orthopaedic surgeon (ZNA, Antwerpen)
<b>Return to work</b>	
Collin John	Occupational physician (APBMT)
Decuman Saskia	Expertise center for disability RIZIV – INAMI
Depreitere Bart	Neurosurgeon (UZ Leuven)
Hans Guy	Anaesthesiologist-algologist (Universitair ziekenhuis Antwerpen)
Heuschling Audrey	Pathway coordinator (VIVALIA)
Larock Caroline	Physiotherapist (AXXON)
Mairiaux Philippe	Occupational physician (Université de Liège)
Muller Michel	Occupational physician (SSST)
Pendeville Etienne	Physiotherapist (UCL)
Piette Alain	SPF Emploi – FOD Werkgelegenheid
Poot Olivier	Fedris
Somville Pierre-René	Physiotherapist & ergonomist (CHU de Liège; Université de Liège)



## 1.2. Composition of the Stakeholders Group

Name	Field of expertise, affiliations
Ailliet Luc	Physiotherapist – Chiropractor (Belgian Chiropractors' Union)
Bengoetxea Ana	Osteopath (ULB)
Berkein Philiep	Sickness fund (Socialistische Mutualiteit)
Bobenrieth Edwin	Sickness fund (Onafhankelijke Ziekenfondsen)
Brands Geoffrey	Pathway coordinator (CHC Liège)
Cuignet Olivier	Acupuncturist (ABMA-BVGA))
De Schutter Fons	Physiotherapist (CEBAM)
De Vilder Peter	Acupuncturist (BAF)
Dewachter Johan	General practitioner
Dobbelaere Eric	Osteopath (UPOB-BVBO)
Drielsma Pierre	General practitioner (FMM)
Fierenc Micky	LUSS
Jeunehomme Martine	Physiotherapist (AXXON)
Laurent Etienne	Sickness fund (Mutualité Chrétienne)
Lepers Yves	Osteopath (UPMO-BVOG)
Lintermans Anneleen	(Vlaams Patiëntenplatform)
Machtelinckx Vera	Acupuncturist (BVGA- ABMA)
Magotteaux Vincianne	Pathway coordinator (VIVALIA)
Mahieu Geneviève	Specialist in physical medicine and rehabilitation (CHU UCL Namur)
Mattelaer Bruno	Reumanet
Michielsen Jef	Pathay coordinator (UZ Antwerpen)
Ollevier Aline	Ergotherapist (VIVES University College)
Ruwet Jean	Osteopath (UBO & GNRPO)
Salem Walid	Osteopath (ULB)
Stevens Veerle	Pathway coordinator (Militair Hospitaal Koningin Astrid - Hôpital Militaire Reine Astrid)



Van Dun Patrick	Osteopath (UPOB-BVBO)
Vandendries Bart	Chiropractor (Belgian Chiropractors' Union)
Vlaeyen Johan	Psychologist (UZ Leuven)
Vogt Guy	Occupational physician (Provikmo-DPBW)
Werrion Patrick	Physiotherapist (AXXON)

### 1.3. Composition of the subcontractor's expert team (KULeuven)

KCE member	Specific role
Depreitere Bart	
Coeckelberghs Ellen	
Goderis Lodde	
Morlion Bart	
Verbeke Hilde	

### 1.4. Composition of the KCE expert team

KCE member	Specific role
Paulus Dominique	Program Director
Eyssen Marijke	Project Coordinator
Jonckheer Pascale	Principal Investigator
Desomer Anja	Scientific researcher
Christiaens Wendy	Scientific researcher
Kohn Laurence	Scientific researcher
Fairon Nicolas	



## 2. LITERATURE REVIEW

### 2.1. Databases and date limits

To identify relevant published evidence we conducted systematic searches of literature in the following databases:

- The Cochrane Database of systematic reviews (<http://onlinelibrary.wiley.com/cochranelibrary/search>)
- Medline (<http://ovidsp.ovid.com/>)
- Embase (<http://www.embase.com/>)
- Cinahl (via [ebSCOhost.com](http://ebSCOhost.com))

All databases were searched from 2011 to present (18<sup>th</sup> April 2016), with no language restriction.

### 2.2. Search strategies

A search strategy was developed to search Medline through OvidSP interface. A special filter was used to separate systematic reviews from all articles, but systematic reviews and all studies were imported in endnote. This strategy has been adapted to each database and each strategy used a combination of appropriate MeSH terms and free text words. For Embase, conference papers and duplicates from Medline were excluded. The search results were then imported in Endnote with automatic duplicates removal enabled.

**Table 1 – Cochrane Database of Systematic Reviews**

Search strategy	Number of hits
[mh "Lumbar Vertebrae"]	2415
[mh Sacrum]	107
[mh Coccyx]	8
[mh "Lumbosacral Region"]	363
[mh "Lumbosacral Plexus"]	868
[mh "Sacrococcygeal Region"]	61
[mh "Sacroiliac Joint"]	93
coccyx:ab,ti	9
lumbar region:ab,ti	249
lumbosacral region:ab,ti	49
lumbar.ti	3



Search strategy	Number of hits
lumbo*.ti	0
Sacrococcygeal:ab,ti	62
sacral region:ab,ti	37
coccygeal:ab,ti	15
(sacroiliac or sacro-iliac):ab,ti	223
(SI next/2 joint):ab,ti	25
lumb*sacr*:ab,ti	359
#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	4408
[mh "Chronic Pain"]	708
[mh Pain]	35474
[mh "Chronic Disease"]	11942
"chronic pain":ab,ti	2567
"chronic disease":ab,ti	1273
pain.ti	141
#20 or #21 or #22 or #23 or #24 or #25	47578
#19 and #26	1356
[mh "back pain"]	3317
[mh "sciatic neuropathy"]	259
[mh sciatica]	251
backache:ab,ti	204
dorsalgia:ab,ti	5
(lumbar near/5 pain):ab,ti	768
back disorder*:ab,ti	1130
lumbago:ab,ti	146
coccydynia:ab,ti	8
(avulsed lumbar near/3 (disc* or disk*)):ab,ti	0
(lumbar disc* near/3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)):ab,ti	768



Search strategy	Number of hits
(lumbar disk* near/3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)):ab,ti	111
lumboischialgia:ab,ti	4
"Piriformis syndrome*":ab,ti	23
(sacral near/2 pain*):ab,ti	9
(sacrococcygeal near/2 pain*):ab,ti	0
[mh "Back Injuries"]	846
[mh "Intervertebral Disc Degeneration"]	150
[mh "Intervertebral Disc Displacement"]	682
[mh "Piriformis Muscle Syndrome"]	5
[mh Polyradiculopathy]	13
[mh "Spinal Diseases"]	2910
[mh "Osteoarthritis, Spine"]	5
[mh "Spinal Stenosis"]	244
(back near/3 (ache* or injur* or pain*)):ab,ti	6439
(lumbar near/3 (pain or facet or nerve root* or osteoarthritis or radicul* or spinal stenosis or spondylo* or zygapophys*)):ab,ti	1033
radiculalgia:ab,ti	7
(spinal near/3 stenosis*):ab,ti	415
"tailbone NEAR/3 pain*":ab,ti	0
"vertebrogenic NEAR/3 pain*":ab,ti	0
#28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 or #52 or #53 or #54 or #55 or #56 or #57	12031
#27 or #58	12481
[mh algorithms]	4263
[mh "Critical Pathways"]	299
[mh triage]	306
clinical path*:ab,ti	23526
critical path*:ab,ti	1374



Search strategy	Number of hits
triage:ab,ti	746
algorithm:ab,ti or algorithms:ab,ti	3983
pathway*:ab,ti	7157
[mh "Patient Care Team"]	1594
[mh "Delivery of Health Care, Integrated"]	321
"process of care":ab,ti	186
#60 or #61 or #62 or #63 or #64 or #65 or #66 or #67 or #68 or #69 or #70	35285
#59 and #71	441
#72 Publication Year from 2011 to 2016	192

**Table 2 – CINAHL**

Search strategy	Number of hits
TI("Lumbar Vertebrae" OR Sacrum OR Coccyx OR "Lumbosacral Region" OR "Lumbosacral Plexus" OR "Sacrococcygeal Region" OR "Sacroiliac Joint" OR lumbar OR lumbo* OR sacrococcygeal OR coccygeal OR "sacral region" OR sacroiliac or sacro-iliac OR "SI joint" OR lumbosacr* OR lumbo-sacr*)	5,924
AB("Lumbar Vertebrae" OR Sacrum OR Coccyx OR "Lumbosacral Region" OR "Lumbosacral Plexus" OR "Sacrococcygeal Region" OR "Sacroiliac Joint" OR sacrococcygeal OR coccygeal OR "sacral region" OR sacroiliac or sacro-iliac OR "SI joint" OR lumbosacr* OR lumbo-sacr*)	1,917
MW("Lumbar Vertebrae" OR Sacrum OR Coccyx OR "Lumbosacral Region" OR "Lumbosacral Plexus" OR "Sacrococcygeal Region" OR "Sacroiliac Joint" OR lumbar OR lumbo* OR sacrococcygeal OR coccygeal OR "sacral region" OR sacroiliac or sacro-iliac OR "SI joint" OR lumbosacr* OR lumbo-sacr*)	7,770
(S1 OR S2 OR S3)	10,684
TI("Chronic Pain" OR "Pain" OR "Chronic Disease")	58,035
AB("Chronic Pain" OR "Pain" OR "Chronic Disease")	76,803
MW("Chronic Pain" OR "Pain" OR "Chronic Disease")	127,796
S5 OR S6 OR S7	168,341
S4 AND S8	4,554
TI("back pain" OR "sciatic neuropathy" OR "sciatica" OR backache OR dorsalgia OR (lumbar N5 pain) OR "back disorder" OR "back disorders" OR lumbago OR coccydynia OR ("avulsed lumbar" N3 (disc* or disk*)) OR ("lumbar disc*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR ("lumbar disk*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR	11,014



lumboischialgia OR "Piriformis syndrome*" OR (sacral N2 pain*) OR (sacrococcygeal N2 pain*) OR "Back Injuries" OR "Intervertebral Disc Degeneration" OR "Intervertebral Disc Displacement" OR "Piriformis Muscle Syndrome" OR "Polyradiculopathy" OR "Spinal Diseases" OR "Osteoarthritis, Spine" OR "Spinal Stenosis" OR (back N3 (ache* or injur* or pain*)) OR (lumbar N3 (pain or facet or nerve root* or osteoarthritis or radicul* or spinal stenosis or spondylo* or zygapophys*)) OR radiculalgia OR (spinal N3 stenosis) OR "tailbone N3 pain*" OR "vertebrogenic N3 pain*")	
AB("back pain" OR "sciatic neuropathy" OR "sciatica" OR backache OR dorsalgia OR (lumbar N5 pain) OR "back disorder" OR "back disorders" OR lumbago OR coccydynia OR ("avulsed lumbar" N3 (disc* or disk*)) OR ("lumbar disc*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR ("lumbar disk*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR lumboischialgia OR "Piriformis syndrome*" OR (sacral N2 pain*) OR (sacrococcygeal N2 pain*) OR "Back Injuries" OR "Intervertebral Disc Degeneration" OR "Intervertebral Disc Displacement" OR "Piriformis Muscle Syndrome" OR "Polyradiculopathy" OR "Spinal Diseases" OR "Osteoarthritis, Spine" OR "Spinal Stenosis" OR (back N3 (ache* or injur* or pain*)) OR (lumbar N3 (pain or facet or nerve root* or osteoarthritis or radicul* or spinal stenosis or spondylo* or zygapophys*)) OR radiculalgia OR (spinal N3 stenosis) OR "tailbone N3 pain*" OR "vertebrogenic N3 pain*")	11,138
MW("back pain" OR "sciatic neuropathy" OR "sciatica" OR backache OR dorsalgia OR (lumbar N5 pain) OR "back disorder" OR "back disorders" OR lumbago OR coccydynia OR ("avulsed lumbar" N3 (disc* or disk*)) OR ("lumbar disc*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR ("lumbar disk*" N3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)) OR lumboischialgia OR "Piriformis syndrome*" OR (sacral N2 pain*) OR (sacrococcygeal N2 pain*) OR "Back Injuries" OR "Intervertebral Disc Degeneration" OR "Intervertebral Disc Displacement" OR "Piriformis Muscle Syndrome" OR "Polyradiculopathy" OR "Spinal Diseases" OR "Osteoarthritis, Spine" OR "Spinal Stenosis" OR (back N3 (ache* or injur* or pain*)) OR (lumbar N3 (pain or facet or nerve root* or osteoarthritis or radicul* or spinal stenosis or spondylo* or zygapophys*)) OR radiculalgia OR (spinal N3 stenosis) OR "tailbone N3 pain*" OR "vertebrogenic N3 pain*")	21,139
S10 OR S11 OR S12	25,488
S9 OR S13	26,430
TI("algorithms" OR "Critical Pathways" OR "triage" OR "clinical pathway*" OR "critical pathway*" OR "clinical path*" OR "critical path*" OR "triage" OR algorithm* OR pathway* OR "Patient Care Team" OR "Delivery of Health Care, Integrated" OR "process of care")	12,508
AB("algorithms" OR "Critical Pathways" OR "triage" OR "clinical pathway*" OR "critical pathway*" OR "clinical path*" OR "critical path*" OR "triage" OR algorithm* OR pathway* OR "Patient Care Team" OR "Delivery of Health Care, Integrated" OR "process of care")	33,330
MW("algorithms" OR "Critical Pathways" OR "triage" OR "clinical pathway*" OR "critical pathway*" OR "clinical path*" OR "critical path*" OR "triage" OR algorithm* OR pathway* OR "Patient Care Team" OR "Delivery of Health Care, Integrated" OR "process of care")	21,838
S15 OR S16 OR S17	53,445
S14 AND S18	423
S14 AND S18	144
(meta-analysis OR PT(review) OR PT("systematic review"))	53,582
S20 AND S21	20
S20 NOT S22	124

**Table 3 – Embase all**

Search strategy	Number of hits
'lumbar vertebra'/exp	16148
'sacrum'/exp	7703
'coccyx'/exp	1271
'lumbosacral plexus'/exp	1866
'sacroiliac joint'/exp	5218
coccyx:ab,ti	822
'lumbar region':ab,ti	2642
'lumbosacral region':ab,ti	799
lumbar:ti	38066
lumbo*:ti	6244
sacrococcygeal:ab,ti	2647
'sacral region':ab,ti	665
'coccygeal':ab,ti	1225
sacroiliac:ab,ti OR 'sacro iliac':ab,ti	5702
(si NEXT/2 joint):ab,ti	378
lumb*sacr*:ab,ti	11536
#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	79450
'chronic pain'/exp	41144
'pain'/exp	973867
'chronic disease'/exp	163274
'chronic pain':ab,ti	35736
'chronic disease':ab,ti	30934
pain:ti	186162
#18 OR #19 OR #20 OR #21 OR #22 OR #23	1158901
#17 AND #24	22188
'back pain'/exp	80597



Search strategy	Number of hits
'sciatic neuropathy'/exp	1854
'sciatica'/exp	1028
backache:ab,ti	2670
dorsalgia:ab,ti	117
(lumbar NEAR/5 pain):ab,ti	6049
'back disorder*':ab,ti	610
lumbago*:ab,ti	1676
coccydynia:ab,ti	125
avulsed:ab,ti AND (lumbar NEAR/3 (disc* OR disk*)):ab,ti	4
((('lumbar disc' OR 'lumbar discs' OR 'lumbar disk' OR 'lumbar disks') NEAR/3 (extruded OR degenerat* OR herniat* OR prolapse* OR sequestered OR slipped)):ab,ti	4859
lumboischialgia:ab,ti	67
'piriformis syndrome*':ab,ti	299
(sacral NEAR/2 pain*):ab,ti	245
(sacrococcygeal NEAR/2 pain*):ab,ti	19
'back injury':ab,ti OR 'back injuries':ab,ti	1406
'intervertebral disc degeneration'/exp	7382
'intervertebral disc displacement'/exp	20788
'piriformis muscle syndrome'/exp	117
'polyradiculopathy'/exp	28348
'spinal diseases'/exp	174984
'spinal stenosis'/exp	8581
(back NEAR/3 (ache* OR injur* OR pain*)):ab,ti	51386
radiculalgia:ab,ti	102
(spinal NEAR/3 (stenosis OR stenoses)):ab,ti	5783
(tailbone NEAR/3 pain*):ab,ti	12
(vertebrogenic NEAR/3 pain*):ab,ti	105



Search strategy	Number of hits
#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52	269716
#25 OR #53	274508
'algorithms'/exp	214697
'critical pathways'/exp	6874
'clinical pathway*':ab,ti	3539
'critical pathway*':ab,ti	1682
'clinical path*':ab,ti	20676
'critical path*':ab,ti	2839
triage:ab,ti	16746
algorithm*:ab,ti	194381
pathway*:ab,ti	964063
team:ab,ti	131303
'delivery of health care, integrated'/exp	8072
'process of care':ab,ti	2238
#55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66	1398429
#54 AND #67	7717
#68 AND [2011-2016]/py	4041
#69 NOT [medline]/lim	2280
#70 NOT ([conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim OR [editorial]/lim)	880

**Table 4 – Embase systematic reviews**

Search strategy	Number of hits
'lumbar vertebra'/exp	16148
'sacrum'/exp	7703
'coccyx'/exp	1271
'lumbosacral plexus'/exp	1866
'sacroiliac joint'/exp	5218
coccyx:ab,ti	822
'lumbar region':ab,ti	2642
'lumbosacral region':ab,ti	799
lumbar:ti	38066
lumbo*:ti	6244
sacrococcygeal:ab,ti	2647
'sacral region':ab,ti	665
'coccygeal':ab,ti	1225
sacroiliac:ab,ti OR 'sacro iliac':ab,ti	5702
(si NEXT/2 joint):ab,ti	378
lumb*sacr*:ab,ti	11536
#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	79450
'chronic pain'/exp	41144
'pain'/exp	973867
'chronic disease'/exp	163274
'chronic pain':ab,ti	35736
'chronic disease':ab,ti	30934
pain:ti	186162
#18 OR #19 OR #20 OR #21 OR #22 OR #23	1158901
#17 AND #24	22188
'back pain'/exp	80597



Search strategy	Number of hits
'sciatic neuropathy'/exp	1854
'sciatica'/exp	1028
backache:ab,ti	2670
dorsalgia:ab,ti	117
(lumbar NEAR/5 pain):ab,ti	6049
'back disorder*':ab,ti	610
lumbago*:ab,ti	1676
coccydynia:ab,ti	125
avulsed:ab,ti AND (lumbar NEAR/3 (disc* OR disk*)):ab,ti	4
((('lumbar disc' OR 'lumbar discs' OR 'lumbar disk' OR 'lumbar disks') NEAR/3 (extruded OR degenerat* OR herniat* OR prolapse* OR sequestered OR slipped)):ab,ti	4859
lumboischialgia:ab,ti	67
'piriformis syndrome*':ab,ti	299
(sacral NEAR/2 pain*):ab,ti	245
(sacrococcygeal NEAR/2 pain*):ab,ti	19
'back injury':ab,ti OR 'back injuries':ab,ti	1406
'intervertebral disc degeneration'/exp	7382
'intervertebral disc displacement'/exp	20788
'piriformis muscle syndrome'/exp	117
'polyradiculopathy'/exp	28348
'spinal diseases'/exp	174984
'spinal stenosis'/exp	8581
(back NEAR/3 (ache* OR injur* OR pain*)):ab,ti	51386
radiculalgia:ab,ti	102
(spinal NEAR/3 (stenosis OR stenoses)):ab,ti	5783
(tailbone NEAR/3 pain*):ab,ti	12
(vertebrogenic NEAR/3 pain*):ab,ti	105



Search strategy	Number of hits
#26 OR #27 OR #28 OR #29 OR #30 OR #31 OR #32 OR #33 OR #34 OR #35 OR #36 OR #37 OR #38 OR #39 OR #40 OR #41 OR #42 OR #43 OR #44 OR #45 OR #46 OR #47 OR #48 OR #49 OR #50 OR #51 OR #52	269716
#25 OR #53	274508
'algorithms'/exp	214697
'critical pathways'/exp	6874
'clinical pathway*':ab,ti	3539
'critical pathway*':ab,ti	1682
'clinical path*':ab,ti	20676
'critical path*':ab,ti	2839
triage:ab,ti	16746
algorithm*:ab,ti	194381
pathway*:ab,ti	964063
'patient care team'/exp	603836
'delivery of health care, integrated'/exp	8072
'process of care':ab,ti	2238
#55 OR #56 OR #57 OR #58 OR #59 OR #60 OR #61 OR #62 OR #63 OR #64 OR #65 OR #66	1853694
#54 AND #67	16451
#68 AND [2011-2016]/py	7338
#69 NOT [medline]/lim	3646
#70 NOT ([conference abstract]/lim OR [conference paper]/lim OR [conference review]/lim OR [editorial]/lim)	2057
#71 AND ('meta-analysis'/exp OR 'meta-analysis' OR 'systematic review'/exp OR 'systematic review')	112

