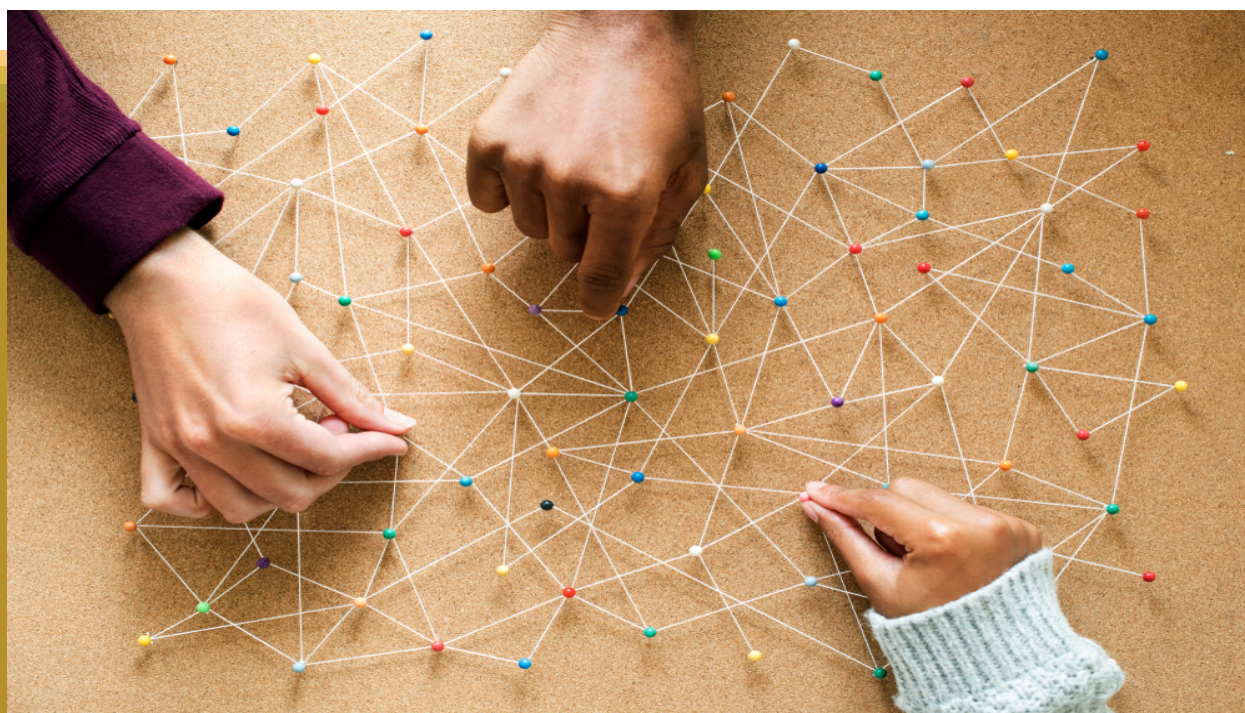


SUPPLEMENT 2: RESULTS

MULTIMODAL MANAGEMENT OF CHRONIC PAIN IN BELGIUM: NINE DOMAINS OF INTERVENTION



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Reported interests: 'All experts and stakeholders consulted within this report were selected because of their involvement in the topic of chronic pain management. Therefore, by definition, each of them might have a certain degree of conflict of interest to the main topic of this report'

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- Finally, this report has been approved by common assent by the Executive Board.
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1 BARRIERS, ENABLERS AND INTERVENTIONS TO IMPLEMENT THE MULTIMODAL PAIN MANAGEMENT ACCORDING TO THE LITERATURE REVIEW

Table 1 – Barriers, enablers and solutions according to the literature (in blue, patient perspective; in black, HCPs perspective)

Domain	Barriers	Enablers	Potential solutions
<i>Micro level</i>			
Patients' demographic characteristics	• Older age leading to undertreatment^{1,2} and less retraining possibilities in RTW³ • Male patients with cancer pain & self-management¹ • Marital status: unmarried patients with cancer pain & pain management at home¹ • Poor health literacy^{4,5} • Lower educational level: women with lower educational level & selection by HCPs for multidisciplinary rehabilitation⁶ • Language barriers & effective communication⁷ • Cultural beliefs & participation to treatment plan⁴ • Ethnicity: migration background & alleviation of pain symptoms⁸ • HCPs judgement of patients' circumstances, social issues (e.g. emotional problems, alcohol misuse, legal case...)⁵	• Higher educational level & communication with HCP in patients with cancer¹	• See meso: interpreters⁸
Patients' clinical characteristics	• Severe pain level: in cancer patients & self-management¹; migrant patients & alleviation of symptoms⁸ • Clinical limitations: ○ Pain, flare ups, fatigue and low energy & self-management in adults with chronic MSK pain⁹ ○ Physical limitations in MUS & primary care or community-based behavioural modification interventions¹⁰ • Psychological factors: ○ Anxiety and depression & pain self-management in patients with cancer¹ or MSK pain⁹; & efficacy of pain management in migrant⁸	• Recognition by HCPs of specific patients characteristics (complexity of clinical presentation)^{5,12}	

	○ Distress experienced (from ongoing pain, fear of pain and/or reinjury, stress, fatigue, reduced concentration capacity) & self-management¹¹ ○ Fear of death & self-management in cancer patient¹ ○ Social isolation (from mood, mindset, stress or chronic pain) & self-management in MSK pain⁹ or RTW³ ○ HCPs judgement that patients are difficult to manage^{7, 10}		
Patients' knowledge	• Lack of knowledge about: ○ Pain & pain self-management in cancer¹ or in MSK pain⁹ ○ Pain & high-value physiotherapy in OAK¹³ ○ Pain management techniques & self-management in cancer patients¹ ○ Mismatch between pain knowledge -therapeutic principles & psychotherapy¹⁴ • Risk of negative assumptions, hearsay or myths¹	• Acquiring knowledge and information about the nature, characteristics, underlying mechanisms, exacerbating factors and psychosocial elements facilitates an active role and participation in self-management of chronic pain^{1, 9, 15} • Using formal and informal resources (e.g. knowledgeable health care providers, the Internet, books, journals, and other patients, friends, or relatives who have the same experience with pain)¹ • Education in how to perform duties safely facilitates the return to work or the stay at work¹⁶	• KM mobilisation and SM programs¹⁷ • Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ ○ Informative com
Patients' belief	• No acknowledgement of PSF role and lack of openness to understanding it^{2, 7, 10, 12, 14, 19} - Biomedically orientation & treatment adherence in HVP¹³ or SM¹¹ - Traditional beliefs about pain & learning during pain education interventions²⁰ • Perceived barriers of the (tangible and psychological) costs associated with treatment & adherence to treatment recommendations²¹ • What a good patients should be, pain is intrinsic to cancer and fear of distracting HCPs with pain & expression of pain¹ • Pain is inevitable and nothing can be done for cancer pain & SM at home¹ • Beliefs that they should self-managed pain, inappropriateness of discussing psychological problems (with GP), stigma related to psychological problems in MUS¹⁰ • Low self-efficacy which lead to overreliance on external support & SM in musculoskeletal pain⁹ Also in RTW: inability to plan for the future, poor self-efficacy perception	• Patient concerns about the potential for drug-related adverse events & non-pharmacological approaches in older patients² • Self-efficacy to perform their job duties & RTW¹⁶	• KM mobilisation and SM programs¹⁷ • Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ ○ Informative com



	to handle work. feeling of not fulfilling their part or doubts of colleagues' support ^{3, 16}		
Patients' attitude/emotion	• Frustration with behavioural interventions¹⁰ • Fatalism & cancer pain self-management¹ & nonpharmacologic approaches in older people² • Despair & stay at work and return to work¹⁶	• Desire to reduce pain & management options⁹ • Sense of empowerment & SM¹¹ • Acceptance of pain & physical activities & future²²	• Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ - Empathetic com
Patients' skills		• Self-discovery and self-awareness by positive experiences, educational interventions, peer learning, clarifying pain history to an HCP or diary^{1, 11, 23} • Having positive coping skills²²	
Patients' experiences	• Previous negative experiences with self-management & compliance⁹	• Previous positive experiences with self-management & compliance⁹ • Patients' involvement in their treatment & SM¹⁵ • Patients' Involvement in occupation (paid or unpaid) 1 SM in workers²²	
Patients' expectation	• Preference to passive treatment^{5, 7, 12} • Unrealistic expectations of magic cure^{7, 12, 15} • HCPs decisions not congruent with patients' expectations or patients' expectations not met in chronic MSK pain management & dropout rate at a multidisciplinary pain clinic⁶ • Mismatch between employee and employer expectations of RTW³		• Tips to be used by HCPs in older patients to counter negative expectations²: - Taking pain seriously, refraining promises, reinsuring, availability, linking treatment with patient goal, encouraging patient to reconnect with artistic or religious interests
Patients' motivation	Patients' lack of motivation or ulterior motives⁵: • Because Financial benefit or compensation • To avoid pressure or working • To manipulate family relationship	Patients compliance in RTW ¹⁶	• Tips for older adults^{2, 24}: ○ Explaining at each visit ○ Tailored home-based management to patient preferences and abilities ○ Promoting appropriate environment ○ Reinforcing socialization ○ Encouraging pleasure activities ○ Including SMART goal setting, incentives and coping strategies for SM • For workers: involvement in (paid and unpaid) occupation²² Use of remote support (see in meso)

Patients' support by significant others	- Lack of support & pain self-management in (cancer patients)^{1, 9, 11} - Too supportive family members (relieving patients of physical activities and encouraging to rest) & RTW³ ! link with marital status	- Family support (i.e. positive family and patient relationships and interaction) for cancer patients & SM practices and behaviours¹ - Support from partner, family, and friends & RTW by creating a balanced life situation helping for home chores¹⁶ - Being believed and understood by significant others (family and friends) & maintaining self-management¹¹ - Active participation of significant others in the intervention & self-management in home¹¹ - Socialisation between older patients and caregivers reinforce the nonpharmacologic approaches to manage pain²	- Couple-focused method as relaxation, psychoeducation, coping...²⁵ - Peer-support interventions with training of peer-support volunteers, specific discussion topics (emotional, informational, appraisal and instrumental support, shared ideas...²⁶ In older adults, leverage social supports by more frequent communication with close family members or group-activities²
Patients' support by colleagues or employers	- Lack of understanding, mutual mistrust, interpersonal conflict, sense of injustice or poor relationship & RTW³ - Supervisors' lack of participation in workplace adjustments or lack of knowledge and resources for managers & RTW^{3, 16}	Supportive work environment (e.g. symptom legitimization and workplace modification) empowered individuals with chronic pain and facilitated ongoing self-management¹¹ A positive working relationships such as support from supervisors and colleagues, explaining physical limitations to colleagues and supervisors, receiving emotional support from co-workers or support from colleagues at the rehabilitation clinic & RTW¹⁶ - Good social support in RTW²²	
Patients support by HCPs	Unsupportive HCPs (and poor relationship patients-HCPs) : lack of knowledge, inability to respond, negative cognitions, behaviours, emotions, biomedical preferences, limited understanding of patients context, insufficient listening and clinicians' scepticism on patients' symptoms^{10, 11} ; also in RTW, feeling that work environment not being understood³ and disrespectful attitude of the medical profession¹⁶	Supportive HCPs: Professional and personal manner, effective listening^{15, 27}, cultural concordance⁸	See HCPs skills
HCP knowledge	Lack of knowledge on chronic pain ⁶	- Knowledge on pain⁵ - Ability to see pain as only a component of the patient's overall health that can be exacerbated by psychological and social stress⁵	KT with implementation component when delivering education to setting directly¹⁷