**Table 5 – Medline OvidSP**

Search strategy	Number of hits
Lumbar Vertebrae/	42195
Sacrum/	7476
Coccyx/	914
Lumbosacral Region/	10359
exp Lumbosacral Plexus/	32808
Sacrococcygeal Region/	3418
Sacroiliac Joint/	3406
coccyx.ab,ti.	550
lumbar region.ab,ti.	1937
lumbosacral region.ab,ti.	633
lumbar.ti.	30995
lumbo*.ti.	5259
Sacrococcygeal.ab,ti.	2150
sacral region.ab,ti.	470
coccygeal.ab,ti.	1002
(sacroiliac or sacro-iliac).ab,ti.	3972
(SI adj2 joint).ab,ti.	256
lumb#?sacr*.ab,ti.	9240
or/1-18	114105
Chronic Pain/	5769
exp Pain/	324835
Chronic Disease/	233238
"chronic pain".ab,ti.	24157
"chronic disease".ab,ti.	22356
pain.ti.	139049
20 or 21 or 22 or 23 or 24 or 25	585529



Search strategy	Number of hits
19 and 26	18153
exp back pain/	31423
sciatic neuropathy/	1647
sciatica/	4637
backache.ab,ti.	2172
dorsalgia.ab,ti.	68
(lumbar adj5 pain).ab,ti.	4144
back disorder?.ab,ti.	518
lumbago.ab,ti.	1185
coccydynia.ab,ti.	85
(avulsed lumbar adj3 (disc* or disk*)).ab,ti.	0
(lumbar disc* adj3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)).ab,ti.	3209
(lumbar disk* adj3 (extruded or degenerat* or herniat* or prolapse* or sequestered or slipped)).ab,ti.	619
lumboischialgia.ab,ti.	44
"Piriformis syndrome*".ab,ti.	206
(sacral adj2 pain*).ab,ti.	166
(sacrococcygeal adj2 pain*).ab,ti.	14
exp Back Injuries/	20707
Intervertebral Disc Degeneration/	2506
Intervertebral Disc Displacement/	16577
Piriformis Muscle Syndrome/	67
Polyradiculopathy/	2418
Spinal Diseases/	19419
Osteoarthritis, Spine/	119
Spinal Stenosis/	4665
(back adj3 (ache* or injur* or pain*)).ab,ti.	36861
(lumbar adj3 (pain or facet or nerve root* or osteoarthritis or radicul* or spinal stenosis or spondylo* or zygapophys*)).ab,ti.	7519



Search strategy	Number of hits
radiculalgia.ab,ti.	79
(spinal adj stenosis).ab,ti.	3501
"tailbone adj3 pain*".ab,ti.	0
"vertebrogenic adj3 pain*".ab,ti.	0
28 or 29 or 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 or 48 or 49 or 50 or 51 or 52 or 53 or 54 or 55 or 56 or 57	110566
27 or 58	116258
algorithms/	195098
Critical Pathways/	5171
triage/	8786
clinical pathway?.ab,ti.	2298
critical pathway?.ab,ti.	1270
clinical path?.ab,ti.	201
critical path?.ab,ti.	451
triage.ab,ti.	11346
algorithm?.ab,ti.	158015
pathway?.ab,ti.	773447
Patient Care Team/	55601
Delivery of Health Care, Integrated/	9364
"process of care".ab,ti.	1921
or/60-72	1123912
59 and 73	2559
limit 74 to systematic reviews	140
limit 75 to yr="2011 -Current"	57
randomized controlled trial.pt	408386
controlled clinical trial.pt	90183
randomized.ti,ab	362722



Search strategy	Number of hits
placebo.ti,ab	171575
clinical trials as topic/ randomly.ti,ab	175121
trial?.ti	244342
77 or 78 or 79 or 80 or 81 or 82 or 83	198627
exp animal/ not humans/ 84 not 85	1022757
74 and 86	4194526
limit 87 to yr="2011 -Current"	942322
	192
	71



### 3. EXTRACTS OF THE LIME SURVEY

Madam, Sir,

The Belgian Healthcare Knowledge Center (KCE) is carrying out a study in order to describe current care pathways for low back pain in Belgium and in other countries.

We have developed with UZLeuven a questionnaire that examines several aspects potentially implemented in your pathway.

A similar questionnaire is also submitted to several countries to get information on what is done in other places.

We will be very grateful if you accept to fulfil this questionnaire, also with colleagues support if needed.

The questionnaire is long and detailed: 14 topics are checked.

You can complete the questionnaire in several times using the button 'resume later', but preferably before the 25th of July.

If you want a colleague to complete the questionnaire, just press the button 'resume later'. Your answers will be saved and your colleague can fill in all blank questions. If all questions are answered, push the 'submit'-button at the end of the survey.

The plan is to obtain one filled questionnaire per pathway (as opposed to one filled questionnaire per caregiver involved in the pathway).

Feel free to answer to 'open questions' in English, French or Flemish.

If you agree, we could eventually contact you later to go over the questionnaire and resolve or deepen any unclear issues.

Many thanks in advance!

For the KCE team,

Laurence Kohn

Section A: Preliminary information

A1. What is the name of the pathway?

A2. Organisation(s)/institution(s) involved in the development and/or the implementation of the pathway

Section B: Demographic information

B1. Please give us information about the people who have filled in this questionnaire  
*Each person who add answer or help to complete the questionnaire is invited to add some information about his/herself*

Name:

Respondant 1				
Respondant 2				
Respondant 3				
Respondant 4				

First Name:

Respondant 1				
Respondant 2				
Respondant 3				
Respondant 4				

Main discipline:

Respondant 1				
Respondant 2				



|||||

D9. How many patients were included in 2015?

10-99 ☐

100-499 ☐

500-999 ☐

1000-1999 ☐

2000-4999 ☐

5000-9999 ☐

>10000 ☐

I don't know ☐

D10. If you know the precise number of patients included in 2015, please complete:

**Section E: Patient Selection**

E1. Is the age of the patient part of the inclusion/exclusion criteria?

Yes ☐

No ☐

I don't know ☐

E2. Please explain in which way and why?

E3. Does the pathway include 'acute' conditions (i.e. < 6 weeks duration)?

Yes ☐

No ☐

I don't know ☐

|||||

Respondant 2

Respondant 3

Respondant 4

**Section C: Pathway description**

C1. What is the name of the pathway's responsible doctor/coordinator/policy maker:

C2. Where is the pathway implemented?

*Please specify your answer*

In a hospital ☐

In a city ☐

In a region ☐

In a province/state ☐

C3. Do you have any other comments on organizational issues?

**Section D: Development of the pathway**

D1. In which year did the development of the pathway start?

D2. Which caregivers play an active role in the development of the pathway?

I don't know ☐



## 4. DESCRIPTION OF THE PATHWAYS (INTERNATIONAL COMPARISON)

### 4.1. Groningen, the Netherlands

**Primary goal** of the pathway was to organize a logical care chain and perform a better triage / referral of the patients. Also, more consensus was needed, with all care providers speaking the same language

**Major accomplishments** of the pathway were:

- More and better co-operation between the different specialisms, based on consensus
- Reduction of the number of consultations per patient with specialists (from 3.6 to 1.4 per patient).
- Reduction of waiting times.
- More patients receive conservative treatment.

#### 4.1.1. Demographic information

The pathway was developed in the Netherlands, University hospital Groningen

Principal interviewee was Maarten Coppes, neurosurgeon and head of the Spine Centre of Groningen, with at least 11 years of experience with care pathways.

#### 4.1.2. Identification and organizational items

There are **9 sub-pathways** concerning spine problems, and they are all developed and implemented **in a hospital setting**:

- Multifactorial back pain (non-specific back pain)
- Lumbar radicular syndrome
- Lumbar stenosis
- Cervical radicular syndrome
- Cervical stenosis
- Spinal tumors
- Diseases of the spinal cord
- Vertebral fractures

The pathway was developed in 2005 and implemented in 2008. 1505, 1606 and between 1000-1999 patients were included in the pathway in 2013, 2014 and 2015, respectively.

#### 4.1.3. Patient Selection:

All patients with low back pain are included, children (less than 12 years old) were excluded.

Acute, subacute and chronic conditions are included in the pathway.

Patients with red flags, radiculopathy and yellow flags are also included.



#### 4.1.4. Team composition and team members role

**Secondary care and tertiary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist	Rehabilitation specialist
Neurologist	Neurologist		Neurologist	Neurologist
Rheumatologist			Rheumatologist	Rheumatologist
Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon	Orthopedic surgeon
Neurosurgeon	Neurosurgeon		Neurosurgeon	Neurosurgeon
Pain therapist	Pain therapist		Pain therapist	Pain therapist
Radiologist				
Physiotherapist				Physiotherapist
Ergonomist				Ergonomist
Psychologist				Psychologist
Traumatologist				Traumatologist
Physician assistant	Physician assistant	<b>Physician assistant</b>	Physician assistant	
Psychiatrist				Psychiatrist
Ergo therapist				
Internal Medicine				Internal Medicine



Role of the general practitioner = he is the one that refers the patients

Approximately **32 caregivers** are involved in the routine processes of intake, triage and management.

**Specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway: they all need to be spine specialists.

The pathway provides algorithms for triage, diagnosis and/or management **WITH** allocation of specific tasks/roles.

The pathway is **interdisciplinary**.

#### *4.1.5. Evidence and implementation process*

The pathway is based on international guidelines.

Eminence + local habits, referral patterns and historical patterns played a role in the development of the pathway.

The implementation of the pathway and associated changes met **resistance** from caregivers: it took 3 years to destroy the walls that were built. Mainly the orthopedic department was reluctant to join the pathway in the initial phase. Reasons were mainly of financial nature. They could finally be persuaded to join in.

#### *4.1.6. Triage and diagnosis*

The intake process is performed on the occasion of a **formal clinic visit**

The diagnostic process:

- is guided by a **questionnaire** that is sent to the patients. The physician assistant is a triage specialist who decides to which specialist in low back pain the patient has to be referred.
- is spread over one or more contacts depending on findings.
- does routinely include a **screening for 'yellow flags'**, with the PDI and EQ5D questionnaire. The screening for 'red flags' does **not** routinely include technical investigations: the patients can undergo this investigations, but it depends on symptoms and signs. They only do specific technical investigations after triage, depending on findings.

The pathway does not include strategy to avoid unnecessary imaging.

Patients with non-specific low back pain are not subcategorized or stratified.

All specialists are in charge of the diagnostic process

#### *4.1.7. Therapeutic actions*

The decision process for the therapy choice is not guided by a protocol/algorithm/tool



### Therapeutic options that are offered within the structure of the pathway:

	Acute	Subacute	Chronic	Patient category
Analgesics	X	X	X	Chronic multifactorial pain
Patient education			X	Chronic multifactorial pain
Exercise therapy	X	X	X	Chronic multifactorial pain, after operation
Behavioural therapy			X	Chronic multifactorial pain
Ergonomic advice			X	Chronic multifactorial pain
Multimodality conservative therapy			X	Chronic non-specific pain
Transforaminal injection	X	X	X	(Pseudo)radicular pain
Epidural injection		X	X	Chronic multifactorial pain, radicular pain
Root pulsed radiofrequency therapy			X	(Pseudo)radicular pain
Microdiscectomy		X	X	Radicular pain
Laminectomy (interlaminar decompression)		X	X	Stenosis
Decompression + fusion		X	X	Instability+stenosis, listhesis, tumor, infection, degenerative spine
Fusion surgery		X	X	Instability+stenosis, listhesis, tumor, infection, degenerative spine
Multidisc supportive pain therapy			X	Chronic multifactorial pain

There is a **limited number of sessions (16)** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, acupuncture or multimodality conservative therapy

Therapy choice is **not** influenced by stratification systems.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: sometimes the best option for a patients is uncertain, in those cases they choose first for the less invasive option.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.

The pathway **includes** a formal evaluation at the end of the therapy program. Usual duration of patient follow up is 1 year.



#### 4.1.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway:

- common reasons: some patients only want an operation as solution for their pain
- proportion of patients refusing: yes; estimation : 5%

**It does happen** that patients drop out from the pathway? Because they disappointment in obtained results.

**Patient education is definitely** a goal of the pathway: they explain and educate the nature of 'pain'.

**There are specific tools** for patient education included in the pathway:

1. Oral education
  - a. Information provided by umbrella patient organizations
  - b. Telephone consultation 1 year after discharge (performed by a physician assistant)

#### 4.1.9. Additional caregiver items

Tools that are available for the caregivers involved in the pathway:

- Feedback/evaluation session.
- Multidisciplinary meeting every week

There are **no** specific incentives for caregivers to join the pathway.

Caregiver education plays a moderate role in the pathway. The exact goal of caregiver education = Patient triage.

#### 4.1.10. Pathway monitoring

Patient-reported outcome measures **are being monitored** in the pathway (after 3 months and 1 year)

- Pain
- Function
- Quality of life
- Anxiety and depression

Questionnaires/tools are being used:

- NRS(validated)
- Roland Morris questionnaire(validated)
- EQ-5D(validated)
- PDI(validated)

Patient satisfaction **is being monitored** in the pathway.

Process indicators being **are being monitored** in the pathway:

- Waiting time consultation
- Waiting time treatment
- Number of specialist consulted
- Patient satisfaction after consultation

There is a cost data analysis outside the pathway



## 4.2. Nijmegen, the Netherlands

**Primary goal** of the pathway was to increase the hit-rate of orthopedic surgeons at their clinic (rate of patients eligible for surgery). They had to see 15 patients in order to operate 1. Non-surgeons entered the staff of orthopedics to see the patients and better triage them. Another goal was the reduction of waiting lists (patients had to wait 42 weeks for a poli-consultation).

### Major accomplishments:

- Increase of the operation rate (hit rate) for orthopedic surgeons
- Reduction of waiting times.
- Slow process but every step of the pathway is evidence-based.

### 4.2.1. Demographic information

The pathway was developed in the Netherlands, Sint Maartenskliniek Nijmegen

Principal interviewee was Dr. Els Van Den Eede. 8 years of experience with care pathways.

### 4.2.2. Identification and organizational items

The pathway is based on the “**Nijmegen Decision Tool**”, and is developed **in a hospital**.

The pathway was developed in 2014 and implemented in 2016.

### 4.2.3. Patient Selection:

All patients with low back pain were included; patients with psychiatric problems, patients who don't understand the language and children (less than 16 years old) were excluded.

**Only chronic conditions** are included in the pathway, because these are the patients that are referred to their clinic. The average duration of low back pain in these patients is 13 years.

Patients with red flags, radiculopathy and yellow flags are part of the pathway.



#### 4.2.4. Team composition and team members role

**Secondary care and tertiary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the development of the pathway	Caregivers that play an active role in the implementation of the pathway:	Caregivers that play an active role in the intake of patients on a routine basis:	Caregivers' services that are requested after the intake process	Caregivers that play an active role in the assessment of the pathway
			General practitioner	
Rehabilitation specialist	Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist
Rheumatologist			Rheumatologist	
Orthopedic surgeon	Orthopedic surgeon	Orthopedic surgeon	Orthopedic surgeon	Orthopedic surgeon
			Neurologist	
			Neurosurgeon	
Pain therapist			Pain therapist	
Occupational medicine specialist				
Physiotherapist			Physiotherapist	
			Radiologist	
Psychologist			Psychologist	
Researcher	Researcher			
	Implementation project leader			

The general practitioner will be involved in a future stage of the pathway development. Starting from January 2017 the Nijmegen Decision Tool will be available for general practitioners (online) to improve the referral to spine specialists. Every patient that is referred to a spine specialist, has a referral letter from a GP.

Approximately 12 caregivers are involved in the routine processes of intake, triage and management.

**Specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway: all are members of the 'orthopedic pool' and have a good knowledge of the Nijmegen Decision Tool.

The pathway provides algorithms for triage, diagnosis and/or management **WITH** allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is **multidisciplinary**.



#### 4.2.5. Evidence and implementation process

The pathway is based on scientific evidence (Van Hooff et al. The Nijmegen Decision Tool for Chronic Low Back Pain. Development of a Clinical Decision Tool for Secondary or Tertiary Spine Care Specialists. PLOS One 2014.)

Eminence + local habits, referral patterns and historical patterns played a role in the development of the pathway. There was no resistance from caregivers, because they benefit from the pathway (their operation rate increases).

#### 4.2.6. Triage and diagnosis

The intake process starts after a referral letter is sent by the GP.

The diagnostic process:

- is guided by a **questionnaire: the Nijmegen Decision Tool, including STarT Back Tool**. This questionnaire is sent to the patients before they come to the clinic.
- is spread over one or more contacts depending on findings.
- does routinely include **a screening for 'yellow flags'**, with the STarT Back Tool and some additional questions on depressive feelings and pain which are included in the Nijmegen Decision Tool.
- No additional technical investigation is performed since most patients have already had them.

The pathway does not include a strategy to avoid unnecessary imaging.

Patients with non-specific low back pain are subcategorized or stratified: there is a selection of patients, based on the Oswestry Disability Index work, yellow flags, etc... to participate in a combined physical and psychological program (RealHealth).

All specialists that are part of the spine unit (orthopedic surgeons and rehabilitation specialists) are in charge of the diagnostic process.

#### 4.2.7. Therapeutic actions

The decision process for the therapy choice is not guided by a protocol/algorithm/tool



### Therapeutic options that are offered within the structure of the pathway

	Acute	Subacute	Chronic	Patient category
Analgesics	X	X	X	Chronic multifactorial pain
Patient education			X	A-specific chronic pain
Manual therapy	X	X		Low back pain
Exercise therapy		X	X	Subacute and chronic multifactorial pain
Behavioural therapy			X	Chronic multifactorial pain
Group education			X	Chronic multifactorial pain
Ergonomic advice		X	X	Multifactorial pain
Multimodality conservative therapy		X		Low back pain
Transforaminal injection		X		Radiculopathy
Epidural injection		X		Spinal stenosis or hernia
Root pulsed radiofrequency therapy			X	Radiculopathy
Microdiscectomy			X	Radiculopathy
Laminectomy (interlaminar decompression)			X	Stenosis or hernia
Decompression + fusion			X	Spinal stenosis, spondylolisthesis
Fusion surgery			X	Spondylolisthesis, one-level discopathy
Multidisc supp pain therapy			X	Chronic a-specific pain
Dorsal column stimulation			X	Chronic radiculopathy

There is a **limited number of sessions** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, acupuncture or multimodality conservative therapy

Therapy choice is influenced by stratification systems: the Nijmegen Decision Tool



Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: the guidelines of the Dutch Orthopedic Society are followed strictly.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.

The pathway **includes** a formal evaluation at the end of the therapy program. Patients are being followed up to 2 years.

#### 4.2.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway:

- common reasons: long waiting times before surgery, rehabilitation being too time-consuming
- characteristics of patients refusing: surgery: realistic patients, rehabilitation: patients with low understanding of their disease.
- Actions taken: explaining to the patient, telephone consultation with the patient.
- proportion of patients refusing: less than 10%

**It does happen** that patients drop out from the pathway:

- common reasons: not showing up (seldom)
- action taken: telephone call to the patients

**Patient education is** a moderate goal of the pathway: they focus on self-management. But there are **no specific tools** for patient education included in the pathway.

#### 4.2.9. caregiver items

Tools that are available for the caregivers involved in the pathway:

- Feedback/evaluation session.
- Consultable protocols/algorithms/flowcharts
- Multidisciplinary meeting every week

There are **no** specific incentives for caregivers to join the pathway. The 'hit rate' of orthopedic surgeons increases so they have automatically an incentive to join.

Caregiver education is not included in the pathway.

#### 4.2.10. Pathway monitoring

Patient-reported outcome measures **are being monitored** in the pathway (at baseline, after 6, 12 and 24 months)

- Pain
- Function
- Quality of life
- Anxiety and depression
- Length of work incapacity

Questionnaires/tools are being used:

- NRS (validated)
- Oswestry Disability Index (validated)
- SF-36 (validated)
- EQ-5D (validated)



- Global Perceived Effect (validated)
- StarT Back tool

Patient satisfaction and process indicators **are not being monitored** in the pathway.

There are additional costs associated with the pathway, being an extra researcher (personnel costs). These are funded by an external grant.

### 4.3. Maastricht, the Netherlands

**Primary goal** of the pathway was to establish uniformity in diagnosis and treatment.

#### Major accomplishments:

- More consensus

#### 4.3.1. Demographic information

The pathway was developed in the Netherlands, Multidisciplinary Spine Center Maastricht Principal interviewee was Dr. Paul Willems 8 years of experience with care pathways.

#### 4.3.2. Identification and organizational items

This is the Multidisciplinary Spine Pathway, and is developed in a hospital.