	- Lack of knowledge about psychosocial factors (PSF) - Importance of these factors¹² - How to identify⁵ and assess them^{5, 12} - Understanding of types and appropriateness of interventions^{5, 10, 12, 19, 20}	- Knowledge on PSF: - PTs acknowledgment of the limitations of a biomedical orientation¹² - Knowledge how to identify (use questionnaires and instruments for PSF screening) or manage PSF⁵	
	- Lack of knowledge of what other HCPs do, other treatment options, and when and where to refer to^{5, 19} - Lack of knowledge in RTW (occupational health knowledge required for the provision of successful RTW)⁷	- Knowledge of treatment options and referrals^{5, 12} - Knowledge of personalized care⁵, stratified approach¹² and that it is not about curing pain, rather guiding patients to manage their pain and improve function⁵ - Knowledge which are other treatment options, what other HCPs do, and when and where to refer⁵ - Self-awareness of own gaps in knowledge and ability to separate evidence from experience (risk of iatrogenic problem from advice not supported by evidence)¹²	
HCP misconceptions of clinical practice guidelines (CPGs)	- GCPs perceived as uncertain, unhelpful (e.g. simplistic, rigid...), not adequately presented...⁵ and used them in the limits of their own knowledge²⁸ - Lack of knowledge of concepts of EBP⁵		See also training below
HCP skills for implementing the BPS approach	Lack of ability to apply the BPS model in practice^{5, 10, 12, 28}	- Ability to implement the BPS approach^{5, 10, 12, 28} - Making fluid connections between biomedical and BPS models^{5, 28} - With skills to listen, provide reassurance and talk in a very careful way^{5, 10}	See also training below
HCPs skills in HCP-patients communication	HCPs Inability to use communication and interpersonal skills^{5, 10, 12, 15, 29} - When dealing with sensitive topics⁵ - To identify and manage patients emotions and reactions^{5, 18, 29} - To manage and negotiate patients' biomedical concerns, health beliefs and expectations^{5, 10} - To apply cognitive-behavioral communication styles²⁹ - To integrate clinical explanations within a broader biopsychosocial framework that made sense to patients⁵	Ability to use effective patient-centred communication^{5, 10, 12, 15} Several skills are described: Feelings of empathy to manage patients' emotions and reactions^{5, 10, 18, 28} - Ability to explore, manage and negotiate health beliefs and patients' expectations and build therapeutic alliance (see below)^{2, 5, 7, 10, 12, 15, 28}	- Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ - Cultural adaptation of interventions⁸ See also training below

		- Understanding of patients' values, preferences and lifestyle for patients motivation and empowerment¹⁶ - Appropriate language^{5, 10, 12, 15}	
HCP personal factors	HCPs professional identity, role definition and scope of practice linked to biomedical treatment orientation ^{5, 7, 10, 12} PSF not in their role^{5, 7, 12}	Flexible professional identity or biopsychosocial treatment orientation ^{5, 12, 15}	- Boundary setting for PTs : defining scope of practice and focusing on patients self-care and more on function and activities than on pain and limitations¹² - Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ - Professional accountability com
HCPs beliefs	Unhelpful belief (including misconceptions) towards the use of a BPS approach ^{5, 28} - Misinterpretation of decrease pain or reassurance⁵ - Sceptical cultural lens²⁸	HCPs helpful beliefs ^{5, 12} - Believing in the limitations of the biomedical model - Belief that patients would not improve unless PSF are addressed - Belief that guidelines are supports to identify and manage more rapidly factors related to persistent disability. - Expectation of the value of Stratified care approach (SCA)¹²	See training
	HCPs negative habits and experiences ^{5, 12} - Biomedical focus and uncritical stance towards experience and knowledge^{5, 12}) HCPs negative emotions ^{2, 5, 28} - Frustration, discomfort, reluctance to ask PSF⁵ - Sense of prof failure^{2, 28}	Positive habits and experiences ^{5, 12, 28} Critical view on their knowledge and ability to reflect on evidence and clinical experience separately - Maturity, amount of experience treating patients with chronic pain and learning from colleagues - Additional qualifications through upskilling or postgraduate courses and relevant work experience⁵	
		Personal motivation/Commitment ¹² Management of their own negative emotion: use a "detached empathy", trying to see where that person was coming from but not letting it become too personal ²⁸	
Communication patients-HCPs	- Poor quality of communication as: - unrelatable content, too many new concepts, inconsistent messages & pain education²⁰ - Incomplete or limited information & choice^{1, 9, 10}	- Effective communication: clear and direct & SM and pain education^{9, 15, 20} - Communication & treatment tailored to patients needs²⁷	- Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ - Disclosure-facilitating com



	- conflicting advice, unclear instructions, dismissive comments, insensitive communication & SM^{1, 9} - Context such as misunderstanding related to the pain experience & SM¹⁵	• Tools : Face-to-face communication (using lay language, metaphor, drawing, charts and anatomical models and pamphlets) is preferred by patients with chronic low back pain engaged in self-management intervention^{15, 20} • Relevant information (pain, diagnosis, prognosis, treatment, self-management strategies, patients' roles and responsibilities for caring for themselves.¹⁵	- Meta-communication • HCPs practical adjustment (remind of com strategies)¹²
Therapeutic alliance	HCPs difficulty forging a strong clinician-patient alliance^{5, 10, 12, 15, 28, 29} • Deal with sensitive topics, patient emotions, patient belief or expectations, patient empowerment...	Ability to forge a strong clinician-patient alliance (therapeutic alliance)^{1, 2, 5, 7, 9, 11, 12, 14, 15, 20, 28, .} • Requiring to build trust, mutual respect • With mutual understanding, negotiation and concessions • Development of a common goal • Setting realistic expectations • Availability of physician during pain flares • Tenacity and commitment on the part of both physician and patient • Emotional investment by both physician and patient in the outcomes of treatment. • Requiring effective communication but also patients believing, listening, valuing...^{9, 11, 14, 15, 20, 23, 30} • Same professional, continuity of the treatment, and mutual understanding & SM¹⁵	• Eight communication behaviors preferred by PTs in psychologically informed physical therapy¹⁸ - Rapport-building com - Collaborative com
Meso (practice/organisation level)			
Organisational resources	• Availability of care: - Long waiting times^{3, 30} - Paucity of proposed interventions³¹ • Time constraints for patients & BPS intervention^{11, 29, 31} • Insufficient time for HCPs: - To communicate, explore and manage PSF within a clinical consultation^{5, 7, 19, 28} - To attend to administrative matters, prepare and reflect on clinical cases⁵ - To reflect, or read and learn about CPGs⁵ • Disincentive work processes or requirement - Lot of administrative work⁵	• Access to HCPS: - Easy access of healthcare services (location, service) & external SM⁹ - Access to HCPs, including psychological support & RTW¹⁶ • Sufficient time for contact HCP-patient^{7, 32} • Enabling work process - Strong leadership support within organizations to adhere to guidelines⁵ - Social structures such as supervision, coaching, peer and management support¹² - Administrative staff working within the clinical team⁵	• For time, see in micro: Eight communication behaviours preferred by PTs in psychologically informed physical therapy¹⁸ - Agenda-setting com (to counter time constraints) • For work process: pre-outpatient group interventions³³ • Use of remote support^{13, 34-37} but also challenging - Group teletherapy (but without direct interaction) to counter issues to access well-trained cognitive behavioural therapy