The pathway was developed in 2008 and implemented in 2011. 2200 patients were included in the pathway in 2013, 2014 and 2015.

#### 4.3.3. Patient Selection:

All adults with spine related problems are included, children are excluded.

**Acute, subacute and chronic conditions** are included in the pathway. Moreover, patients with **radiculopathy and yellow flags** are also included.

Red flags are excluded. In case of red flags other trajectories are followed, these patients receive an individual approach.

#### 4.3.4. Team composition and team members role

**Primary care and tertiary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the development of the pathway	Caregivers that play an active role in the implementation of the pathway:	Caregivers that play an active role in the intake of patients on a routine basis:	Caregivers' services that are requested after the intake process	Caregivers that play an active role in the assessment of the pathway
Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist	Rehabilitation specialist
Neurologist	Neurologist	Neurologist		Neurologist
Orthopedic surgeon	Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon
Neurosurgeon	Neurosurgeon	Neurosurgeon	Neurosurgeon	Neurosurgeon
Pain therapist		Pain therapist		
	Nurse			
	Physiotherapist			



Psychologist		
Psychiatrist		
	Radiologist	
	Occupational specialist	Medicine

The general practitioner is involved for education purposes and receives information on referral criteria.

Approximately 15 caregivers are involved in the routine process of intake, triage and management.

**There are no specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway.

The pathway provides algorithms for triage, diagnosis and/or management **WITHOUT** allocation of specific tasks/roles to specific disciplines of caregivers. The pathway is **multidisciplinary**.

#### 4.3.5. Evidence and implementation process

The pathway is based on a biopsychological model and fear avoidance (Johan Vlaeyen).

Eminence played a role in the development of the pathway.

There was resistance from other caregivers: some neurologists found the evaluation and pathways to be too elaborate. Those physicians do not participate in the pathways.

#### 4.3.6. Triage and diagnosis

The intake process is performed during a planned consultation with a specialist physician.

The diagnostic process:

- is guided by a Yellow flag screening tool.
- is spread over one or more contacts depending on findings.
- does routinely include a **screening for 'yellow flags'**, with the HADS, PCS, RAND-36 and EQ-5D.
- in case of red flags: an MRI scan is performed if necessary, not routinely.

The pathway does include strategy to avoid unnecessary imaging: in case the triage is performed based on referral letters earlier imaging is collected in advance.

Patients with non-specific low back pain are subcategorized or stratified: with and without psychological burden.

Orthopedic surgeons, pain specialists and neurologists are in charge of the diagnostic process.

#### 4.3.7. Therapeutic actions

The decision process for the therapy choice is guided by a psychological screening: if patients are above the threshold there are referred to rehabilitation, a psychologist or a psychiatrist.



### Therapeutic options that are offered within the structure of the pathway:

	Acute	Subacute	Chronic	Patient category
Analgesics	X	X	X	Nonspecific pain
Patient education	X	X	X	All patients
Exercise therapy	X	X		All patients without psychological burden
Behavioural therapy		X	X	All patients with psychological burden
Group education		X	X	All patients with psychological burden
Ergonomic advice		X	X	Variable
Multimodality conservative therapy		X	X	All patients with psychological burden
Transforaminal injection	X	X	X	Nerve root compression
Epidural injection			X	Spinal stenosis
Medial branch nerve block			X	Facet arthropathy
Root pulsed radiofrequency therapy		X	X	Nerve root compression
Microdiscectomy		X	X	Disc herniation
Laminectomy (interlaminar decompression)	X	X	X	Spinal stenosis
Decompression + fusion			X	Spondylolisthesis
Fusion surgery			X	Spondylolisthesis, deformity

There is a **limited number of sessions (16)** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, and acupuncture or multimodality conservative therapy. Both for medical and reimbursement reasons.

Therapy choice is not influenced by stratification systems.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: in general there is a staged care approach unless the patient has a strong desire for surgery.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.



The pathway **includes** a formal evaluation at the end of the therapy program, but when depend on the received treatment. Pain therapists have a telephone consult after 6 weeks, physiotherapist also perform a follow up. Orthopedic surgeons patients' need to complete specific questionnaires 6 months and 1 year after surgery for national registration purposes.

#### 4.3.8. *Additional patient items*

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway,

- common reasons: financial reasons, patients have to pay for certain consults themselves.
- proportion of patients refusing: minority

**It does happen** that patients drop out from the pathway,

- common reasons: mostly financial reasons
- proportion of patients refusing: very small amount of patients does not want surgery.

**Patient education is** a moderate goal of the pathway: informed decision for treatment, help in self-management.

**Specific tools for patient education** are folders, leaflets and DVD.

#### 4.3.9. *Additional caregiver items*

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Consultable protocols/algorithms/flowcharts
- Feedback questionnaires

There are **no** specific incentives for caregivers to join the pathway.

**Caregiver education** is included in the pathway: there are joint patient evaluations for more uniformity and knowledge of each other's skills.

#### 4.3.10. *Pathway monitoring*

Patient-reported outcome measures **are being monitored** in the pathway (at intake)

- Pain
- Function
- Quality of life
- Anxiety and depression

Questionnaires/tools are being used:

- VAS (validated)
- Oswestry Disability Index (validated)
- SF-36 (validated)
- EQ-5D (validated)
- HADS (validated)
- Global Perceived Effect (validated)
- PCS (validated)

Patient satisfaction is **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway:

- Waiting lists
- Referral-to-diagnosis time
- Referral-to-treatment time

There are no additional costs associated with the pathway.



#### 4.4. Saskatchewan, Canada

**Primary goal** of the pathway was to establish a one-stop solution spine center. They wanted to develop comprehensive education programs for surgical and non-surgical patients, there is a strong focus on self-management.

##### Major accomplishments:

- Reduction waiting times for spine care services.
- Early triage and stratification + early management tools

There is one pathway in Saskatchewan. The core elements of the pathway are:

1. Assessment and management at the primary level. The patients' pain is categorized as one of 4 patterns and treated according to the pattern.
2. If back pain is not improving with conservative treatment at the primary level, escalation of care to a secondary assessment at one of the two locations in the province.
3. Referral to spine surgeon if surgery is indicated.

##### 4.4.1. Demographic information

The pathway was developed in Saskatchewan, Canada

Principal interviewee was Terry Blackmore, with assistance of Dr. Darryl Fournery. More than 10 years of experience with care pathways.

Identification and organizational items

This is the Saskatchewan Spine Pathway, and is developed in a province.

The pathway was developed in 2010 and implemented in 2011.

##### 4.4.2. Patient Selection:

Inclusion criteria at primary care level: people with low back pain.

Inclusion criteria at second level: people who have not responded to conservative management after 6-8 weeks, or in some cases up to 6 months.

Children and patients with red flags are excluded. Patients with red flags are referred to emergency department or spine surgeon.

Acute, subacute and chronic conditions are included in the pathway.

Moreover, patients with red flags (see above), radiculopathy and yellow flags are also included.

##### 4.4.3. Team composition and team members role

Primary, secondary and tertiary care are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the development of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
<b>General practitioner</b>	General practitioner	General practitioner	General practitioner	General practitioner
<b>Orthopedic surgeon</b>	Orthopedic surgeon		Orthopedic surgeon	Orthopedic surgeon
<b>Neurosurgeon</b>	Neurosurgeon		Neurosurgeon	Neurosurgeon
<b>Physiotherapist</b>	Physiotherapist	Physiotherapist	Physiotherapist	Physiotherapist
<b>Chiropractor</b>	Chiropractor	Chiropractor	Chiropractor	



Nurse	Nurse	Nurse	
	Nurse practitioner		
			Patient advisor, ministry or health staff

**There are specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway: primary care providers have to follow a course on the assessment and management of low back pain.

The pathway provides algorithms for triage, diagnosis and/or management **WITH** allocation of specific tasks/roles to specific disciplines of caregivers.

Patients are initially assessed by their primary care provider in the community. If symptoms are not improving after some time, they are referred to the spine clinic in Regina or Saskatoon where they are assessed by a physiotherapist. If surgery is indicated, they are referred to a spine surgeon.

The pathway is **interdisciplinary**.

#### 4.4.4. Evidence and implementation process

The pathway is based on **evidence**.

**Eminence and local habits/referral patterns/historical patterns** played a role in the development of the pathway.

There was **resistance** from other caregivers: primary care providers resisted to take the course; some concerns continue to exist regarding access to community based supports such as physiotherapy, psychology, for the management of chronic back pain.

#### 4.4.5. Triage and diagnosis

The intake process is performed during a **visit with the primary care provider**.

The diagnostic process:

- is guided by a specific **algorithm** and on the Hamilton Hall classification (appendix 4)
- is spread over one or more contacts depending on findings.
- does routinely include a screening for 'yellow flags'.

in case of red flags: and MRI scan is performed prior to the consult with a spine surgeon, but only if a major problem is suspected.

The pathway does include strategy to **avoid unnecessary imaging**: a checklist for MRI for lumbar spine is used. A checklist for lumbar spine CT is being developed.

Patients with non-specific low back pain are subcategorized or stratified: Hamilton Hall classification.

Primary care provider and physiotherapist at spine clinic are in charge of the diagnostic process.



#### 4.4.6. *Therapeutic actions*

The decision process for the therapy choice is guided by specified treatment protocols for 4 pain patterns according to the Hamilton Hall classification. Yellow flags are taken into account (if pronounced, this constitutes a 5<sup>th</sup> pattern: pain disorder).

It is unknown how many sessions of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, and acupuncture or multimodality conservative therapy are consumed. Many of these services are offered in the community, not specifically at the pathway clinics. A lot of those services are covered, many of these services would be offered in the community, not specifically at the pathway clinics. Lots of services are covered, but there are some that have to be paid private. Therapy choice is influenced by stratification systems: the pattern of pain is assessed, and treated accordingly.

The pathway focusses on early management of low back pain with a conservative treatment (eg. Exercise therapy). Further specialist therapies are not part of the pathway, but are available in Saskatchewan.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The program **includes** the option of surgery for chronic axial low back pain: the specialist treatments are not part of the pathway. In theory it is possible, but it would be exceptional.

The pathway **does not include** a formal evaluation at the end of the therapy program. Follow up depends on trajectory of the patient.

#### 4.4.7. *Additional patient items*

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway.

**It does happen** that patients drop out from the pathway.

**Patient education** is an important part of the pathway, the goal is **self-management**, patients are provided with exercise sheets so they can do their exercises at home.

#### 4.4.8. *Additional caregiver items*

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Consultable protocols/algorithms/flowcharts

There are specific incentives for caregivers to join the pathway: if patients are included in the pathway, the waiting times for a consultation with a specialist are shorter. GP's can refer their patients earlier.

**Caregiver education** is included in the pathway: the main goal is that caregiver learn to reassure the patients. In order to do so, they receive a **training course**.

#### 4.4.9. *Pathway monitoring*

Patient-reported outcome measures **are being monitored** in the pathway (at intake)

- Pain
- Function



Questionnaires/tools are being used:

- VAS (validated)
- Primary Care provider Assessment Tool (validated)
- Oswestry Disability Index (validated)
- Örebro Musculoskeletal Pain Questionnaire (OMPQ) (validated)
- EQ5D (validated)

Process indicators **are being monitored** in the pathway:

- number of patients seen at the Regina and Saskatoon clinics
- referrals to spine surgeon from clinics

There are **no additional costs** associated with the pathway: Most family physicians in the community bill a fee for service; physiotherapists in the community are either employees of the local health region or in private practice where clients pay directly; physiotherapists in the Regina and Saskatoon health regions are employees of the region; spine surgeons are either fee for service or on alternate payment plan with the health region.

## 4.5. Toronto, Canada

**Primary goal** of the pathway is to improve outcomes and satisfaction with delivered care. Also, to reduce unnecessary referrals to spine specialist.

### Major accomplishments:

- Less imaging using MRI
- Better/lower referral to spine specialists
- Higher self-management

#### 4.5.1. Demographic information

The pathway was developed in Canada, Toronto

Principal interviewee was Dr. Raja Rampersaud 10 years of experience with care pathways.

#### 4.5.2. Identification and organizational items

This is the Inter-professional Spine Assessment and Education Clinics, and is developed in a region.

The pathway was developed in 2011 and implemented in 2012. 1000-1999, 2000-4999 and 2000-4999 patients were included in the pathway in 2013, 2014 and 2015, respectively.

#### 4.5.3. Patient Selection:

Inclusion criteria:

- Patients who suffer from persistent back pain from 6 to 52 weeks post onset.
- Patients who have unmanageable recurrent LBP regardless of overall duration
- Patients with radiculopathy

Patients that are excluded:

- Patients with known emergent red flags
- Motor vehicle accident patients (MVA)
- Children (less than 18 years)
- pregnancy
- post-partum back pain (less than 1 year)
- established pain disorder
- ongoing litigations
- WSIB claim (workers compensation)

*Note: there are separate pathways for MVA and Workers comp in the province of Toronto.*



Subacute and chronic conditions are included in the pathway.

Patients with **radiculopathy and yellow flags** are also included. Red flags are excluded.

#### 4.5.4. Team composition and team members role

The **Primary care** levels is actively participating in the pathway.

Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner	General practitioner	General practitioner		General practitioner
Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist	
Rheumatologist	Rheumatologist		Rheumatologist	
Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon	Orthopedic surgeon
Radiologist				
Nurse	Nurse	Nurse		
Physiotherapist	Physiotherapist	Physiotherapist	Physiotherapist	Physiotherapist
Chiropractor	Chiropractor	Chiropractor	Chiropractor	Chiropractor
Psychologist				

Approximately **488 caregivers** are involved in the routine process of intake, triage and management.

**There are specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway. There is a CME training course to become part of network and referral privilege to pathway. This was a hands-on course. (Motivational interviewing techniques, using STarT Back, stratify patients,...) in the beginning with face to face education but it was too expensive. Now it is an online course, with questions, ....

The pathway provides algorithms for triage, diagnosis and/or management **WITHOUT** allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is **interdisciplinary**.



#### 4.5.5. Evidence and implementation process

The pathway is based on scientific evidence.

Eminence did not play a role in the development of the pathway.

Local habits, referral patterns and/or historical patterns played a role in the development of the pathway: regional factors influenced implementation, but not process or content. There was some resistance from other caregivers: All stakeholders were engaged in development and implementation (including patient representatives). However, participation is not mandatory.

#### 4.5.6. Triage and diagnosis

The intake process is performed during **a consultation in primary care**.

The diagnostic process:

- is guided by the Hamilton Hall stratification.
- is spread over one or more contacts depending on findings.
- does routinely include **a screening for 'yellow flags'**, with the STarTBack.
- The screening for red flags does not routinely include technical investigations, this depends on symptoms and signs.

The pathway does include strategy to avoid unnecessary imaging: imaging is not done unless intervention (e.g. injection) or surgery is being considered.

Patients with non-specific low back pain are subcategorized or stratified (Hamilton Hall classification).

#### 4.5.7. Therapeutic actions

The decision process for the therapy choice is guided by the Hamilton Hall mechanical low back Pain Patterns as well as stratification for yellow flag, opioid dependence, inflammatory back pain, and surgical criteria (leg dominant presentation).

Therapeutic options that are offered within the structure of the pathway:

The core of this pathway is **an education program for Self-management**, patients have to learn to manage themselves.

Self-management is individualized based on a variety of patient factors and resources.

Principle management is education and recommendations for self-management. The GP is trained to triage the patients, he decides if a patient should be included in the pathway or not. The patient receives a self-management package with instruction video's, information, etc. Patients with no knowledge of their body, health condition and/or the self-management program are sent to a specialist. Once a patient is treated by a specialist, the pathway is no longer of use, the specialist does what he thinks is best.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: e.g. if patients have a high score on the STarT Back they are sent to Cognitive Behavioral Therapy. If that doesn't work they are sent to a psychiatrist in the context of a pain clinic.

The program **does not include** the option of surgery for chronic axial low back pain.

The pathway **does not include** a formal evaluation at the end of the therapy program. There is no systematic follow up appointment planned, this depends on the patients. 1/3 patients are low risk and does not need follow up.



#### 4.5.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway.

**It does happen** that patients drop out from the pathway: 25% does not follow their treatments.

**Patient education is** an important goal of the pathway. For yellow flags: cognitive behavioral therapy. **Specific tools for patient education:** website with instruction video's on how they have to do their exercise (isaec.org). Additionally, patients can receive personalized treatment. All patients have to discuss their plan with their GP.

#### 4.5.9. Additional caregiver items

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Feedback/evaluation sessions
- Consultable protocols/algorithms/flowcharts
- Feedback questionnaires
- Other material: video, conference, newsletter,...

There are specific incentives for caregivers to join the pathway: caregivers receive education in management of low back pain and get faster access to the specialists. Moreover, patients are not bouncing back to the GP every time. Better access to specialists is very important, because GP's are not trained to manage some patients. Therefore, the pathway includes fast access to the experts/specialists.

**Caregiver education** plays an important role in the pathway: GP's are trained in the management of low back pain. Specific tool to do so are

instruction video's and in case of more difficult patients/problems they do a video conference. Also, a newsletter is send at fixed intervals.

#### 4.5.10. Pathway monitoring

Patient-reported outcome measures **are being monitored** in the pathway (at intake)

- Pain
- Function
- Quality of life
- Anxiety and depression
- Length of work incapacity

Questionnaires/tools are being used:

- VAS (validated)
- Oswestry Disability Index (validated)
- WORQ work Rehabilitation Questionnaire (validated)
- EQ-5D (validated)
- NRS (validated)

Patient satisfaction and caregiver satisfaction are **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway:

- Waiting lists
- Costs
- MRI use

The pathway is associated with **additional costs** for logistics (meetings, communication...), which are funded by the government / Ministry of Health.



## 4.6. North-East England, UK

**Primary goal** of the pathway was reduce practice variation and thereby reduce medical costs, (back pain being the largest cause of disability in the UK).

### Major accomplishments:

- to reduce practice variation by controlling referrals to specialists
- improve referral/triage of the patients
- promote conservative management of low back pain

### 4.6.1. Demographic information

The pathway was developed in the UK, North-East England

Principal interviewee was Dr. Charles Greenough.  
Identification and organizational items

This is The North of England Regional Back Pain and Radicular Pain Pathway, and is developed in a region.

The pathway was developed in 2009 and implemented in 2015.

### 4.6.2. Patient Selection:

All with back pain and/or leg pain are included in the pathway.

- Exclusion criteria are:
  - Children
  - red flags or cauda equina syndrome
  - potential inflammatory disease
  - thoracic spine pain.

Acute, subacute and chronic conditions are included in the pathway.

The pathway starts in community (primary care), before people present with back pain treatments. In case of low back pain, they go to the GP. Secondary care triage specialists are based in the communities, not in the hospital

### 4.6.3. Team composition and team members role

**Primary, secondary and tertiary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner	General practitioner	General practitioner		General practitioner
Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist	Rehabilitation specialist
Rheumatologist	Rheumatologist			Rheumatologist
Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon	Orthopedic surgeon
Neurosurgeon	Neurosurgeon		Neurosurgeon	Neurosurgeon
Pain therapist	Pain therapist		Pain therapist	Pain therapist
Radiologist	Radiologist		Radiologist	Radiologist



Physiotherapist	Physiotherapist	Physiotherapist	Physiotherapist
Chiropractor	Chiropractor	Chiropractor	
Psychologist	Psychologist	Psychologist	Psychologist
Patient experience	Patient experience		
		Osteopathy specialist	
		111 telephone service	
		Neurologist	

The general practitioner is involved for the triage of the patients. The patient goes first to the GP, who refers the patient to a physiotherapist for conservative treatment or a specialist if necessary.

**There are specific requirements** for caregivers in the pathway: specific triage specialists are trained and based in the community.

The pathway provides algorithms for triage, diagnosis and/or management **WITHOUT** allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is **interdisciplinary**.

#### 4.6.4. Evidence and implementation process

The pathway is based on the NICE guidelines, and all relevant scientific evidence.

Eminence and local habits/referral patterns/historical pattern did not play a role in the development of the pathway.

There was resistance from other caregivers: mainly from pain therapists and also surgeons. E.g. For the elimination of facet blocks there was a lot of resistance. The pathway is a vehicle for implementation of evidence-based treatments. The commissioners have the power of refusing surgical options.

#### 4.6.5. Triage and diagnosis

The intake process is performed during a planned consultation with a GP, chiropractor or physiotherapist. Those are responsible for early triage. Unplanned intakes are performed in the emergency room. Also a planned consultation with a specialist physician can theoretically be the intake occasion.

The diagnostic process:

- is guided by the STarT Back Tool.
- is spread over one or more contacts depending on findings.
- in case of red flags: priority spine imaging: protocol led MRI whole spine unless contraindicated.

The pathway does include strategy to avoid unnecessary imaging.

Patients with non-specific low back pain are not subcategorized or stratified.

An orthopedic surgeon is in charge of the diagnostic process.