	- Environmental constraints (hindering to explore PSF) such as group therapy sessions⁵, lacking private rooms⁵, no suitable environment¹² - Intervention as standalone event²⁰ - Standard interventions not flexible enough for tailoring^{9-11, 15} - Group interventions and listening other experiences^{3, 9, 29} - Problems with online training program²⁹ - In RTW, lack of resources and time for adjustments, failure of some strategies³ • Lack of material support - Lack of educational content and tool⁵ - Written communication & SM¹⁵	- Availability of specialist services and appointment slots for multiple, scheduled patient contacts for follow-up in team process^{5, 32} - Team structure involving a (nurse) care manager³² or care coordinator for RTW⁷ - One-on-one therapy sessions for patients (rather than group therapy)^{5, 12} - Individualised approaches & SM^{2, 9, 15} - Communication of personally relevant information & learning neurobiology of pain²⁰ - Group format & SM^{3, 9, 11, 31} - Multiple sessions & learning neurobiology²⁰ - Holistic approach & RTW²² - Goal setting & SM by workers²² • Availability of tools: - Psychosocial screening tools or questionnaires, embedding risk stratification tools - Educational videos and resources to explain pain to patients⁵ - Translators when necessary in RTW. - Utilisation of a diary to document medication administration, side effects, experiences, and pain-related questions¹ - Adapted work technique/equipment/technical aids/assistive device...¹⁶	(CBT) practitioners due to clinician availability, affordability, mobility, family care needs and/or living in a remote under-resourced area³⁵ - iCBT to counter reduced mobility due to physical complaints, limited transport possibilities, treatment costs, associated stigma and lack of available therapists³⁷ - Telehealth interventions with well-designed platforms, tailored info, flexibility and broad availability of material³⁴ • KM initiatives and self-management programs¹⁷ • See also in macro
Local factors (between HCPs)	• Lack of HCPs access to a clinical support system or network with an efficient communication channel. - Non homogenous treatment orientation with inefficient communication^{5, 10, 28}, contradictory patient information^{5, 6}, conflicts between HCPs, patients, employers in RTW^{7, 16} - Spatial or organizational distance⁵ - Lack of specialist services and limited appointment slots^{5, 10, 15, 28, 38}, change in attending doctor⁵ • Poor communication among providers noted by older patients & less reliance on pharmaceutical medication²²	• Access and availability of a clinical support system or network^{5, 7, 10, 12, 32} - Well-functioning interdisciplinary network: Team with different expertise in a non-hierarchical structure^{5, 32} - Alignment between HCPs^{5, 7, 12, 28, 32} in the interpretation about what care is required, with clear referral pathways, common language and efficient communication channel (e.g. joint patient assessment or development of treatment plans at baseline) • In RTW, enlargement of the collaboration to all stakeholders¹⁶ with regular effective	



		communication ²² and “integrational leadership” ⁷	
Macro (system) level			
Health policy & health care system	Low level of political support or attention by governments, payers, professional associations, and regulators⁵ • Lack of a monitoring system³⁸ • Governance arrangements that do not ensure the credentialing of chronic pain providers and clinics³⁸ • Inadequate access to optimal management, in particular in primary care³⁸ • Inequitable geographical access to regional MTD centres³⁸ • Obstructing regulations within healthcare systems or workplace culture⁵ • Limited support of the health system for self-management³⁸ • HCPs discomfort^{5, 28} • Logistical barriers & evidence-based psychotherapies (Goldsmith 2023) or specialists³¹ • Difficulties for navigating in the care system³¹ • Limited assistance to support RTW by the health care system, especially primary care¹⁶	• Endorsement and political support by professional organizations and compensable bodies for the use of clinical practice guidelines⁵ • Locating or coordinating treatment within primary care (GP has a better knowledge of personal circumstances, personalized care is a value of PC, primary care setting may be found more acceptable for psychological management of pain.¹⁰	Initiate a national stakeholder-engagement process - multistakeholder working group (with a coordinating hub, key opinion leaders³⁸ - chronic pain policy portfolios and strategic orientation³⁸ - registry/monitoring system in the form of program research³⁸
Social security and health insurance	Incompatible criterion for the funding set by healthcare systems, insurers, or organizations for BPS approach⁵ • Lack of appropriate compensation for HCPs^{5, 10, 12, 19} • Encouragement for some forms of care (e.g., injections) but not others (e.g. counselling and monitoring)³⁸ • Financial barriers for some patients^{5, 12, 19, 38} • Limited options secondary to health insurance type/status⁶ • In RTW, incorrect information of the insurers but also financial difficulties when moving from welfare benefit to work^{3, 10}	Specific financial support from workers' compensation board or health insurance⁵	Implementation of a cross-payer, cross-discipline model of patient centred primary health care-based chronic pain management (with payment for the time demands, most cost-effective providers, tiered support and tiered referrals)³⁸
Societal perspective	• Persistence of a biomedical culture in HC professions and systems⁵ • Not aligned information spread through mass media⁵ • Social stigma towards psychological services⁵ and in RTW⁷ • Misunderstanding of the situation by family who discharge patients to much⁷ • Family and society considered by patients as judgmental, unsupportive and discriminatory³ • Coordination of treatment hampering RTW⁷	Employers supportive of a graduated approach for the return to work⁵	Launch an advocacy campaign using traditional media, new media (MSMs online petitions...) for supporting comprehensive chronic pain management³⁸