#### 4.6.6. *Therapeutic actions*

The decision process for the therapy choice is guided by an algorithm.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program does not include a staged approach for certain therapies.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.

The pathway **includes** a formal evaluation at the end of the therapy program, more specific after 6 months and 1 year.

#### 4.6.7. *Additional patient items*

The program (or subprograms) **does not** provide out-of-hour services.

There are specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function. The treatment is 'free' if the patient follows the program, if a patient is not included in the pathway his treatments are not reimbursed. Every option is discussed with the patient.

**It does happen** that patients refuse to follow the actions proposed by the pathway.

**It does happen** that patients drop out from the pathway.

**Patient education** is an important goal of the pathway: self-management. **Specific tools for patient education** is the BACK BOOK (available on the website).

#### 4.6.8. *Additional caregiver items*

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Feedback/evaluation sessions
- Consultable protocols/algorithms/flowcharts

**Caregiver education** is included in the pathway: the Triage and Treat Practitioners are caregivers that are specifically trained to be experts in the triage of patients. They are extensively trained because they are the key to the whole pathway. What is SAID to the patients is more important than what is DONE to the patients. GP's have only protected learning time, but in each geographical area there is a 'GP champion' who instructs the other GP's.

#### 4.6.9. *Pathway monitoring*

Patient-reported outcome measures **are being monitored** in the pathway (at intake)

- Pain
- Function
- Quality of life
- Anxiety and depression
- Length of work incapacity

Questionnaires/tools are being used:

- VAS (validated)
- NRS (validated)
- Oswestry Disability Index (validated)
- BPI (validated)
- EQ-5D (validated)
- VASPI (validated)



- Global impression of change (validated)
- GAT (validated)

Patient satisfaction is **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway:

- Referral rates
- Number of MRI's

The pathway is associated with **additional costs**, which are funded by the Clinical Commissioning Group (CCG).

#### 4.7. London (implementation of the British Pain Society Pathway), UK

**Primary goal** of the pathway was to improve the effectiveness of care. The BPS pathway was designed to provide clear guidance to purchasers and providers about recommended management strategies

**Major accomplishments: (unclear)**

##### 4.7.1. Demographic information

The pathway was developed in the UK by the British Pain Society.

Principal interviewee was Dr. John Lee, he has more than 20 years of experience with care pathways.

Identification and organizational items

This is **The Low Back and Radicular Pain Pathway**, and is developed **on a country-level**, but the questionnaire and interview describe the **implementation in a hospital** (the National Hospital for Neurology and Neurosurgery). The implementation of the pathway was not steered, is probably hardly consulted in primary care, but the pathway defines the modus operandi in the NHSS.

The pathway was developed in 2011 and implemented (in NHSS) in 2012.

##### 4.7.2. Patient Selection:

Inclusion criteria that are being used: Assessment, treatment, and management of non-specific mechanical low back pain not attributed to a serious pathology of up to 12 months duration, in adults within primary care; assessment, treatment, and management of sciatica – lumbar radicular pain.

- Exclusion criteria are:
  - children under 18 years
  - cauda equine syndrome
  - malignancy
  - potential inflammatory disease
  - fracture
  - low back pain in pregnancy

Acute, subacute and chronic conditions are included in the pathway.

Patients with **radiculopathy and yellow flags** are also included.

**Red flags** are excluded from the pathway.

##### 4.7.3. Team composition and team members role

**Primary, secondary and tertiary care** are the levels of care that are actively participating in the pathway.



Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner	General practitioner	General practitioner		
Rheumatologist	Rheumatologist		Rheumatologist	
Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon	
Neurosurgeon	Neurosurgeon		Neurosurgeon	
Pain therapist	Pain therapist		Pain therapist	
Occupational medicine specialist			Occupational medicine specialist	
Nurse	Nurse		Nurse	
Physiotherapist	Physiotherapist		Physiotherapist	
Chiropractor			Chiropractor	
Psychologist	Psychologist		Psychologist	
	Emergency specialist			
			Neurologist	
				In team meetings

There are approximately 40 caregivers involved in the routine processes of the pathway in NHSS.

**There are specific requirements** for caregivers in the pathway: some parts of the pathway require specialist skills, specifically the secondary specialist care.

The pathway provides algorithms for triage, diagnosis and/or management **WITHOUT** allocation of specific tasks/roles to specific disciplines of caregivers.

The pathway is **multidisciplinary**.

#### 4.7.4. Evidence and implementation process

The pathway is based on evidence, guidelines.

Eminence and local habits/referral patterns/historical pattern did not play a role in the development of the pathway. There was resistance from other caregivers: a little bit, some people needed to change their habits. Right treatment at the right time (not bouncing around). Follow the pathway and send them to specialists.



#### 4.7.5. Triage and diagnosis

The intake process is performed during **primary care visit**.

The diagnostic process:

- is guided by the STarT Back Tool.
- is spread over at least two patient contacts
- includes routinely screening for yellow flags: STarT Back Tool and biopsychological assessment by psychologist.
- in case of red flags no routinely technical investigations are performed.

The pathway does not include an active strategy to avoid unnecessary imaging, but imaging is only deemed appropriate for symptoms / signs of neural impingement.

Patients with non-specific low back pain are subcategorized or stratified according to duration of ongoing symptoms and severity of impact of symptoms (STarT back assisted)

#### 4.7.6. Therapeutic actions

The decision process for the therapy choice is guided by a flow chart (map of medicine).

**Therapeutic options that are offered within the structure of the pathway:**

	Acute	Subacute	Chronic	Patient category
Analgesics	X	X	X	All patients
Patient education	X	X	X	All patients
Manual therapy	X	X		patients with medium risk in StartBack screening
Exercise therapy	X	X	X	patients with medium risk in StartBack screening
Behavioural therapy			X	patients with high risk in StartBack screening
Group education			X	patients with high risk in StartBack screening
Ergonomic advice			X	patients with high risk in StartBack screening
Multimodality conservative therapy	X	X		patients with medium risk in StartBack screening
Transforaminal injection	X	X		Radicular pain
Epidural injection	X	X		Radicular pain
Medial branch nerve block			X	
Facet rhizolysis therapy			X	Medium/high risk in StartBack screening
Microdiscectomy			X	Radicular pain
Laminectomy (interlaminar decompression)				Radicular pain
Decompression + fusion				Radicular pain



Fusion surgery		Radicular pain
Multidisciplinary supportive therapy for chronic pain		Radicular pain
Dorsal column stimulation	X	Radicular pain

There is no limited number of sessions in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, acupuncture or multimodality conservative therapy.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program does include a staged approach for certain therapies.

The program **does not include** the option of surgery for chronic axial low back pain.

The pathway **includes** a formal evaluation at the end of the therapy program in certain cases, but this depends entirely on the path that is followed.

#### 4.7.7. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are no specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway.

**It does happen** that patients drop out from the pathway, approximately 10-30%.

**Patient education is** an important goal of the pathway: **self-management**.

#### 4.7.8. Additional caregiver items

Tools that are available for the caregivers involved in the pathway:

- Consultable protocols/algorithms/flowcharts: pathway was imbedded in the brains of the senior staff. Juniors needed to learn the pathway (map of medicine).

**Caregiver education** is included in the pathway: any new team member is explained why we do what we are doing. They are given the documents and the flow chart of the pathway.

#### 4.7.9. Pathway monitoring

Patient-reported outcome measures **are being monitored** in the pathway

- Pain
- Function
- Quality of life
- Anxiety and depression

Questionnaires/tools are being used:

- PSCQ (validated)
- FABQ (validated)
- DAPOS (validated)
- BPI (validated)
- CPEQ (validated)



- Task specific scale
- Sit to stand measurement

Patient satisfaction is **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway.

The pathway is not associated with additional costs.

#### 4.8. Ireland, Waterford

**Primary goal** of the pathway was to avoid referral to secondary care if they can be treated in primary care.

**Major accomplishments:** (unclear)

##### 4.8.1. Demographic information

The pathway was developed in the Ireland, Waterford.

Principal interviewee was Dr. Susan Murphy. She has 13 years of experience with care pathways.

##### 4.8.2. Identification and organizational items

This pathway is developed **in a city**.

The pathway was developed in 2001 and implemented in 2001.

##### 4.8.3. Patient Selection:

All adults with benign Mechanical Low Back Pain and aged 20 – 65 are included.

Children, patients with red flags, older than 65 years and associated neurological conditions (MS, Parkinson) are excluded.

Acute, subacute and chronic conditions are included in the pathway.

Moreover, patients with **radiculopathy and yellow flags** are also included. Red flags are excluded.

##### 4.8.4. Team composition and team members role

**Primary care and secondary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner	General practitioner	General practitioner		The pathway is not assessed.
Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon	
Physiotherapist	Physiotherapist		Physiotherapist	
	Rheumatologist		Rheumatologist	
	Pain therapist		Pain therapist	



The general practitioner is involved for the intake and referral of the patients.

Approximately 60 GPs, 15 physiotherapists, 2 orthopedic surgeons, 2 rheumatologists and 1 pain specialist involved in the routine process of intake, triage and management.

**There are no specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway.

The pathway provides algorithms for triage, diagnosis and/or management **WITH** allocation of specific tasks/roles to specific disciplines of caregivers.

The pathway is **multidisciplinary**.

#### *4.8.5. Evidence and implementation process*

The pathway is based on evidence.

Evidence or local habits/patterns did not play a role in the development of the pathway.

#### *4.8.6. Triage and diagnosis*

The intake process is performed during **a planned consultation with a GP**.

The diagnostic process:

- is not guided by a diagnostic protocol/algorithm/tool.
- does routinely include **a screening for 'yellow flags'**, with the STarTBack at the **second** level (physiotherapist level)
- in case of red flags: there are no routine investigations performed, the GP just sends the patients to a specialist.

Patients with non-specific low back pain are subcategorized or stratified using the STarTBack tool.

#### *4.8.7. Therapeutic actions*

The decision process for the therapy choice is guided by a protocol, but only for the physiotherapists, the GP's have no protocol.

There is **no limited number of sessions** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, and acupuncture or multimodality conservative therapy. Both for medical and reimbursement reasons.

Therapy choice is not influenced by stratification systems.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: first physical therapy before referral to a medical specialist.

The program **does not include** the option of surgery for chronic axial low back pain.

The pathway **includes** a formal evaluation at the end of the physical therapy program.



#### 4.8.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway, but only a very small proportion of patients.

**It does happen** that patients drop out from the pathway, but only a very small proportion of patients.

**Patient education** is an important goal of the pathway: **self-management** and understanding the problem. in physiotherapy is this 40% of the effort.

There are **no specific tools** for patient education.

#### 4.8.9. Additional caregiver items

Tools that are available for the caregivers involved in the pathway: physiotherapists and GP's meet once a year to discuss patients and the pathway.

There are **no** specific incentives for caregivers to join the pathway.

**Caregiver education** is included in the pathway: they trained in the way of working in the pathway.

#### 4.8.10. Pathway monitoring

Patient-reported outcome measures **are being monitored** in the pathway (at intake and then every 2 weeks)

- Pain
- Function
- Quality of life
- Anxiety and depression
- Length of work incapacity

Questionnaires/tools are being used (at physiotherapy level):

- VAS (validated)
- EQ-5D(validated)
- HADS(validated)
- Back believes (validated)
- Length of work absence (validated)

Patient satisfaction is **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway:

- Waiting lists

There are no additional costs associated with the pathway.



## 4.9. , Switzerland

**Primary goal** of the pathway was harmonize care, make 1 entry for patients with low back pain.

### Major accomplishments:

- More consensus and harmony
- Less surgical interventions
- Better triage

### 4.9.1. Demographic information

The pathway was developed in Switzerland, Lausanne.

Principal interviewee was Dr. De Goumoëns, assisted by Dr. Kulik. More than 25 years of experience with care pathways.

### 4.9.2. Identification and organizational items

This is the “**Filière dos CHUV**”, and is developed in a hospital. It was developed in collaboration with the University hospital of Geneva.

The pathway was developed in 2012 and implemented in 2014. More than 5000 patients were included in the pathway in 2013, 2014 and 2015.

### 4.9.3. Patient Selection:

All adults with back pain (elective or emergency room) are included, children (less than 16 years) are excluded.

Acute, subacute and chronic conditions are included in the pathway.

Moreover, patients with **red flags, radiculopathy and yellow flags** are also included.

### 4.9.4. Team composition and team members role

**Tertiary care** are the levels of care that are actively participating in the pathway.

Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner	General practitioner	General practitioner		General practitioner
Rehabilitation specialist	Rehabilitation specialist	Rehabilitation specialist		Rehabilitation specialist
Rheumatologist	Rheumatologist	Rheumatologist		
Emergency specialist	Emergency specialist	Emergency specialist		Emergency specialist
Orthopedic surgeon	Orthopedic surgeon	Orthopedic surgeon		Orthopedic surgeon
Neurosurgeon	Neurosurgeon	Neurosurgeon		Neurosurgeon
Pain therapist	Pain therapist	Pain therapist		Pain therapist
Radiologist		Radiologist	Radiologist	
Nurse	Nurse	Nurse		Nurse



Psychiatrist	Psychiatrist	Psychiatrist
Referring secretary	Referring secretary	Referring secretary
		Physiotherapist
		Ergonomist
		Psychologist
		Neurologist
		Physician associated with insurance company
		Social worker

The general practitioner is involved by filling out a questionnaire specifying patient condition for triage purposes.

Approximately 100 caregivers are involved in the routine process of intake, triage and management in the hospital. In private practice, at least 500 caregivers are involved.

There are no specific requirements for physicians or for specific categories of caregivers who want to participate in the pathway.

The pathway provides algorithms for triage, diagnosis and/or management WITHOUT allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is interdisciplinary.

#### 4.9.5. Evidence and implementation process

The pathway is based on a biopsychological model, the Oswestry and StarTBack Tool.

Eminence did not play a role in the development of the pathway. There was no resistance from or no significant problems with other caregivers.

#### 4.9.6. Triage and diagnosis

The intake process is performed during a planned consultation with a specialist physician or in the emergency room.

The diagnostic process:

- is guided by a specifically designed patient questionnaire.
- is spread over one or more contacts depending on findings.
- does routinely include **a screening for 'yellow flags'**, using
  - a. Validated questionnaire: STarTBack
  - b. Psychological visit (common session pain specialist and psychologist) is available
- in case of red flags, no technical investigations are performed routinely, this depends on symptoms and signs.

The pathway does include strategy to avoid unnecessary imaging: this is written in the guidelines of the pathway.

Patients with non-specific low back pain are not subcategorized or stratified.



#### 4.9.7. Therapeutic actions

The decision process for the therapy choice is guided by a protocol that includes:

1. Red flag exclusion
2. Radiculopathy

3. Spinal stenosis
4. Non-specific low back pain (acute, subacute, chronic), biopsychosocial model

#### Therapeutic options that are offered within the structure of the pathway:

	Acuut	Subacuut	Chronisch
Analgesics	X	X	X
Patient education			X
Manual therapy	X		
Exercise therapy			X
Behavioural therapy			X
Group education			X
Ergonomic advice			X
Multimodality conservative therapy			X
Transforaminal injection		X	X
Epidural injection		X	X
Medial branch nerve block		X	X
Root pulsed radiofrequency therapy			X
Microdiscectomy	X	X	
Laminectomy (interlaminar decompression)			X
Decompression + fusion			X
Fusion surgery			X
Dorsal column stimulation			X



There is a **limited number of sessions** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, acupuncture or multimodality conservative therapy. And this is for insurance policy reasons.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies: two or more phase management depending on patient condition and context.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.

The pathway **includes** a formal evaluation at the end of the therapy program, but when depend on the received treatment. In pain therapists this is variable, up to two years for surgery, otherwise return to GP with management plan

#### 4.9.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway, because of:

- common reasons: different reasons, medical and non-medical.
- Characteristics of patients refusing: often poor educational level, poorly integrated patients, in case of language problems
- proportion of patients refusing: minority

**It does happen** that patients drop out from the pathway, because of:

- common reasons: mostly without known reason, patient that come from other countries (language and integration problems), other problems like alcoholism
- proportion of patients refusing: minority, there are seldom patients that refuse or drop out.

**Patient education** is an important goal of the pathway: Information and guided application during 1 year. The primary goal is self-management. This is important for a faster return to work.

**Specific tools for patient education** are Back book, information sessions with various specialists.

#### 4.9.9. Additional caregiver items

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Consultable protocols/algorithms/flowcharts
- Feedback/evaluation sessions
- Pocket cards
- If a new caregiver enters the pathway he is supervised by a senior doctor.

There are **no** specific incentives for caregivers to join the pathway.

**Caregiver education** is included in the pathway, the goal is here effective back patient management. Several tools are available: protocols, pocket cards, patient information, internal web pages,...



#### 4.9.10. Pathway monitoring

Patient-reported outcome measures **are not being monitored** in the pathway. However, some surgeons use the COMI questionnaire (Spine Tango).

Patient satisfaction is **not being monitored** in the pathway.

Process indicators **are not being monitored** in the pathway:

There are additional costs associated with the pathway:

- Personnel: medical coordinator 50%, data manager 30%
- Logistics: steering committee meeting 2 times a year

#### 4.10. Nürnberg, Germany

**Primary goal** of the pathway was to implement the German Rückenschmerz guideline.

**Major accomplishments:** (unclear)

##### 4.10.1. Demographic information

The pathway was developed in Germany, General Hospital Nürnberg

Principal interviewee was Dr. Susanne Scharzkopf. More than 15 years of experience with care pathways. Identification and organizational items

This is the **Low back pain Pathway (based on the Rückenschmerz guideline)**, and is developed **in a country**. The current analysis describes how this was implemented in a hospital.

##### 4.10.2. Patient Selection:

All adults with spine related problems are included, children are not formally excluded, and they go to paediatrics.

Acute, subacute and chronic conditions are included in the pathway. Moreover, patients with red flags, radiculopathy and yellow flags are also included.

##### 4.10.3. Team composition and team members role

**Primary, secondary and tertiary care** are the levels of care that are actively participating in the pathway.

Note: it is not a formal pathway (i.e. no available algorithms), but rather a standardized way of working based on the German guideline. It was developed by the head of the general hospital in this specific hospital.



Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
Rehabilitation specialist	Rehabilitation specialist	Rehabilitation specialist	Rehabilitation specialist	
		Emergency specialist	Emergency specialist	
			Neurologist	
			Neurosurgeon	
			Rheumatologist	
			Orthopedic surgeon	
			Pain therapist	
			Nurse	
			Physiotherapist	
			Radiologist	
			Phycologist	
			Social worker	

The general practitioner is involved for education purposes and receives information on referral criteria.

Approximately 15 caregivers are involved in the routine process of intake, triage and management.

**There are no specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway.

The pathway provides algorithms for triage, diagnosis and/or management WITH allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is **multidisciplinary**.

#### 4.10.4. Evidence and implementation process

The pathway is based on the Rückenschmerz guideline

Eminence played a role in the development of the pathway. There was no resistance from other caregivers.

#### 4.10.5. Triage and diagnosis

The intake process is performed during a planned consultation with a specialist physician or in the emergency room.

The diagnostic process:

- Is not guided by a diagnostic protocol, algorithm or tool.
- is spread over one or more contacts depending on findings.



- does routinely include a **screening for 'yellow flags'**, based on intuitive screening.

The pathway does NOT include strategy to avoid unnecessary imaging is included in the pathway. Actually, all patients will get a spine X-ray and 99% a lumbar spine MRI.

Patients with non-specific low back pain are not subcategorized or stratified.

Orthopedic surgeons and neurologists are in charge of the diagnostic process.

#### 4.10.6. *Therapeutic actions*

The decision process for the therapy choice is **not** guided by a protocol, algorithm or tool.

Therapeutic options that are offered within the structure of the pathway:

	Acute	Subacute	Chronic
Analgesics	X	X	X
Patient education	X	X	X
Massage			
Manual therapy			
Exercise therapy	X	X	
Behavioural therapy		X	X
Group education		X	X
Ergonomic advice		X	X
Acupuncture			
Multimodality conservative therapy		X	X
Transforaminal injection	X	X	X
Epidural injection			X
Medial branch nerve block			X
Microdiscectomy		X	X
Laminectomy (interlaminar decompression)	X	X	X
Decompression + fusion			X
Fusion surgery			X
Multidisciplinary supportive therapy for chronic pain			
Dorsal column stimulation			



There is **no limited number of sessions** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, and acupuncture or multimodality conservative therapy.

Management decisions are influenced by:

- The presence of 'yellow flags'
- Job or sports requirements

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **does not include** a staged approach for certain therapies.

The program **includes** the option of surgery for chronic axial low back pain. But only in selected cases.

The pathway **does not include** a formal evaluation at the end of the therapy program, but when depends on the received treatment.

#### *4.10.7. Additional patient items*

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway,

- Characteristics of patients refusing: mostly young patients

**It does happen** that patients drop out from the pathway,

- proportion of patients refusing: very small proportion of patients

**Patient education is** an important goal of the pathway: risk assessment, prevention of falling, education how to cope in daily life,...