	Resistance of employers to adapt workplace or work process ^{5, 7}		
Economic climate	• Austerity & RTW^{3, 16}		
CPG formulation	• No compatibility with real-world situation of lack of resources⁵ • No compatibility with individualized care^{5, 28} • No compatibility with clinical practice, former knowledge, training...⁵ • Presentation not appealing⁵ • Inadequate provision of tools to evaluate or guide patients⁵	Compatibility of guidelines with • real-world situation⁵ • individualized care^{5, 28} • former knowledge and training⁵ Quick synthesis of evidence and global overview of treatment options with up-to-date, useful information, decisional algorithms and suggestion of psychosocial questionnaires	Create a national network of centres (with a coordinating hub to analyse data, synthesize evidence, develop and disseminate GCP, tools for SM, undergraduate and continue prof training)³⁸
Workforce training issues	Inadequate training and continuing professional development^{5, 10, 12, 15, 31, 38} • Biomedical focus¹² • Lack of communication/counselling, PS training^{5, 15, 38}	HCPs training^{10, 19, 22} • Formal training in psychological interventions for physiotherapists¹⁹ • Front-line providers such as primary care physician or nurses training (especially) to facilitate well informed, educated patients who take an active role in their care²² • Training with extensive support such as treatment protocol, supervision, DVD and website²⁹ • Health care professionals skilled in pain neuroscience education help patient to achieve pain reconceptualization²³ and SM²²	Use KT (KM + KI) with dedicated implementation plans and strategies³⁹ Create a national network of centres (with a coordinating hub to analyse data, synthesize evidence, develop and disseminate GCP, tools for SM, undergraduate and continue prof training)³⁸



2 BARRIERS TO THE IMPLEMENTATION OF THE MULTIMODAL PAIN MANAGEMENT IN BELGIUM

Table 2 – Overview of the barriers and underlying factors reported by patient associations and CPCs on patient attitude

<i>Barriers and the underlying factors</i>
<i>Lack of knowledge</i> Unfamiliarity with the concept of BPS approach While most patient organizations recognized the value of a holistic approach to chronic pain, they did not explicitly identify it as the biopsychosocial (BPS) model.[Patient association] The patient associations confirmed that also their members were unfamiliar with the BPS approach. The concept is poorly understood because the terminology is complex; patients need explanations in simple, accessible language.[Patient associations] Reluctancy to the holistic approach Patients often misunderstand the psychological dimension of the BPS model, perceiving it as a disregard for the physical aspect of pain. As a result, they struggle to see the value of a more holistic approach to care.[Patient association] Struggle to accept the chronicity of pain Patients often expect a purely biomedical solution and struggle to accept the chronic nature of pain.[Patient association]
<i>Reluctant to search for help</i> Patient resistance to multidisciplinary (MD) approach Some patients are not ready for MD care; they need time or a crisis before being open to it.[CPCs] Preference for trying medical-technical interventions first.[CPCs] Patients often show resistance towards the psychological dimension of the BPS model, perceiving it as a dismissal of their pain or as only related to stress (e.g. in case of headaches). This can lead to the impression that their physical suffering is being downplayed or minimized.[Patient association] Related to certain types of pain Patients are reluctant to consult a physician for certain types of pain, such as headaches, because they tend to minimize or normalize these symptoms.[Patient association] Lack of assertive skills Patients often lack sufficient knowledge about pain and are incapable of reacting when HCPs fail to listen or understand their concerns.[Patient association]

Expectations of outcomes

Unrealistic or incorrect expectations about treatment outcomes.[Patient association]

Patients keep “fighting the pain” instead of learning acceptance.[Patient association]

Loss in commitment

Patients often fail to show up or cancel their appointments (in CPCs).[CPCs]

Patients feel discouraged when seeking care, as not all physicians possess the necessary expertise to effectively address pain-related symptoms, such as headaches.[Patient association]

Patients feel their expectations are not heard. Lack of empathy from GPs can lead to poor adherence to therapy.[Patient association]

Passive coping strategy**Passive patient behaviour**

Preference for passive medical techniques over active responsibility and lifestyle changes.[CPCs]

Resistance to scientific insights and self-management.[CPCs]

Patients expect a quick solution (and/or medication-based).[CPCs]

Lifestyle advice (e.g. smoking cessation) not well received and even often rejected by the patients.[CPCs]

Reinforcement by other care providers

Some providers share or reinforce the passive approach, undermining MD strategies.[CPCs]

External locus of control

Patients often lack a sense of personal responsibility, which is sometimes reinforced by care approaches.[CPCs]

The patient relies entirely on the healthcare professional for guidance and answers.[Patient association]


Table 3 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to the attitude of the HCPs

Barriers and the underlying factors
Lack of knowledge Insufficient training for HCPs: too little focus on chronic pain and BPS approach in HCP education. Overemphasis on biomedical approaches. GPs lack knowledge of certain diagnoses (e.g., psoriatic arthritis) and cannot specialize in everything.[Patient association] Undetermined referral pattern Multimodal approach often applied without explanation; patients do not understand why they are referred to psychologists or psychiatrists.[Patient association] Late or suboptimal referral to multidisciplinary pain centres (CPCs).[Patient association] Variety of levels of experience across the HCPs Adequate knowledge exists within Multidisciplinary Pain Centres (CPCs), but there is a lack of knowledge and specialized providers in primary care.[CPCs]
Resistance to adapting clinical practice to the principles of the BPS approach Reluctancy to training Lack of interest from psychologists in training on pain (linked to professional identity).[CPCs] The healthcare professional assumes to possess complete theoretical and scientific knowledge.[Patient association] Predominant biomedical approach Overconsumption of pain medication (huge budget impact, risk of dependency). GPs easily prescribe painkillers due to lack of time or because it satisfies patients.[Patient association] Lack of interest from neurosurgeons and anaesthesiologists, who prioritize “doing something” rather than taking time to talk with patients or collaborate with other professionals.[Patient association] Difficulty ensuring optimal (and BPS-based) pain management in primary care (e.g., physiotherapists not following prescriptions). Many GPs remain unaware of the BPS approach and mainly use a medical approach, often switching to multidisciplinary care only after a long trajectory.[CPCs] Care is protocol-driven, not patient-centred; home situation and family context are rarely considered.[Patient association] Reluctancy in validating pain The physicians seem to be reluctant in validating chronic pain as a legitimate clinical diagnosis, often due to non-visible presentation of pain and the absence of measurable clinical parameters.[Patient association]