#### *4.10.8. Additional caregiver items*

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Feedback/evaluation sessions
- Team meetings

There are **no** specific incentives for caregivers to join the pathway.

**Caregiver education** is not included in the pathway.

#### *4.10.9. Pathway monitoring*

Patient-reported outcome measures **are being monitored** in the pathway (at intake)

- Pain
- Function

Questionnaires/tools are being used:

- NRS (validated)
- Bartell Index (validated)

Patient satisfaction is **being monitored** in the pathway.

Process indicators **are being monitored** in the pathway:

- Waiting lists

There are no additional costs associated with the pathway.



### 4.11. Plymouth, United States

**Primary goal** of the pathway was to improve management of low back pain by reducing practice variation and thereby creating more value.

**Major accomplishments:**

- Fast referral → short or no waiting lists
- More emphasis on conservative management of low back pain → less surgical interventions
- More self-management

#### 4.11.1. Demographic information

The pathway was developed in the US, Massachusetts, Plymouth

Principal interviewee were Dr. Ian Paskowski and Dr. James Berghelli  
16 years of experience with care pathways.

#### 4.11.2. Identification and organizational items

This is the Low Back Pain Clinical Pathway, and is developed in a city.

The pathway was developed in 2012 and implemented in 2012. 1033, 1011 and 942 patients were included in the pathway in 2013, 2014 and 2015, respectively.

#### 4.11.3. Patient Selection:

All adults with low back pain are included, children are excluded.

Acute, subacute and chronic conditions are included in the pathway.

Moreover, patients with **red flags, radiculopathy and yellow flags** are also included.

#### 4.11.4. Team composition and team members role

**Primary care and secondary care** are the levels of care that are actively participating in the pathway.



Caregivers that play an active role in the <b>development</b> of the pathway	Caregivers that play an active role in the <b>implementation</b> of the pathway:	Caregivers that play an active role in the <b>intake</b> of patients on a routine basis:	Caregivers' <b>services that are requested after the intake</b> process	Caregivers that play an active role in the <b>assessment</b> of the pathway
General practitioner		General practitioner	General practitioner	
Rehabilitation specialist		Rehabilitation specialist	Rehabilitation specialist	
Neurologist			Neurologist	
Rheumatologist			Rheumatologist	
Emergency specialist	Emergency specialist	Emergency specialist		
Orthopedic surgeon			Orthopedic surgeon	
Neurosurgeon			Neurosurgeon	Neurosurgeon
Pain therapist			Pain therapist	
Radiologist			Radiologist	
Occupational medicine specialist		Occupational medicine specialist	Occupational medicine specialist	
Nurse	Nurse	Nurse		
Physiotherapist			Physiotherapist	
Chiropractor	Chiropractor	Chiropractor	Chiropractor	Chiropractor
Psychologist				
Director of Clinical Pathway Committee	Director of Clinical Pathway Committee			Director of Clinical Pathway Committee
			Osteopathy specialist	

The general practitioner is involved for the referral of the patients to the Spine Clinic when needed. These schemes/questionnaire are also available in the emergency department and for other referring hospital specialists. When referral is deemed necessary, intake is usually within 48 hours.

Approximately 6 caregivers are involved in the routine process of intake, triage and management **at the Spine Clinic**.

**There are no specific requirements** for physicians or for specific categories of caregivers who want to participate in the pathway.

The pathway provides algorithms for triage, diagnosis and/or management **WITHOUT** allocation of specific tasks/roles to specific disciplines of caregivers

The pathway is **interdisciplinary**.



#### 4.11.5. Evidence and implementation process

The pathway is based on evidence and screening for yellow flags (STarTBack).

Local habits/ referral patterns/ historical patterns also played a role in the development of the pathway.

There was some resistance from other caregivers: for the nurses in the emergency department the screening increased their workload. Therefore, they included IT and had a digital version of all questionnaires which improved the process significantly. Digitalization of the pathway is one of the main reasons of the success.

#### 4.11.6. Triage and diagnosis

The intake process is performed in the emergency unit or in a planned consultation with the GP or hospital specialist.

The diagnostic process:

- is guided by a questionnaire, including the STarT Back tool.
- is spread over at least two patient contacts.
- does routinely include **a screening for 'yellow flags'**, with the STarTBack.

The pathway does include strategy to avoid unnecessary imaging: MRI only recommended in red flags and radiculopathy. Because of this, there was a huge reduction in MRI's.

Patients with non-specific low back pain are not subcategorized or stratified.

#### 4.11.7. Therapeutic actions

The decision process for the therapy choice is guided by a protocol.

There is a **limited number of sessions** in case of massage, manual therapy, exercise therapy, behavioral therapy, group education, ergonomic advice, acupuncture or multimodality conservative therapy: for initial exercise/manual therapy this is limited to 3 weeks, then assessment is done and decision for next step taken.

Management decisions are influenced by:

- The presence of 'yellow flags'

The choice for therapy is definitely a shared decision process with the patient.

The therapeutic program **includes** a staged approach for certain therapies.

The program **includes** the option of surgery for chronic axial low back pain.

The pathway **includes** a formal evaluation at the end of the therapy program.

#### 4.11.8. Additional patient items

The program (or subprograms) **does not** provide out-of-hour services.

There are **no** specific incentives for patients, apart from the therapeutic goals of reducing pain and restoring function.

**It does happen** that patients refuse to follow the actions proposed by the pathway.

**It does happen** that patients drop out from the pathway.

**Patient education is** an important goal of the pathway.

#### 4.11.9. Additional caregiver items

Tools that are available for the caregivers involved in the pathway:

- Training session.
- Consultable protocols/algorithms/flowcharts
- Feedback/evaluation sessions

There are **no** specific incentives for caregivers to join the pathway.

**Caregiver education** is included in the pathway.



#### 4.11.10. *Pathway monitoring*

Patient-reported outcome measures **are being monitored** in the pathway (at intake and then every 2 weeks during Spine Clinic treatment)

- Pain
- Anxiety and depression

Questionnaires/tools are being used:

- 10 point pain scale
- STarTBack Tool

Patient satisfaction is **being monitored** in the pathway.

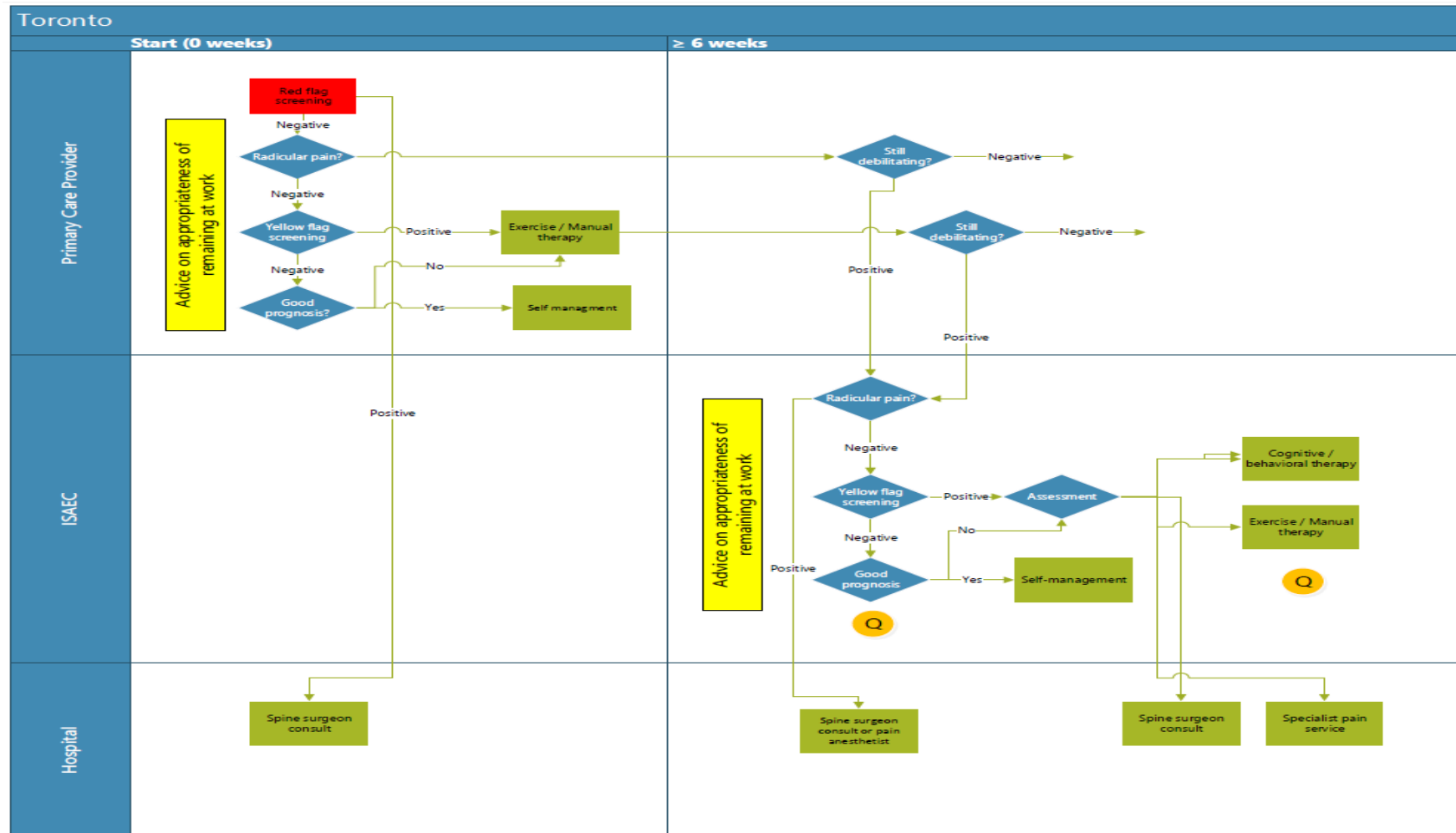
Process indicators **are being monitored** in the pathway:

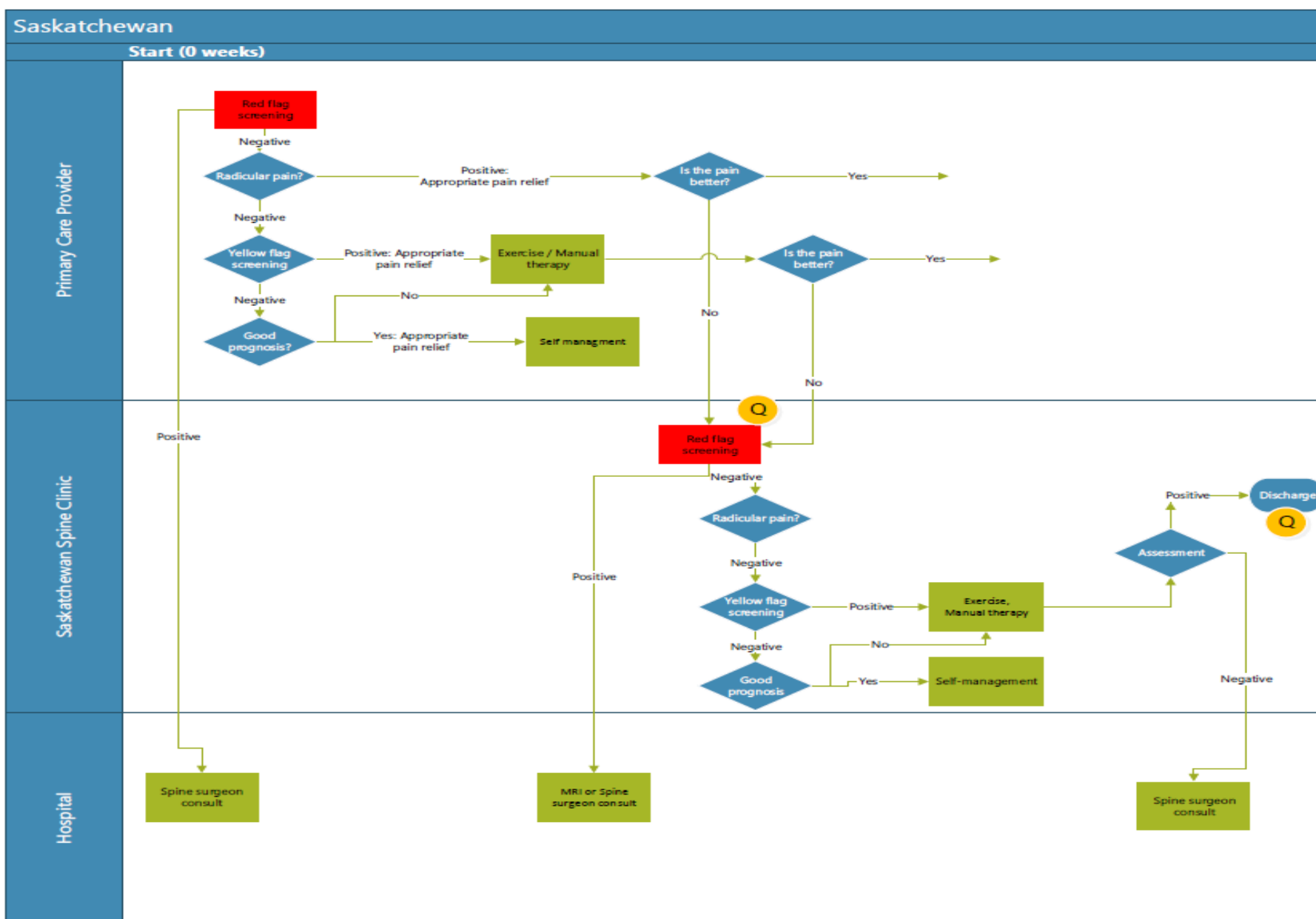
- Number of MRI's
- Number of admissions without major comorbidities.
- Cost data are also being monitored
- Length of stay

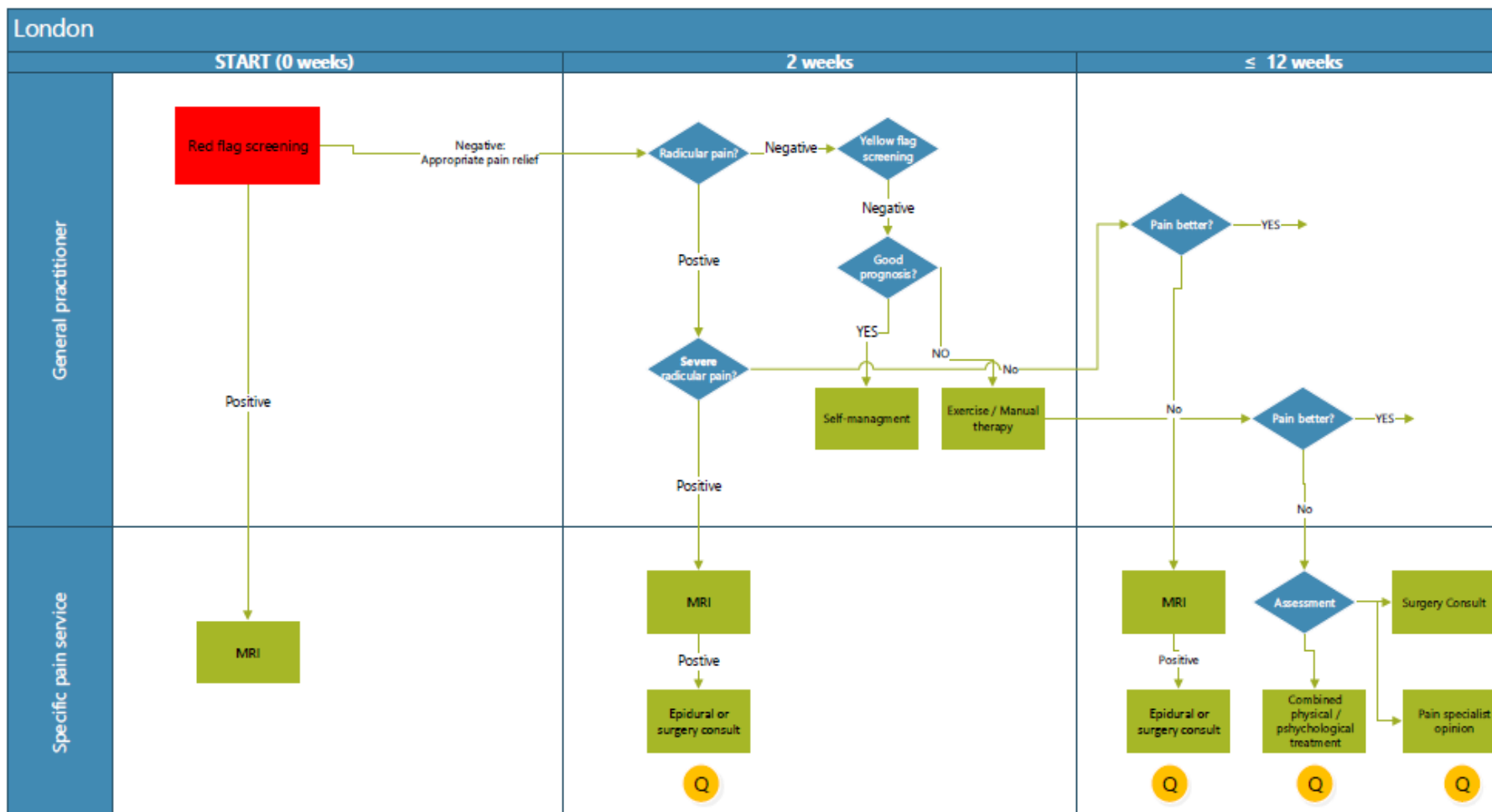
There are no additional costs associated with the pathway.

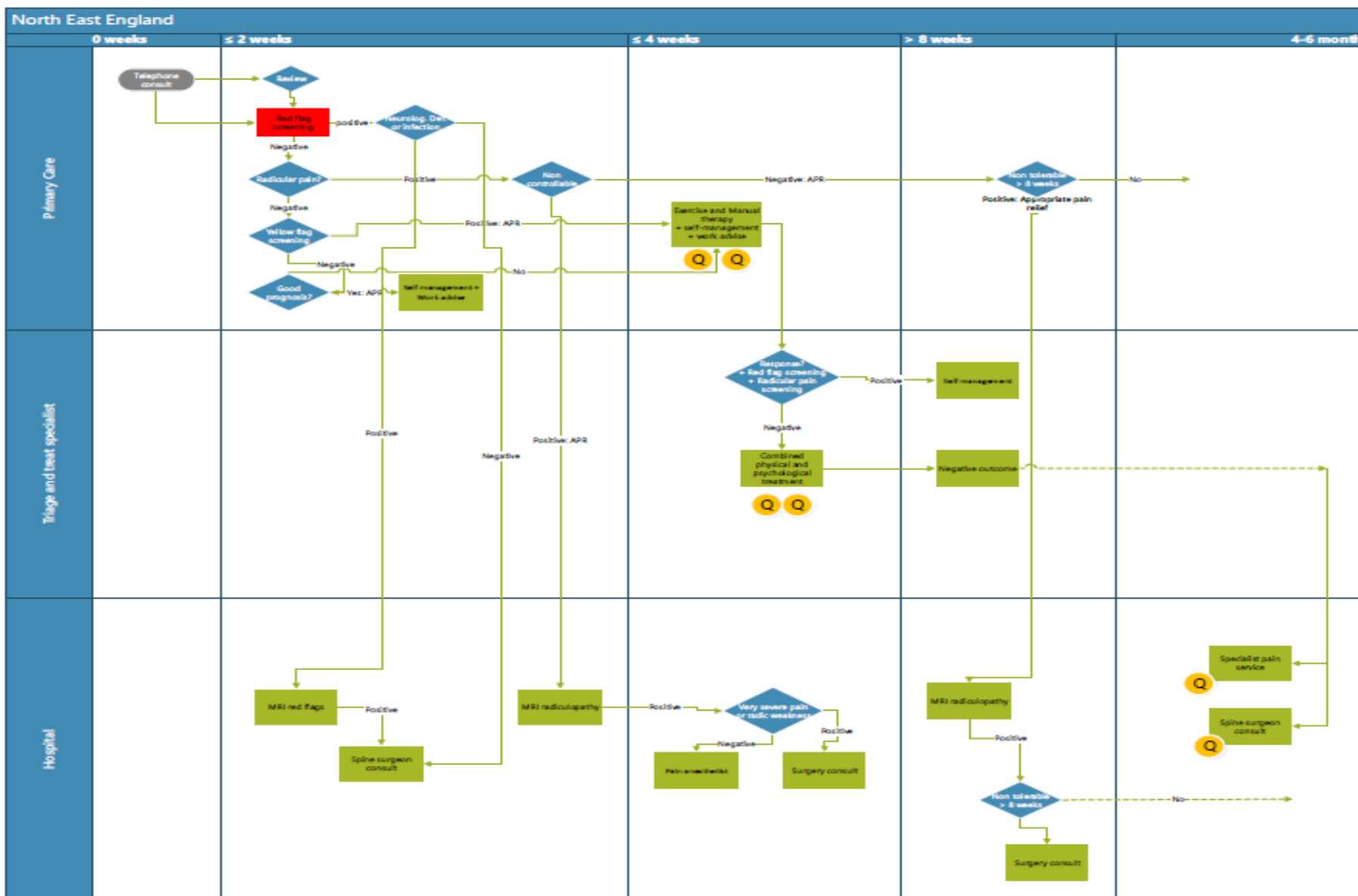


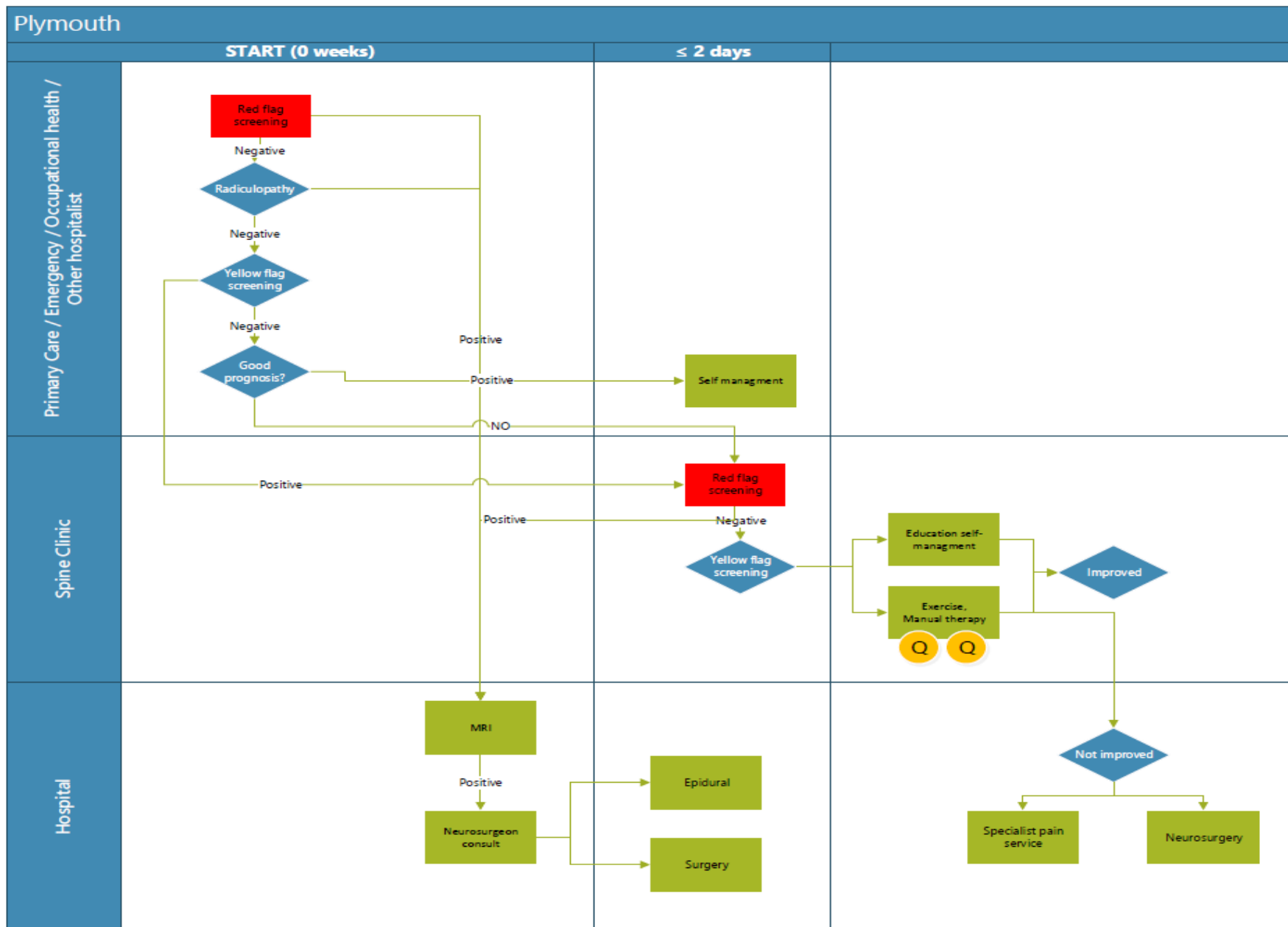
## 5. PATHWAYS FLOWCHARTS (INTERNATIONAL COMPARISON)