Physicians are reluctant to treat chronic pain symptoms.[Patient association]

Patient experience is highly variable: some GPs are supportive and proactive, while others provide little help.[Patient association]

Lack of information on patient's rights

Patients are not informed about their rights by CPCs or sickness funds.[Patient association]

Table 4 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to the components of BPS approach

Barriers and the underlying factors

Lack of patient education

Physicians, and more in particular general practitioners, often neglect to educate the patient about the BPS model. On rare occasions, a specialist-physician may suggest consulting a psychotherapist but without explaining the rationale behind this referral.[Patient association]

Lack of information provided by GPs on available pain management options (e.g., for long COVID).[Patient association]

Physical component not always adapted to the needs of the patient

Current movement therapy initiatives such as “exercise on prescription” or aquajogging programs are not adapted to chronic pain patients. Patients feel unsupported and may drop out of programs. Risk of overexertion or worsening symptoms.[Patient association]

Many patients experience fear of movement.[Patient association]

Lack of physiotherapists oriented toward the biopsychosocial (BPS) model, although this is improving.[CPCs]

Psychological support often ignored in chronic pain management

Delayed referral

In some patients (e.g. women with painful periods or fibroids) psychological support is only offered after several years (and when the delayed diagnosis has affected their lives).[Patient association]

Once (delayed) referral is made, the psychological aspect is often considered as the cause of illness rather than the consequence of the disease and the long diagnostic delays, implying there is no biological basis for the pain.[Patient association]



Psychological support is only suggested to the patient when all other care options have failed and diagnosis for the complaints have been reduced to a suspicion of a psychological diagnosis, such as depression, burnout.[Patient association]

Patients split also their complaints up to different care domains and are reluctant to speak about anxiety or emotions to their physician.[Patient association]

Stigma and negative perception of mental healthcare

Patients with no prior experience in mental health often have strong prejudices, associating it with “doctors for crazy people” or “professionals for the depressed.” [Patient association]

Lack of accessibility

Shortage of professionals (e.g., in Luxembourg province, no psychiatrists accept new patients; long waiting times for psychologists).[Patient association]

Financial barriers (patients cannot afford weekly sessions). When patients must choose, psychological care is often the first to be dropped.[Patient association]

Long waiting times, causing multiple problems to accumulate.[Patient association]

Limited reimbursement and restricted number of sessions.[Patient association]

Different therapeutic approaches make it hard for patients to navigate.[Patient association]

For chronic, complex problems, specialized psychologists are needed, but they are scarce.[Patient association]

Psychological private practices can feel intimidating, creating an access barrier.[Patient association]

Lack of psychologists trained in pain management, especially in the psycho-somatic interplay (psychological distress caused by somatic issues).[CPCs]

Psychologists are overwhelmed.[CPCs]

Patients reluctant to accept the psychological component of BPS approach

Patients resist psychological care because they want physical relief and struggle to accept that pain is not purely physical. The message “it’s in your head” reinforces this resistance.[Patient association]

Weak social component in BPS approach

Social workers’ role is undervalued despite their importance in addressing social determinants of health.[Patient association]

Heavy workload (e.g., 100 beneficiaries per social worker, but planning allows only 2 patients/week).[Patient association]

No multidisciplinary meetings or coordination with doctors and nurses.[Patient association]

Lack of a supportive approach regarding return to work

Blocked reintegration despite motivation [Patient association]

Not all chronic patients can return to full-time work, but they feel a strong political pressure for reintegration. Part-time work or limited hours are not allowed; scheduling and equipment adaptations are hard to obtain—it's "all or nothing." [Patient association]

Current approach is more repressive than supportive with little focus on work accommodations. [Patient association]

Some patients are so afraid of insurance doctors that they avoid asking for help from their sickness funds. Advisors often do not listen to patients' difficulties, show limited knowledge of social law (e.g., proposing to terminate a permanent contract without realizing this may forfeit unemployment rights), refuse work below prior qualifications, and make 10-minute decisions without explaining consequences. [Patient association]

Lack of individualized approach. [Patient associations]

The most important outcomes for patients after a BPS approach vary (RTW, general well-being, improved QoL, feeling heard and recognized, ability to perform ADL). [Patient association]

Patients often have physical or functional restrictions that limit their ability to work, but these are not sufficiently considered in care and support planning. [CPCs]

Medical control by insurance doctors is often not multidisciplinary, and reports are not always read. [Patient association]

Stigma and job insecurity after RTW [Patient association]

The planned policy measure requiring employers to cover the 2nd month of employee incapacity may discourage hiring or retaining workers with recurrent sick leave (e.g., chronic pain). Those who do return remain vulnerable; because pain flares are unpredictable, employers may view them as less reliable, sidelining them into dead-end roles. [Patient association] Health insurers and employers may either: keep patients on long-term disability despite rehabilitation potential, or suspend disability status too quickly. [CPCs]

The current VOB premium (return-to-work incentive) only applies if the patient returns to the same job, which is often not possible, causing many patients to miss out on this benefit. [Patient association]

The NIHDI "Return to Work" fund provides a workplace coach, but only under certain conditions and with an administrative process that requires digital literacy. Employers often do not allow flexible reintegration due to lack of awareness of legal possibilities. [Patient association]

Returning to work often results in only a small financial gain (e.g., €100 more than unemployment benefits), reducing motivation. Returning to work may result in lower income than disability benefits (in particular in low-educated patients). [CPCs]

Even patients who are capable of working face anxiety and uncertainty about how long their disability status will last. [CPCs]

Lack of coordination [CPCs]

Insufficient communication between treatment teams and controlling institutions (e.g., insurers, employers). [CPCs]



Table 5 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to overall organizational issues for the patient

Barriers and the underlying factors
<i>Insufficient resources for the patient</i>
<i>Limited accessibility due to financial restrictions</i> No access to certain alternative treatments (e.g., CBD, wellness solutions) due to lack of recognition and reimbursement.[Patient association] Current financing model ties subsidies to the number/type of treatments (e.g., infiltrations), limiting flexibility.[Patient association]
<i>Administrative burden for the patient</i>
NIHDI and mutuality regulations are unclear (e.g., MAF ceiling, chronic pain lump sum after a certain number of infiltrations, day hospital reimbursements, limited number of physiotherapy sessions).[Patient association] Numerous administrative procedures exhaust patients.[Patient association] Diagnosis sometimes leads to lengthy administrative procedures for recognition (and possible rejection), although specialists can sometimes speed up referrals.[Patient association]
<i>Lack of access to digital health and new technologies</i>
Low patient adoption: Digital health tools are currently underused by patients due to lack of familiarity with digital technologies or not suited for every patient (for example patients who are electro-sensitive).[Patient association]
<i>No universal format of peer-support that fits for all patients</i>
Disruption due to Covid-19: Peer-led support and action groups ('groupe de parole et d'action'), set up by the patient associations, were discontinued during the pandemic.[Patient association] Limited experience with patient-caregiver collaboration: Groups gathering patients are caregivers is still relatively unexplored.[Patient association] Social isolation and lack of support: Patients may feel alone and may lack the sense of community. The role of associations and peer support is poorly known, even though peer-to-peer assistance is essential for sharing lived experience.[Patient association] Missed opportunities for shared learning: peer discussion help recognize common challenges, compare treatment and side effects and offer emotional support.[Patient association]

Lack of family support for the patient

Spouses and family are not systematically invited by the patient associations to support groups or conferences.[Patient association]

Involvement of family members during consultation can be challenging: they can help explain to HCPs what the patient is experiencing but this is not always possible. The level of family involvement depends on how open family members are to understanding the condition.[Patient association]

Chronic illness affects not only the patient but also children, partners, and the entire family. Many patients feel misunderstood (my family doesn't understand me"), and some even lose their partners because living with chronic pain is so difficult. Patients can feel alone and helpless.[Patient association]

Society provides little or no recognition or support for informal caregivers, who often struggle to balance work and caregiving responsibilities.[Patient association]

Limited patient involvement in coordinating care

Coordination of care by the patient not always possible: they are not always in a condition to manage their illness or do not have all the necessary knowledge. Some patients are also very isolated, abandoned by their social circle.[Patient association]

Table 6 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to overall organizational issues for the HCPs

Barriers and the underlying factors***Insufficient resources for the HCPs******Limited availability of care services due to financial restrictions***

Current financing model ties subsidies to the number/type of treatments (e.g., infiltrations), limiting flexibility.[Patient association]

Lack of financial remuneration for longer consultations

Medical staff lack time for in-depth care, especially for undiagnosed patients.[Patient association]

Consultations are often too short to properly assess patients.[Patient association]

Performance-based medicine prevents longer consultations needed for meaningful conversations with patients.[Patient association]

Lack of access to digital health and new technologies

Limited access to digital health tools for GPs: GPs are no longer allowed to conduct consultation by phone.[Patient association]



Lack of care coordination leads to a redundancy in medical tests

Lack of clear role definition, hampers the implementation of coordination solutions.[Patient association]

Care is protocol-driven, **not patient-centred**; home situation and family context are rarely considered.[Patient association]

Insufficient communication among primary HCPS, and between primary, secondary and tertiary care. Incorrect information in patient records, which is difficult to remove or correct.[Patient association]

Difficulties accessing the patient record: the hospital's current software (requires 18 clicks, works only 1 out of 3 times, so much so that only 25% of the hospital's doctors know how to use the Walloon health network), access is even more difficult with the Flemish network (Cozo), which requires using a mobile phone for identification and entering the patient's ID.[CPCs]

Table 7 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to organizational issues specific in primary care

Barriers and the underlying factors

Lack of training on identification of causes of pain and chronic pain management

Lack of interest and knowledge among **primary care providers**. Often linked to insufficient training or awareness about chronic pain and multidisciplinary approaches.[CPCs]

GPs play an important role in the diagnostic assessment, but are not sufficiently trained to identify causes of pain.[Patient association]

Once a diagnosis is made, some GPs attribute all symptoms to it (e.g., assuming all pain is due to long COVID) without further investigation or pain management.[Patient association]

General practitioners have sufficient knowledge about opioids but lack consultation time.[CPCs]

Peripheral **physiotherapists** are less well-trained in chronic pain management.[CPCs]

Psychologists interested in chronic pain are harder to find in peripheral areas. Some patients end up with psychologists who do not know how to address chronic pain.[CPCs]

Inconsistent referral patterns

Some GPs rely entirely on specialist' opinions.[Patient association]

Others fail to refer patients to specialists when needed (e.g., young woman with monthly sick leave for painful periods).[Patient association]

Late or suboptimal referral to multidisciplinary pain centres (CPC).[Patient association]

GP-patient relationship determinant for BPS approach

A GP-patient relationship in which the GP is more attentive to patients' daily lives and feelings will facilitate the BPS approach [Patient association]

Lack of coordination of care

Lack of centralization and coordination among primary care HCPs.[Patient association]

Foster collaboration among primary care providers instead of working in silos.[Patient association]

Lack of action before the transition to chronicity (insufficient early intervention for secondary prevention).[CPCs]

Difficulty organizing multidisciplinary care in every GP practice

Not all primary care practices are equipped or structured to support multidisciplinary collaboration.[CPCs]

Table 8 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to accessibility issues specific in CPCs

Barriers and the underlying factors

Accessibility: Delayed referral to CPCs

Limited awareness: The CPCs are not always well known and their approach requires explanation.[Patient association] Increasing number of therapy-resistant patients due to ignored, refused, or inappropriate treatments.[CPCs] Lack of identification by HCPs and/or lack of response to transitional pain (pre-chronic stage).[CPCs]

Referral hesitation: GPs may delay the referral to a CPC due to lack of knowledge about the care available in these centres. Multidisciplinary care often starts too late in the patient's journey. It should be present from the beginning—not necessarily immediate referral to CPC, but an early start of multidisciplinary support.[Patient association]

Mandatory referral criteria: Mandatory referral by a physical medicine doctor or neurosurgeon creates access barriers.[Patient association] [CPCs]



Perceived as last option: HCPs often consider these CPCs as final option, only when all other options have failed. Physician-specialists are reluctant to refer patients to CPCs and focus more on pharmaceutical care.[Patient association] Patients arrive at pain centres in very severe condition, consuming significant resources and often at the end of the line.[CPCs]

Long waiting lists: delays of at least 6 months (up to 1y) were mentioned. In contrary, it was also mentioned that traveling long distances to find competent HCPs was acceptable if it leads to better health outcomes. Delayed access to specialized care, leading to worsening symptoms and chronicity. Increased frustration and stress for patients.[Patient association] [CPCs]

Pre-selection of patients on: [CPCs]

- Patient readiness and workability: pre-selection of patients who do not start the program due to lack of engagement, financial constraints, or language barriers (including among migrant populations). A patient's ability to engage in care is a process and influences therapy outcomes more than the duration or severity of complaints.
- place of residence of the patient (e.g. limited to a specific province)
- pathology (e.g. max 50% patients with fibromyalgia)
- Suitability for BPS approach: sometimes the team determines whether a patient is not suitable for MD care and refers them to a more appropriate setting (e.g., psychiatric care).