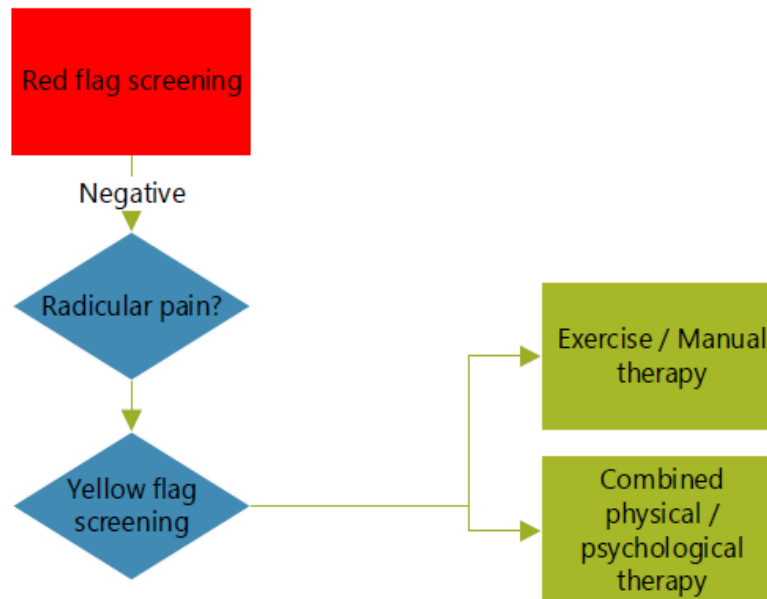






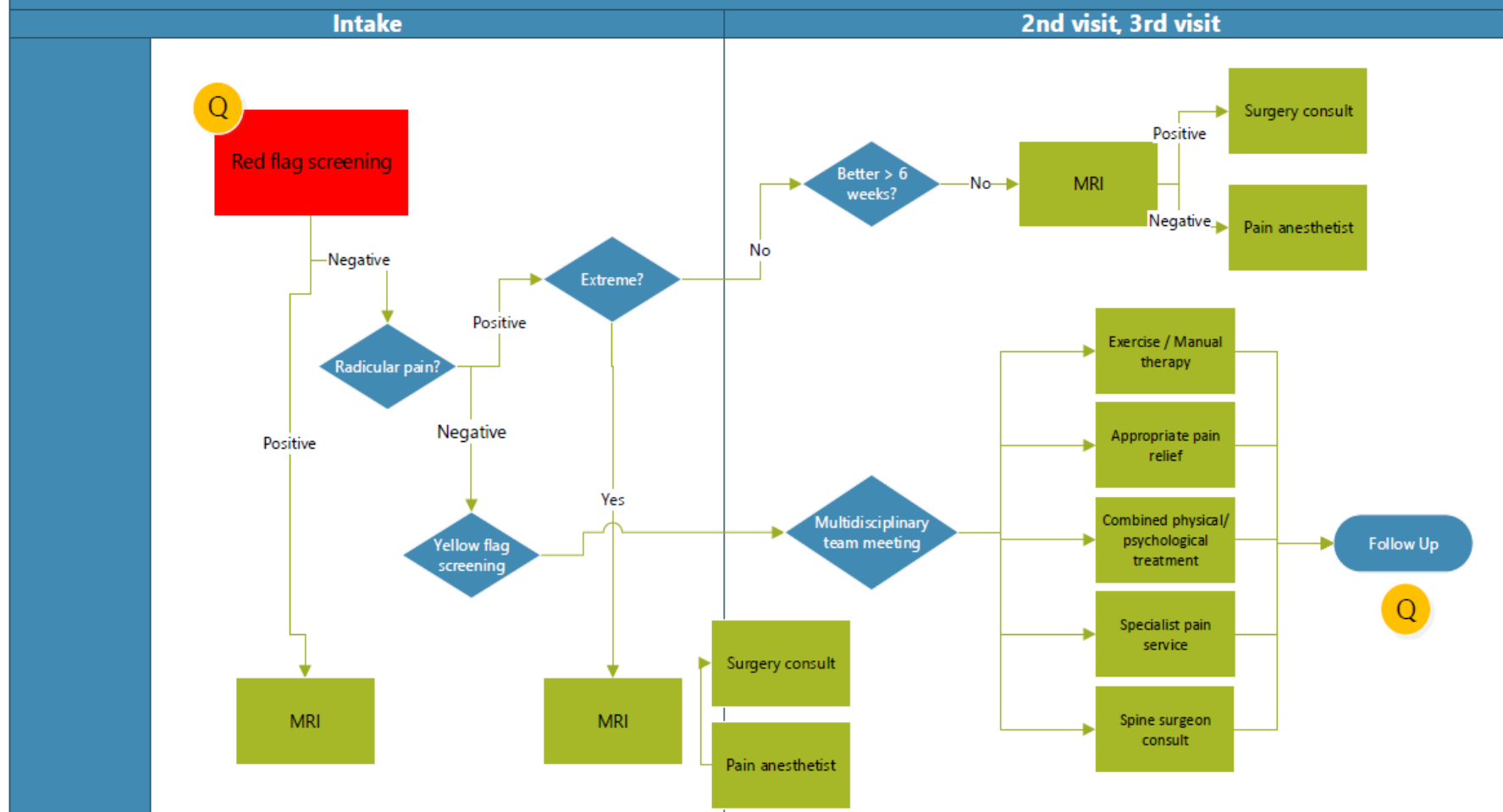
# Lausanne

## Intake





## Groningen

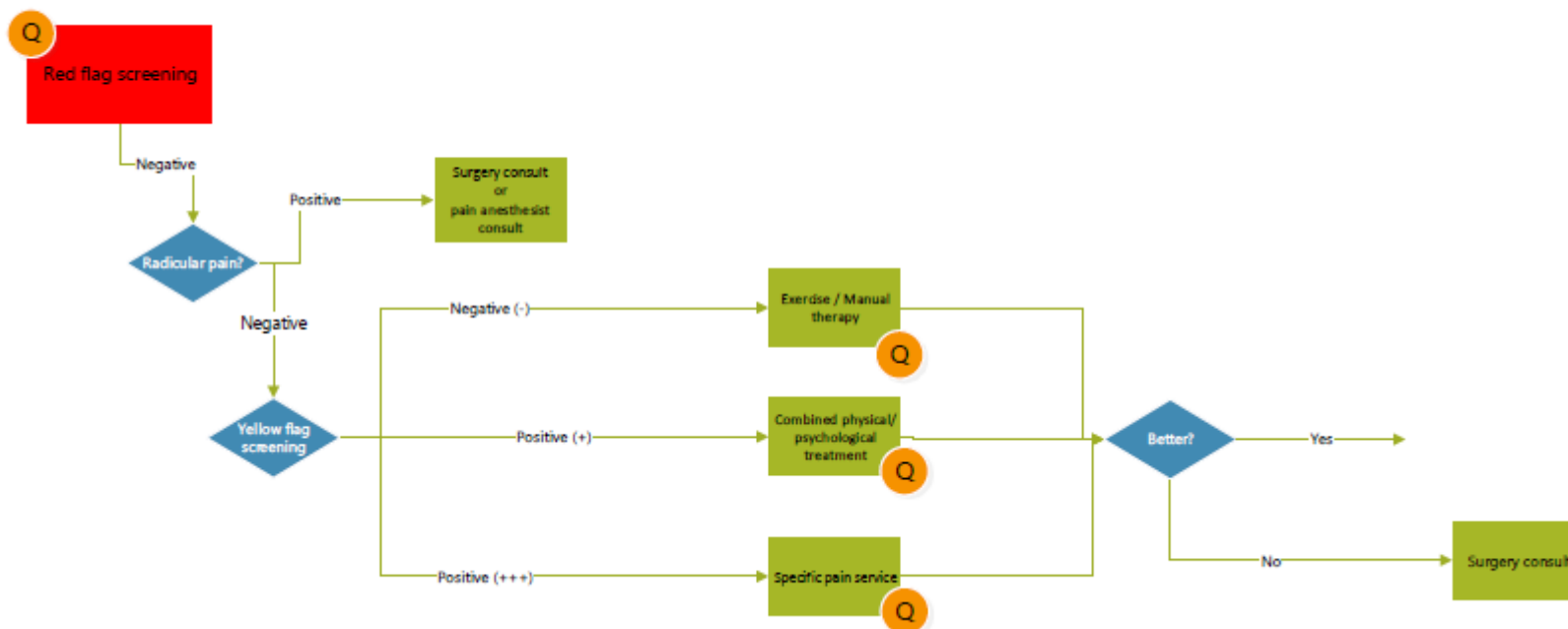




## Maastricht

## Intake

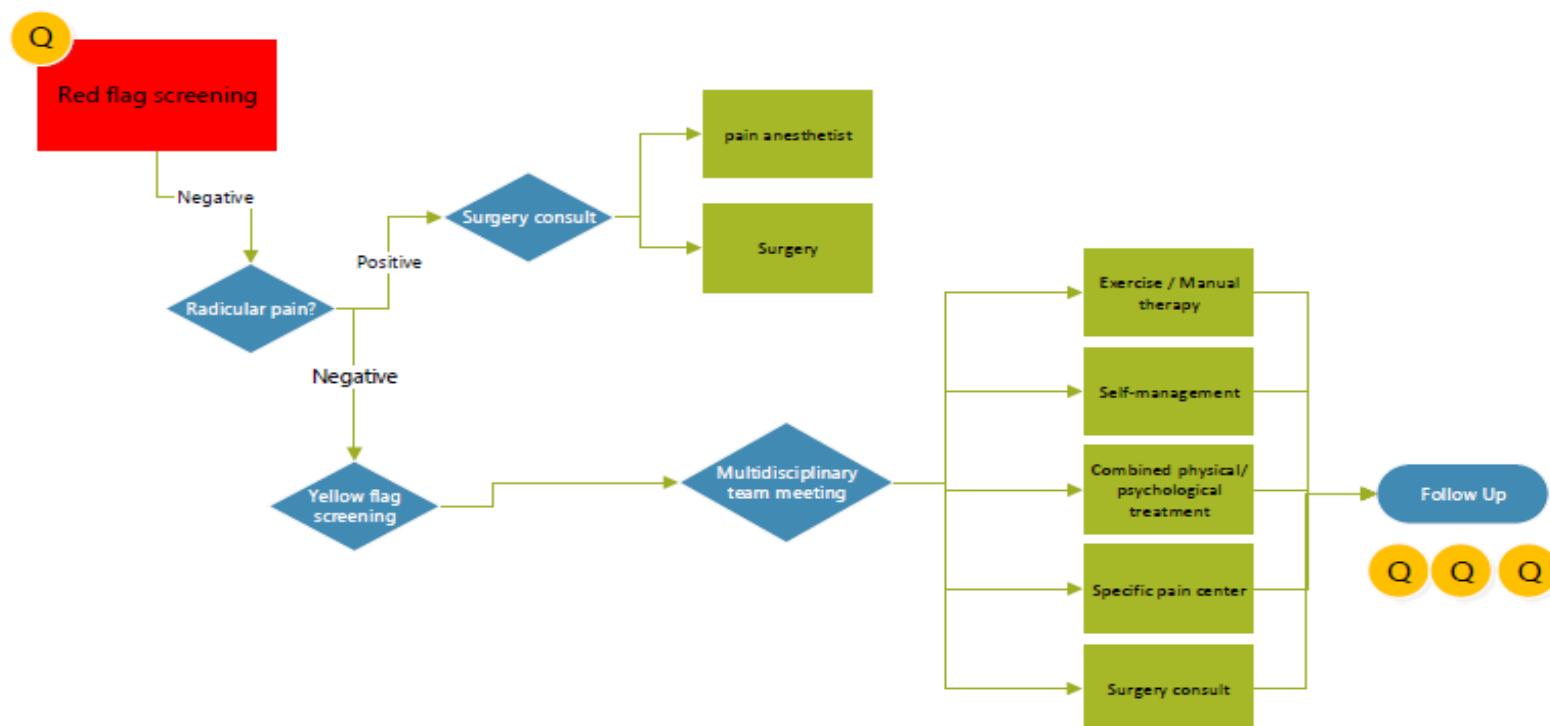
General practitioner



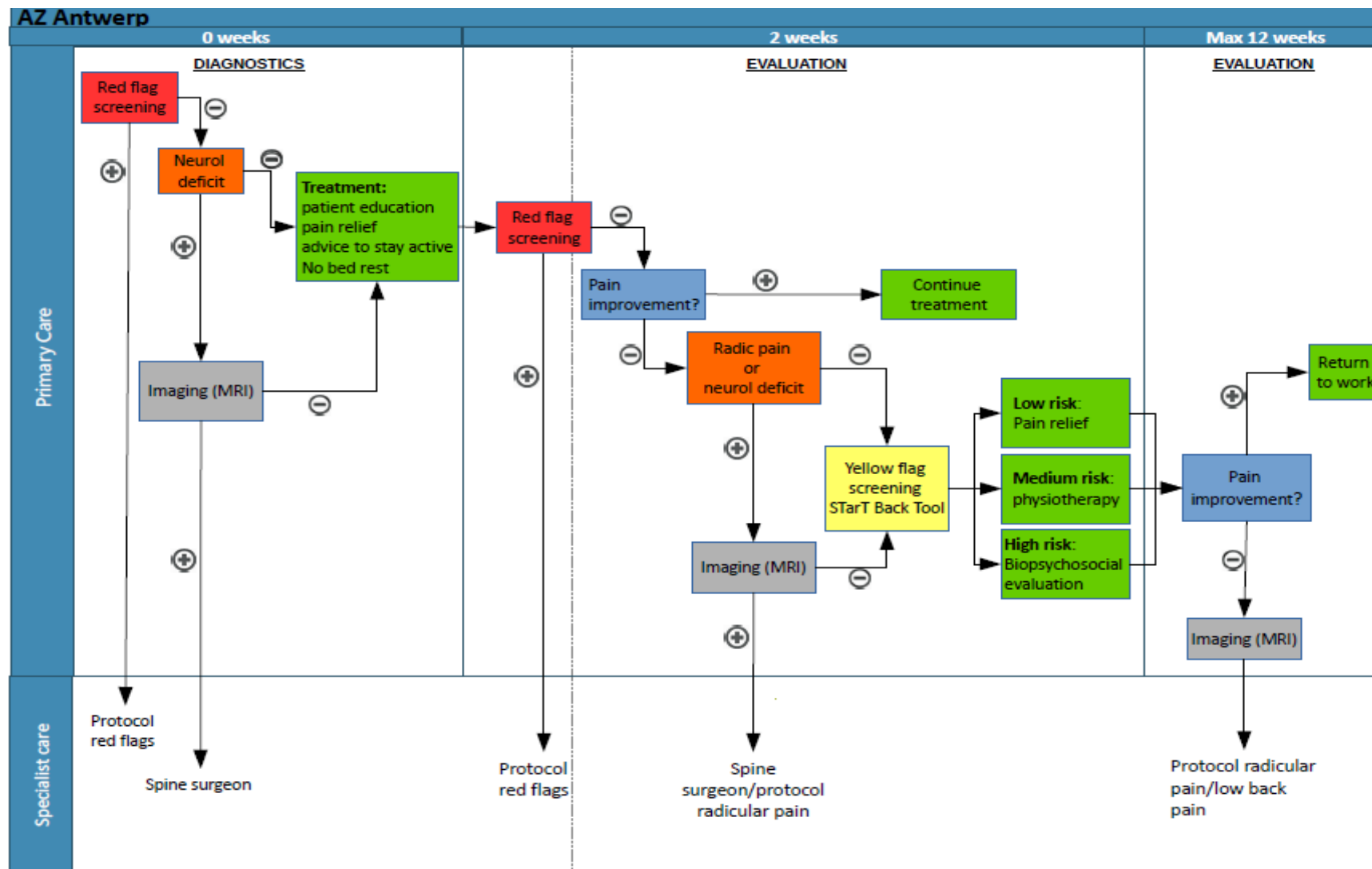


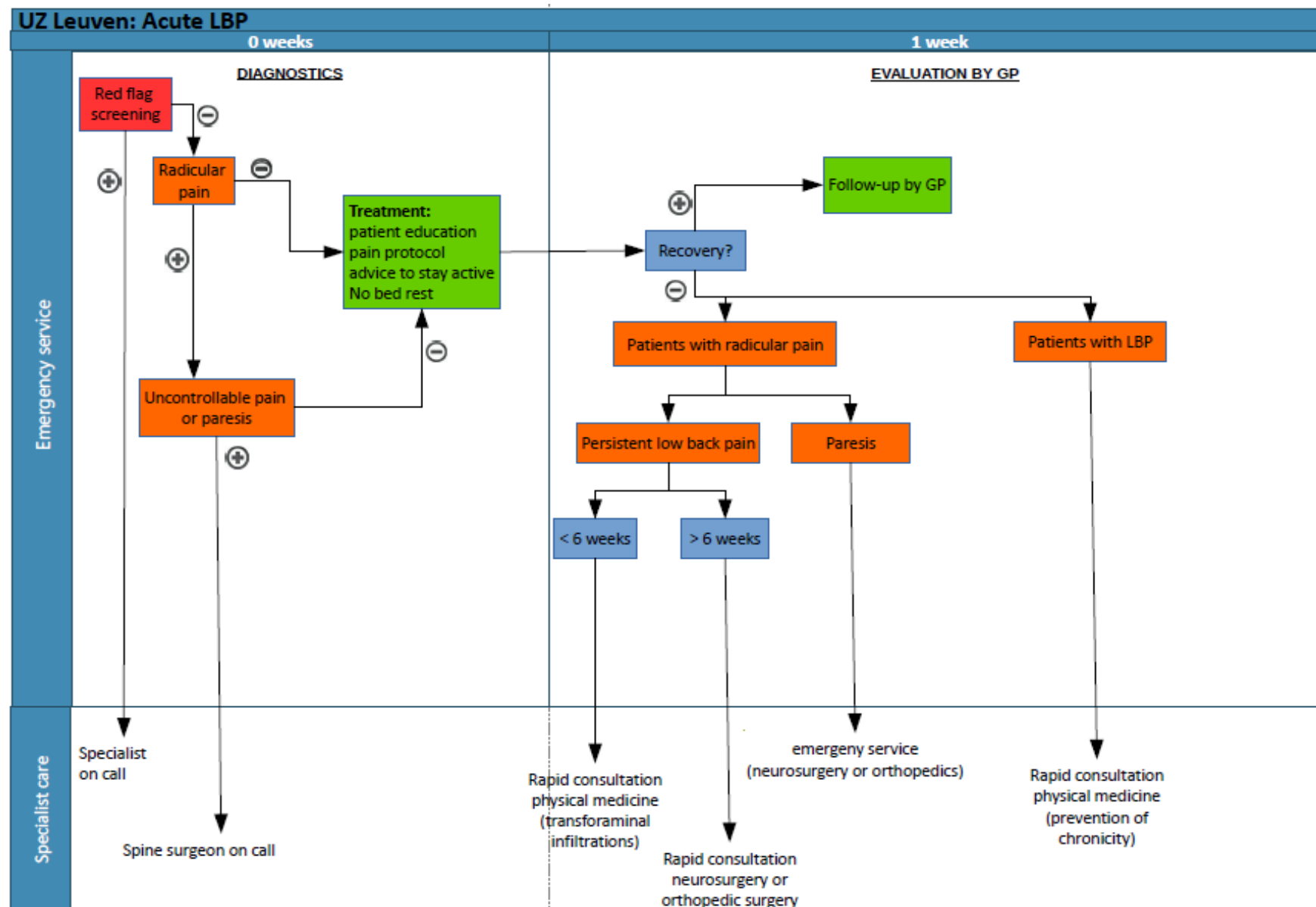
## Nijmegen

## Pré-intake &amp; Intake



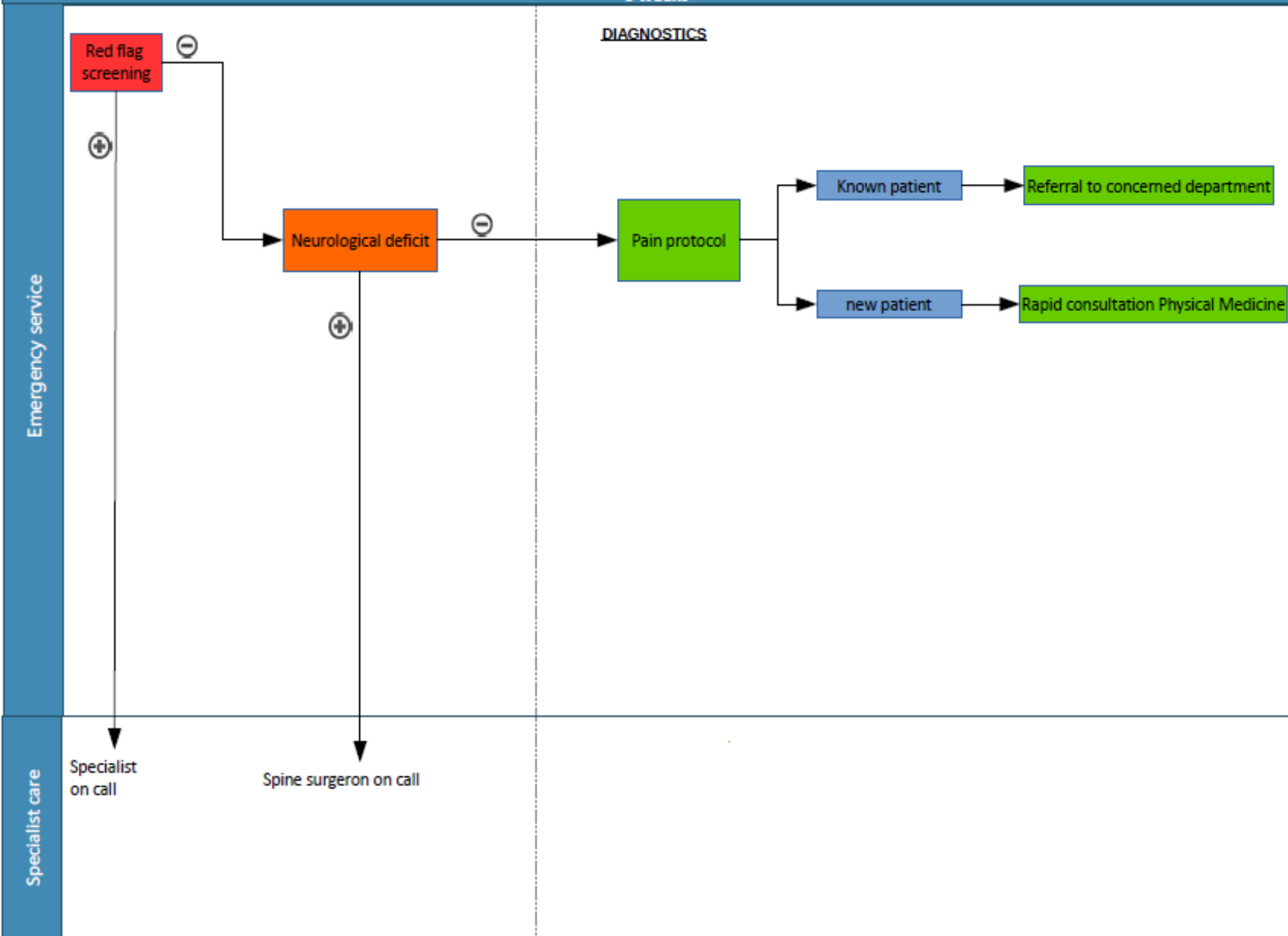
## 6. BELGIAN INITIATIVES IN FLOWCHARTS

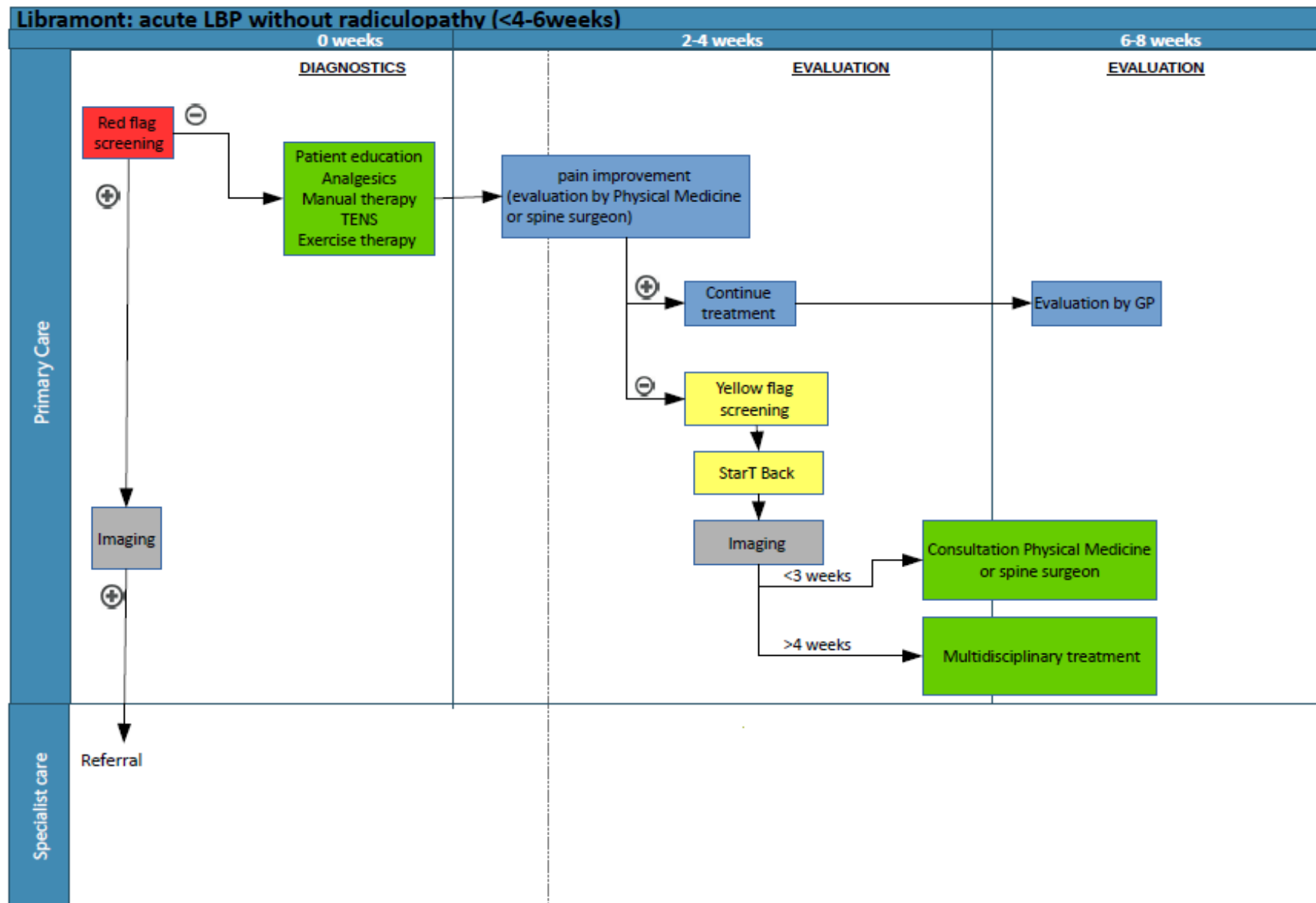


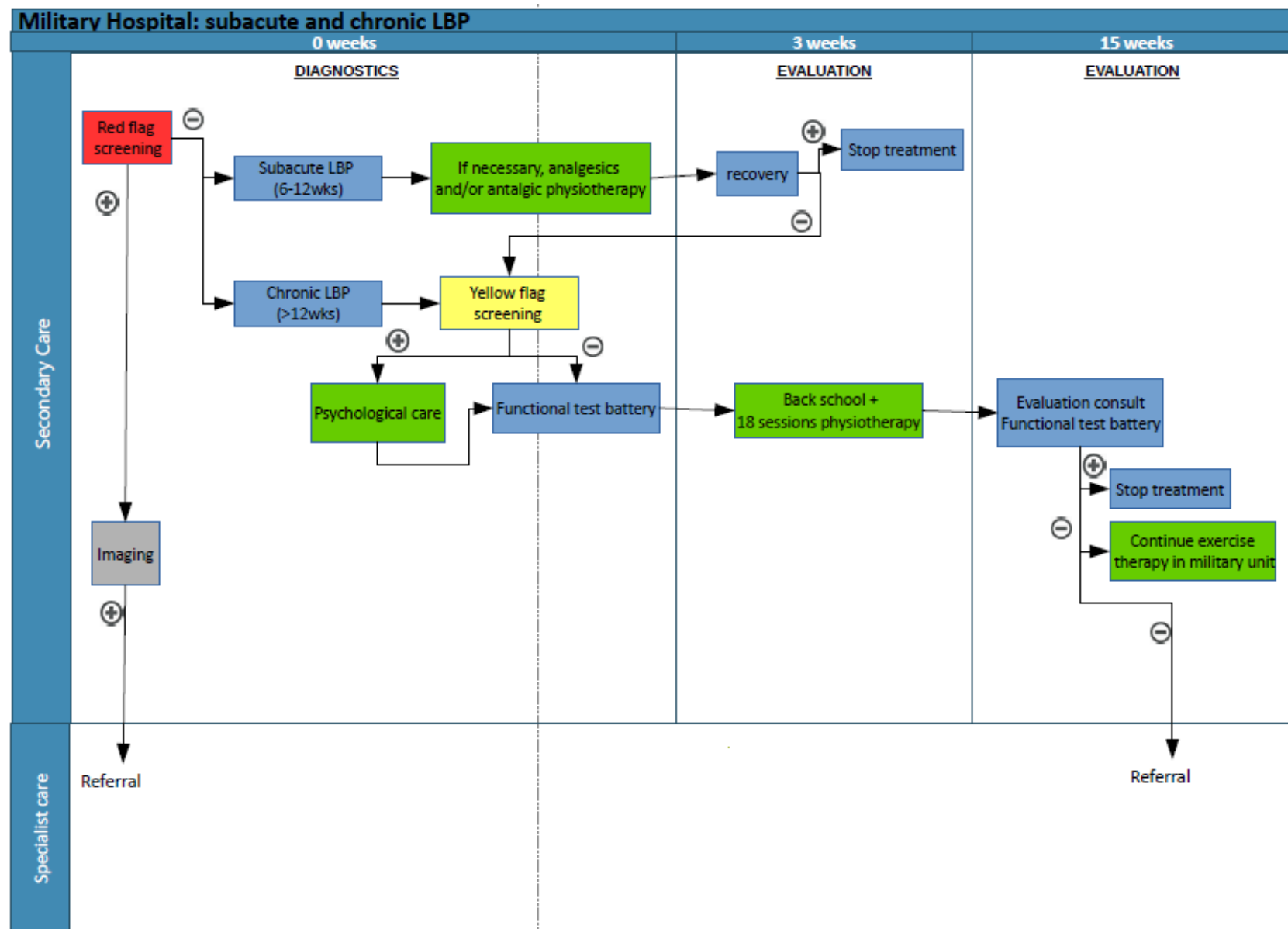


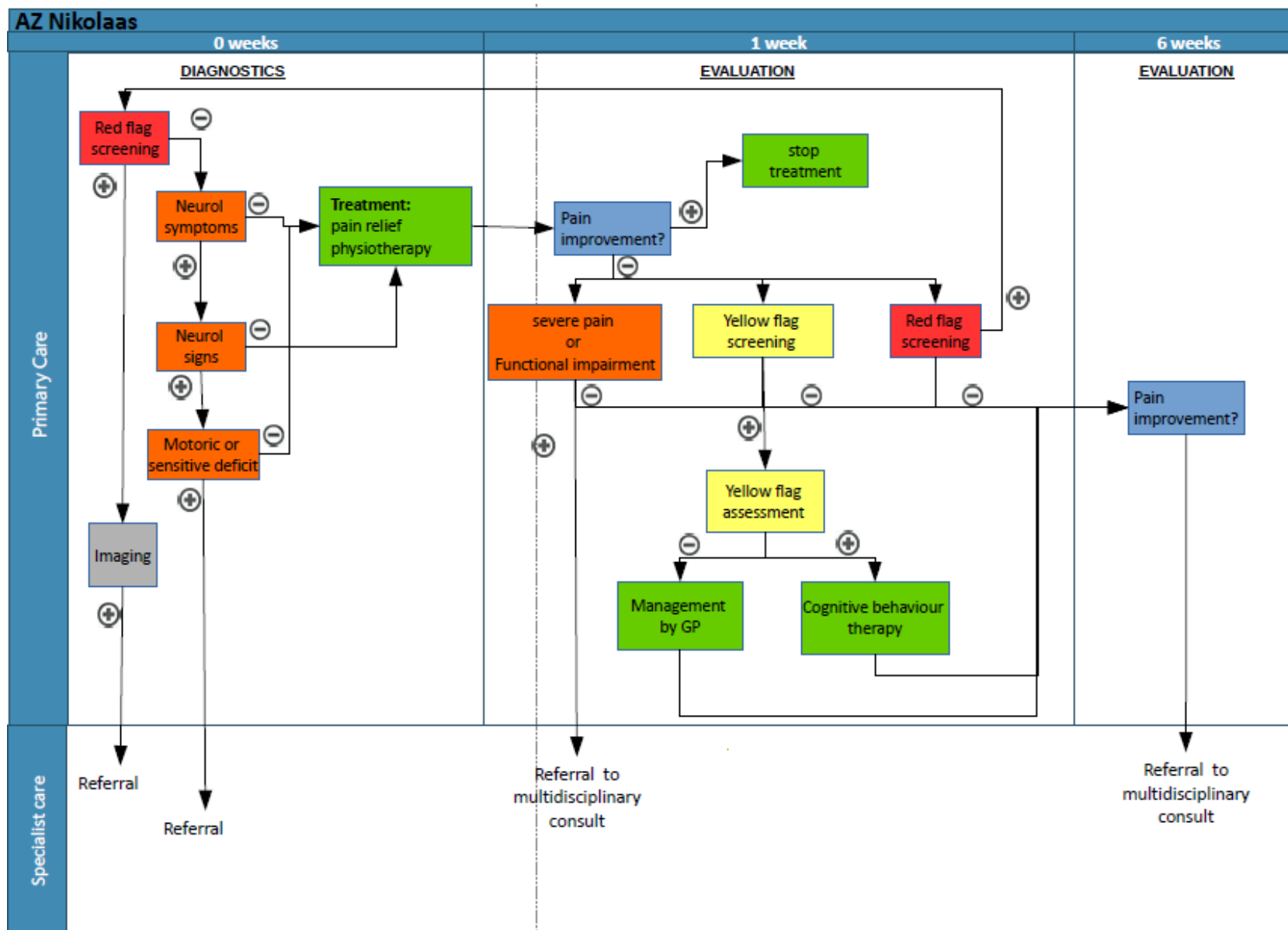
**UZ Leuven: Sub-acute LBP or exacerbation chronic LBP**

0 weeks











## 7. FOCUS GROUPS MATERIAL

### 7.1. Flyers for patients

#### French version

#### **Le Centre Fédéral d'expertise des soins de santé (KCE) cherche des personnes souffrant de douleurs au bas du dos (lombalgies)**

Le mal de dos est un problème très fréquent, qui peut avoir un impact à différents niveaux : difficulté à rester actif, coût du traitement, répercussions sur l'humeur... Dans de nombreux cas, la cause de ces maux de dos n'est pas clairement établie, et il n'existe alors pas de recommandations précises sur la manière de les prendre en charge. Et ce d'autant plus que les parcours des uns et des autres peuvent être très différents.

Le KCE est en train de mener une étude afin de proposer un parcours de soins pour la prise en charge des personnes souffrant de douleurs au bas du dos. Et pour établir ce parcours, nous avons besoin de l'avis et de l'expérience des patients.

- **Pourquoi ces réunions?**
  - Pour mieux connaître **le parcours de soins à proposer aux personnes souffrant d'un mal de dos (niveau lombaire)** qui ne semble avoir aucune cause précise.
  - Les questions se concentreront sur ce qui vous semble problématique dans la prise en charge actuelle des maux de dos en Belgique et sur ce qui pourrait être amélioré.

- **Qui peut participer?**
  - Cela vous concerne si vous êtes un adulte de plus de 18 ans, homme ou femme, et que vous souffrez d'une douleur au bas du dos depuis plus de six semaines et pour lequel vous avez rencontré au moins un professionnel de la santé comme un médecin généraliste, un kinésithérapeute, un ostéopathe...
  - Ce mal de dos ne doit pas être lié à une maladie précise comme une fracture vertébrale, une spondylarthrite ankylosante, une infection.
  - Vous devez pouvoir vous exprimer en français.
- **Comment?**
  - Une discussion avec une dizaine d'autres personnes dans le même cas que vous aura lieu le 20 octobre à Bruxelles (soit en matinée de 10 à 12h30, soit en soirée de 18 à 20h30).
  - Cette discussion durera 2h30 maximum.
  - Même si votre dos ne vous fait plus mal en octobre, vous pourrez participer à la discussion.
  - Une indemnité de 50 euros est prévue pour la participation à la discussion.
  - Votre anonymat est garanti. Aucun de vos soignants ne sera mis au courant de votre participation à ces groupes de discussion. Les résultats seront présentés dans un rapport sans qu'aucun nom ne soit cité.

Si vous vous sentez prêt(e) à donner un peu de votre temps pour nous permettre de mieux comprendre ce qui se passe quand on a une douleur au bas du dos et que l'on doit choisir un traitement, merci de vous inscrire sur le site du KCE, à l'adresse (A COMPLETER)

Si vous voulez des renseignements supplémentaires, vous pouvez aussi contacter le Dr Pascale Jonckheer par e-mail : [pascale.jonckheer@kce.fgov.be](mailto:pascale.jonckheer@kce.fgov.be).



## Le KCE

Le KCE est un centre de recherches indépendant dont le domaine d'expertise englobe l'organisation et le financement des soins de santé au sens large, l'évaluation des traitements médicaux et la production de guides de pratique clinique.

La mission du KCE consiste à fournir aux pouvoirs publics des analyses et études scientifiques objectives pour les guider dans leurs décisions en matière de soins de santé et d'assurance maladie. Le KCE n'est pas impliqué dans les choix politiques mêmes, ni dans leur implémentation, mais on attend de lui qu'il propose des solutions optimales pour des soins à la fois accessibles à tous et de haute qualité, et cela dans un contexte de demande croissante et de budget limité.

Il rend des avis scientifiques sur sollicitation par les autorités, les universités, les associations professionnelles, etc. Son financement provient essentiellement des autorités fédérales (à 75 % de l'INAMI et à 25 % des SPF Santé et Sécurité sociale). Par ailleurs, des subsides spécifiques de l'Europe couvrent la participation du KCE à des réseaux et projets de recherche européens.

Pour plus d'information, voir: [www.kce.fgov.be](http://www.kce.fgov.be)

## Dutch Version

### Het Federaal Kenniscentrum voor de Gezondheidszorg (KCE) zoekt personen met lage rugpijn

Rugpijn is een vaak voorkomend probleem dat een impact kan hebben op verschillende aspecten in het leven: actief blijven wordt moeilijk, de behandeling is soms duur, en de pijn kan behoorlijk het humeur verstoren. Vaak is de oorzaak van lage rugpijn onduidelijk, waardoor er voor de aanpak van het probleem geen precieze medische aanbevelingen bestaan en er erg verschillende zorgtrajecten uitgerold kunnen worden.

Het KCE voert momenteel een studie uit rond de ontwikkeling van een zorgtraject voor de aanpak van lage rugpijn. Hiervoor hebben we ook de mening en de ervaring van patiënten nodig. Wij willen u daarom graag uitnodigen op een bijeenkomst.

- **Doel van deze bijeenkomsten**

- wij willen beter het **zorgtraject** van personen met lage rugpijn (zonder duidelijke oorzaak) leren kennen
- wij willen graag weten wat u in de huidige aanpak van lage rugpijn problematisch vond, en wat er kan worden verbeterd.

- **Wie kan deelnemen ?**

- Alle volwassenen ouder dan 18jaar, mannen en vrouwen, die al meer dan 6 weken lijden aan lage rugpijn en die er minstens 1 maal een zorgverlener, zoals een huisarts, een kinesitherapeut, een osteopaat...voor hebben geraadpleegd
- De lage rugpijn mag niet veroorzaakt zijn door een specifieke aandoening, zoals een wervelbreuk, ziekte van Bechterew (spondylitis ankylopoetica), een infectie.
- U kunt zich vlot uitdrukken in het Nederlands.



- **Hoe ?**

- De bijeenkomst met een tiental andere personen met lage rugpijn zal plaatsvinden op 13 oktober in Leuven (in de voormiddag van 10u tot 12u30, of 's avonds van 18u tot 20u30).
- Deze bijeenkomst zal maximum 2u30 duren.
- Zelfs al hebt u geen lage rugpijn in oktober, kan u nog steeds deelnemen.
- Een vergoeding van 50 euro wordt voorzien.
- Uw anonimiteit is volledig gewaarborgd. Geen enkele zorgverlener zal op de hoogte worden gebracht van uw deelname. De resultaten zullen in een rapport worden gepubliceerd, zonder vermelding van uw naam.

Als u graag ervaringen wil uitwisselen rond de aanpak van lage rugpijn, en als u ons wil helpen met het verbeteren van de huidige behandelingen, kan u zich inschrijven op de website van het KCE, via :

Voor bijkomende informatie kan u contact opnemen met Dr Pascale Jonckheer: [pascale.jonckheer@kce.fgov.be](mailto:pascale.jonckheer@kce.fgov.be).

#### Het KCE

Het KCE is een onafhankelijke onderzoeksinstituut met expertise in de organisatie en de financiering van de gezondheidszorg in de ruime zin, in de evaluatie van medische behandelingen en in de ontwikkeling van klinische praktijkrichtlijnen. Het geeft wetenschappelijk advies op verzoek van de overheid, universiteiten, beroepsverenigingen, enz.

De missie van het KCE bestaat uit het uitvoeren van analyses en objectieve wetenschappelijke studies, waarmee het de beleidsmakers ondersteunt bij het nemen van beslissingen in het domein van de gezondheidszorg en de ziekteverzekering. Het KCE is niet betrokken bij de besluitvorming zelf, of bij de uitvoering ervan. Het wijst wel de weg naar de best mogelijke oplossingen, in een context van een optimaal toegankelijke gezondheidszorg van hoge kwaliteit, en rekening houdend met een toenemende vraag en budgettaire beperkingen.

Zijn financiële middelen zijn vooral afkomstig van federale overheidsdiensten (75% van het RIZIV en 25% van de FODs Volksgezondheid en Sociale Zekerheid). Daarnaast wordt de deelname van het KCE aan Europese netwerken en onderzoeksprojecten gedekt door Europese subsidies.

Voor meer informatie: [www.kce.fgov.be](http://www.kce.fgov.be)

## 7.2. Interview guide

### Guide d'entretien pour le focus group avec des patients souffrant de lombalgies

#### Introduction

- Présenter brièvement l'**objectif de la réunion**: prendre connaissance du vécu des personnes souffrant du dos dans leurs relations avec les soignants, des solutions qui leur ont été offertes, des problèmes qui se sont posés, et comprendre comment il serait possible d'améliorer la prise en charge des problèmes de douleurs dans le bas du dos (lombalgies, douleurs lombaires). Une rencontre avec les cliniciens a aussi été organisée. Ils vont recevoir des recommandations cliniques (autre projet). Ce qui sortira de ce travail sera présenté aux cliniciens mais aussi aux décideurs politiques.
- Présenter le **rôle** du modérateur, du co-modérateur.
- Préciser que les **informations** recueillies seront exclusivement utilisées dans la cadre de cette étude; plus précisément, elles seront intégrées de façon anonyme dans le rapport final qui sera publié sur le site du KCE. Anonyme signifie que tous les noms seront effacés.
- Souligner que tout ce qui va être dit dans cette réunion est **confidentiel**. Cette confidentialité s'applique à chacun, participants, modérateurs et observateur.



- Demander si tout le monde est d'accord que la réunion soit **enregistrée (audio)**, dans le but de faciliter son analyse ultérieure. L'enregistrement sera détruit une fois le rapport publié.
- Expliquer **les règles** :
  - Chacun peut prendre la parole quand il le désire, mais si possible pas en même temps;
  - Laisser chacun s'exprimer complètement;
  - Limiter les bruits d'environnement (tasses, verres, stylos, ...);
  - Planning prévu: deux blocs de 2 heures, avec une courte pause de 10 minutes entre les deux. Le modérateur est le gardien du temps. De temps en temps, il pourra interrompre des personnes: cela ne vaudra pas dire qu'il trouve que ce qu'elles disent n'est pas intéressant, mais qu'il faut rester dans les temps et laisser à chacun l'occasion de s'exprimer;
  - Chacun peut arrêter la conversation à n'importe quel moment.
- Définir ce que nous entendons par "mal au bas du dos" dans cette étude: une douleur au bas du dos qui n'est pas provoquée par une maladie identifiée comme une infection ou un cancer, qui n'est donc pas expliquée, et qui dure ou a duré depuis plus de 6 semaines.
- Nos questions portent sur la manière dont vous percevez et évaluez l'organisation des soins pour les personnes souffrant du bas du dos. Nous allons parler de ce qui vous a motivé à demander de l'aide, de votre expérience avec les prestataires de soins, de la manière dont le diagnostic et le traitement se sont passés. Nous attendons donc de vous que vous parliez de votre propre expérience; il n'y a pas de "bonnes" ou de "mauvaises" réponses aux questions. Nous nous intéressons à votre opinion, vos réflexions et vos ressentis par rapport à votre mal de dos. Vous pouvez aussi réagir aux interventions des autres participants.

#### Tour de table pour se présenter

Chacun se présente brièvement (nom, âge, durée de la lombalgie, brève histoire) et explique éventuellement pourquoi il participe à la réunion.

#### Questions

##### *Question d'ouverture / premier contact*

Chacune des personnes autour de cette table a souffert pendant au moins 6 semaines de douleurs au bas du dos. Chacun a également consulté un professionnel de la santé pour cela.

min	Questions	relances/ sous-questions
10h00	Intro et papiers	
	<b>LE PREMIER CONTACT</b> <b>Essayer de vous remémorer la première fois que vous avez contacté un prestataire de soins pour votre mal de dos (Médecin généraliste, osteo...)</b>	
	Qui avez-vous contacté ?	- Saviez-vous où vous adresser? - Y avait-il un temps d'attente
	Qu'est-ce qui vous a poussé à consulter ?	- Trop douloureux dans la vie de tous les jours



		<ul style="list-style-type: none"> <li>- relation avec le travail</li> <li>- éléments déclencheurs...</li> </ul>
	<p>Comment s'est passé la première consultation?</p> <p>Qu'est-ce qui était positif</p>	<ul style="list-style-type: none"> <li>- temps d'attente</li> <li>- contact avec le professionnel</li> <li>- se sentir écouté, pris au sérieux</li> <li>- recevoir des infos compréhensibles</li> <li>- Recevoir des conseils</li> <li>- soulagement de la douleur</li> </ul>
	Qu'est-ce qui ne s'est éventuellement pas bien passé lors de ce premier contact?	<ul style="list-style-type: none"> <li>- référence vers un autre prestataire</li> <li>- arrêt de travail</li> </ul>
	<i>Que pourrait-on faire pour améliorer cela?</i>	<i>beter luisteren naar uw <b>verhaal</b>? (verhaal is meer dan waar het pijn doet, hele sociale context errond)</i> <i>-betere uitleg?</i> <i>-sneller doorverwijzen?</i> <i>-meer gericht advies geven?</i> <i>-aanpassingen op het werk?</i>
10h35	Si vous vous en souvenez, qu'avez-vous dû faire après ce contact ? Avez-vous été mis en arrêt maladie ?	Imaging, médicament, autre professionnel ?
	Un rdv de suivi avait-il été prévu ?	
	Un plan de prise en charge (on va commencer par faire ceci, puis cela...) a-t-il été proposé ?	
	De quoi aviez-vous besoin à ce moment?	Besoins d'informations, de soutien,... Travail adapté Aide ménagère
	Comment votre médecin /prestataire a –t-il réagit à ces besoins ?	Implication, compréhension, empathie



	Qu'a-t-il fait pour rencontrer ces besoins?	Communication médecin-patient
	Comment avez-vous perçu l'implication des différents intervenants que vous avez rencontrés?	<p>Qualité de la communication ?</p> <ul style="list-style-type: none"> <li>o entre médecins spécialistes ?</li> <li>o entre spécialistes et GP</li> <li>o entre GP et kiné?</li> </ul> <p>Se sont-ils tenus au courant?</p> <p>Avez-vous reçu les mêmes informations des différents intervenants?</p> <p>Ou des informations différentes/contradictoires ?</p>
	Et votre entourage, comment a-t-il réagit ?	
11h10	PAUSE	
11h25	<b>TRAITEMENTS-SUIVI</b>	
	<del>Quelles étaient vos attentes vis-à-vis du traitement?</del>	—
	Comment s'est passé votre prise en charge?	Y a-t-il eu des problèmes ? Qu'est-ce qui s'est bien passé? Communication entre professionnels? Temps d'attente?
	Qu'a-t-il été fait pour diminuer le plus possible les risques de rechutes?	
	Qu'est-ce qui s'est bien passé ? quels points positifs souhaitez-vous mettre en avant ?	
	Qu'est-ce qui ne s'est éventuellement pas bien passé dans les soins ou l'organisation des soins?	
	Que pourrait-on faire pour remédier à cela?	
	Et avec votre travail ?	Reprise (rapide) (environnement de ) travail adapté



12h00		
	Est-ce que quelque chose a été fait pour vous permettre de reprendre votre travail aussi vite que possible?	poste de travail adapté? reprise progressive du travail?
	<b>CONCLUSION</b>	
	En conclusion, Quel serait d'après vous le trajet idéal ?	<ul style="list-style-type: none"><li>- Premier contact ?</li><li>- Follow-up ?</li><li>- Prise en charge ?</li><li>- Travail ?</li><li>- Implication du partenaire, de l'entourage?</li><li>- Aspect financier ?</li><li>- Coach ?</li><li>- Equipe multidisciplinaire ?</li><li>- Flexibilité au travail ?</li><li>- Psychologue ?</li></ul>
12h20	<b>QUESTION DE CLÔTURE</b>	
	Y a-t-il encore des points que nous n'avons pas abordés et dont vous souhaitez absolument nous parler?	



## Remerciements

### Interview gids voor FG met lage rugpijn patiënten

#### Introductie

- Kort voorstellen van het **doel** van de bijeenkomst: de ervaringen die lage rugpijn patiënten hebben met zorgverleners, de aangereikte oplossingen; welke problemen ze hebben ervaren en hoe de aanpak van lage rugpijn zou kunnen verbeterd worden.
- Voorstellen van de **rollen**: moderator, co-moderator, observator/verslaggever
- De **data** wordt enkel gebruikt in het kader van deze studie, meer bepaald worden de inzichten anoniem verwerkt in een eindrapport dat gepubliceerd zal worden op de KCE website. Anoniem wil zeggen dat alle namen verwijderd worden.
- Alles wat hier gezegd wordt is **vertrouwelijk**. Die vertrouwelijkheid geldt voor iedereen, deelnemers, moderators en observator.
- Vragen of iedereen akkoord is met **audio** opname. Dankzij de audio wordt de data analyse gemakkelijker. Opname wordt vernietigd als rapport af is.
- Uitleggen **spelregels**:
  - Iedereen mag het woord nemen, wanneer hij wil, maar liefst niet tegelijk.
  - Graag mekaar laten uitspreken

- Omgevingslawaaï beperken (tassen, glazen, stylo's, ...)
- Tijd: we plannen twee blokken van 2 uur, met in het midden een korte pauze van 10 minuten. Als moderator houd ik de tijd in de gaten. Af en toe zal ik mensen onderbreken, niet omdat het niet interessant is, maar omdat we binnen de tijd moeten blijven en iedereen de gelegenheid moet krijgen om aan bod te komen.
- U kan op gelijk welk moment het gesprek stoppen.
- Wat bedoelen we met lage rugpijn in deze studie: lage rugpijn die niet veroorzaakt wordt door een aandoening of ziekte, dus niet duidelijk verklaard kan worden en langer dan 6 weken duurt.
- Met onze vragen willen we weten hoe u de organisatie van de zorg voor mensen met rugpijn ervaart en evalueert. We zullen het hebben over wat u motiveerde om hulp te zoeken, over uw ervaring met zorgverleners, over hoe de diagnose en de behandeling verlopen is. Het is daarbij de bedoeling dat u spreekt vanuit **uw eigen ervaringen**, er is **geen juist of fout antwoord** op de vragen. We zijn geïnteresseerd in uw mening, gedachten, en gevoelens inzake lage rugpijn. U kan daarbij uiteraard ook reageren op de interventies van de anderen.

#### Voorstellingsronde

Iedereen krijgt de gelegenheid om zichzelf kort even voor te stellen en eventueel toe te lichten waarom hij of zij deelneemt.

Iedereen rond de tafel heeft ooit gedurende langere tijd (minstens 6 weken) last gehad van lage rugpijn. Iedereen heeft daar ook hulp van zorgverleners voor gezocht.

min		
10u00	Introductie + invullen papieren	
10u10	Vragen	Subtopics
	<i>Het eerste contact</i> <i>Denk even terug aan de eerste keer dat u met rugpijn een zorgverlener</i>	



	<i>contacteerde (huisarts, osteopaat,...)...</i>	
	1) Wist u waar naartoe? Wie heeft u toen gecontacteerd?	
	2) Wat heeft u ertoe aangezet om hulp te zoeken?	-Had u teveel pijn bij dagdagelijkse activiteiten? -Kon u uw werk niet meer uitvoeren?
	3) Was u tevreden over de hulp die u toen heeft gekregen? Waar was u tevreden over?	-gekregen uitleg -hoe de zorgverlener het probleem heeft aangepakt -geluisterd? -advies gekregen? -wat gedaan om de pijn te verlichten -doorverwezen? -ziekteverlof?
	4) Waren er zaken die niet goed liepen tijdens dit eerste contact, waar u spijt van had of waar u ontevreden over was?	-Wachttijd -gevoel au sérieux genomen te worden -begrijpbare uitleg gekregen -al dan niet doorverwezen -advies gekregen? -wat gedaan om de pijn te verminderen? -ziekteverlof?
	5) Wat zou daaraan kunnen verbeterd worden?	-beter luisteren naar uw <b>verhaal</b> ? (verhaal is meer dan waar het pijn doet, hele sociale context errond) -betere uitleg? -sneller doorverwijzen? -meer gericht advies geven? -aanpassingen op het werk?

10u35	Aanpak en ondersteuning Wat is er na dat eerste contact gebeurd?	-ziekteverlof -doorverwezen -pijnstillers gekregen -RX/scan genomen
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	6) Heeft de zorgverlener (arts) nagekeken en kunnen uitsluiten dat er een bepaalde ziekte aan de basis lag van uw rugpijn? Bijv. kanker.	
	7) Heeft hij/zij u kunnen geruststellen dat er niets ernstigs aan de hand was?	
	8) Hoe is het duidelijk geworden dat de rugpijn niet direct verklaard kon worden door een ziekte of aandoening?	
	9) Toen duidelijk was dat de rugpijn niet veroorzaakt werd door een ernstige ziekte of aandoening, wat was dan de volgende stap?	-Doorverwijzing -behandeling -andere onderzoeken -herhaling van onderzoeken -medicatie
	10) Waaraan had u op dat moment behoefte? Werden uw behoeften juist ingeschat door de zorgverlener? Werden ze vervuld?	-informatie -ondersteuning -lichter werk -hulp in het huishouden
	11) Had u het gevoel dat de zorgverlener (arts) betrokken was, zich begripvol opstelde?	
	<u>Doorvragen:</u> werd er goed gecommuniceerd? Hielden ze mekaar op de hoogte?	
	<u>Doorvragen:</u> kreeg u van iedereen dezelfde boodschappen/informatie of liep dat uiteen?	
	12) Zijn er zaken die u nu te binnen vallen die niet goed zijn gelopen bij het uitzoeken van wat er precies aan de hand was?	
	13) Wat zou daaraan kunnen verbeterd worden?	

11u10	PAUZE	
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11u25	Behandelingen	
	Denkt u even terug aan de behandelingen die u gekregen hebt. Wat waren uw verwachtingen en werden ze vervuld?	
	1) Hoe is de behandeling verlopen?	-Deden er zich daarbij bepaalde problemen voor? -Wat is er goed gegaan?



		-Communicatie tussen zorgverleners? -Wachttijden?
	2) Was u ondertussen aan het werk? Heeft u snel het werk kunnen hervatten? Aangepast werk gekregen?	
	3) Wat werd er ondernomen om de kans op hervallen zo klein mogelijk te maken?	
	4) Zijn er zaken ivm de behandeling(en) die u kreeg waar u bijzonder tevreden over bent?	
	5) Waren er zaken die niet goed liepen bij de (organisatie van de) behandeling?	
	6) Wat zou daaraan kunnen verbeterd worden?	

12u00	<i>Opvolging</i> <i>Hoe gaat het nu verder?</i>	
	1) Uit wat bestaat de opvolging van lage rugpijn?	
	2) Waren er zaken die niet goed liepen bij de opvolging?	
	3) Wat zou daaraan kunnen verbeterd worden?	
	4) Wat werd er ondernomen om zo snel mogelijk terug aan het werk te kunnen?	Kreeg u aangepast werk? Kon u het werk geleidelijk aan terug hervatten?

12u20	<i>Slotvraag</i>	
	Zijn er nog zaken die nog niet aan bod gekomen zijn, maar die u absoluut nog met ons wilt delen?	

## Bedanken