Accessibility: Financial burden for the patient

Billing codes for medicotechnical intervention:

Pain care in Belgium is largely driven by billing codes used by anaesthesiologists.[CPCs] Strong lobbying by professional groups.[CPCs] Financially more attractive to perform infiltrations than to talk with patients.[CPCs]

Restricted access to psychological care:

Insufficient reimbursement for psychological care.[Patient association] Psychological sessions are only partially reimbursed.[CPCs]

Non-convention leads to financial burden for the patient:

Most physiotherapists are now non-conventioned, leading to higher costs and lower reimbursement for patients (unlike non-conventioned physicians).[CPCs]

Accessibility: insufficient capacity in the CPCs

Variety between CPCs

Much higher care intensity in CPC Leuven compared to others.[CPCs]

Geographical inequality: uneven distribution of CPCs across Flanders.[CPCs]

Staff shortage

Limited staff time due to part-time contracts, reducing the number of patients that can be treated.[CPCs] Reference salary scales for paramedical professionals are very low (based on junior staff without seniority). Few full-time equivalents (FTEs) and currently only one physician in the center.[CPCs] These scales have not been updated over the past decade, except for a recent indexation that still falls short of the estimated 25-point adjustment needed.[CPCs]

High workload for physicians because consultations require a lot of time.[CPCs]

Shortage of psychologists specialized in chronic pain and Cognitive Behavioral Therapy (CBT).[CPCs]

Lack of recognition of algology [CPCs]

Need for a separate status not tied to billing codes for interventions. Should be based on knowledge (approach to chronic pain), not technical skills. Courses in Spa and European programs focus on the BPS model but only offer certificates, not diplomas.

Recognition currently blocked by performance-based medicine. Internal disagreement among anaesthesiologists about the role and scope of algologists.

Table 9 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to care management issues specific in CPCs

Barriers and the underlying factors

Management in CPCs: assessment

Pain assessment is poorly conducted (single pain scale despite multiple pain sites).[Patient association]

A long delay for full assessment with different consultation time slots for somatic assessment, BPS assessment and to discuss the results. Patients expect care after assessment but are left without follow-up.[Patient association]

Initial conclusions rarely revisited, leading to prolonged misdiagnosis.[Patient association]

Assessment: previously follow-up by physician, now delegated to administration.[CPCs]

BPS approach sometimes delayed until after additional clinical examinations or information needed.[CPCs]

Management in CPCs: BPS care management

Lack of clear explanations or personalized advice; patients are pushed to follow the centre's program even if far from home. Strict adherence to a fixed protocol (e.g., must see a doctor first) with no flexibility. Insufficient information provided about the protocol and reasons for referrals to other professionals (psychologist, psychiatrist). Sometimes treatment is dominated by a single discipline (e.g., anaesthesiologist), leading to a narrow approach focused mainly on interventional techniques.[Patient association]



Difficulty implementing a multimodal and multidisciplinary approach in non-recognised CPCs (depends on goodwill, unlike MOC structures).[CPCs]

Having inpatient beds for pain management is a recognition criterion for pain centres and can add value, especially for opioid withdrawal support. This is not always the case in non-recognised centres. Need to refer certain patients elsewhere.[CPCs]

Management in CPCs: insufficient coordination of care and multidisciplinary collaboration (including with primary care)

Coordination within CPC:

No real coordination; mediation services are inactive.[Patient association]

“Ping-pong” between physical medicine and pain clinic—no one takes responsibility for initiating care.[Patient association]

No financial reimbursement for multimodal team meetings in non-recognised CPCs.[CPCs]

No designated contact person for patient issues.[Patient association]

Unequal investment from hospital professionals in chronic pain care.[CPCs]

Collaboration with primary care:

Communication with GPs is limited to emails or letters; no real consultation or meetings.[CPCs]

Limited referral to primary care: due to lack of networks and differing visions/knowledge between primary care providers and CPCs.[CPCs]

Fragmented care pathways and poor continuity between primary and specialized care.[CPCs]

For one pain specialist, patients should quickly take responsibility for their care, regain autonomy, and exit follow-up at the center. This is less the case for physical medicine doctors, who see patients less frequently and can wait longer for changes.[CPCs]

Referral to the general practitioner (GP) does not always go smoothly (e.g., prescription of a patch or 18 massage sessions); same with physiotherapists, who do not always follow prescriptions (and sometimes discourage patients from moving or even tell them not to do certain movements). However, there is progress (e.g., less use of opioids).[CPCs]

Table 10 – Overview of the barriers and underlying factors reported by patient associations and CPCs related to resource issues specific in CPCs

<i>Barriers and the underlying factors</i>
<i>Resources: insufficient funding for the functioning of the CPCs</i>
Annual financial deficit for CPCs leads to Management pressure to be more financially viable: with a loss of staff and expected further reductions. Management sees how much private pain center doctors earn through billing-code-based care.[CPCs] Financial losses lead to management pressure to reduce multidisciplinary care and focus on reimbursable services.[CPCs] Funding does not cover medical consultations.[CPCs] Fee-for-service payment is insufficient for independent practitioners: [CPCs] Doctors receive €19 per consultation (minimum 45 minutes). Physiotherapists use M Fb codes for 60 sessions or K20 (but financially unattractive due to high hospital deductions). Occupational therapists are salaried by the hospital (shared across pain, K60, rehab floor, geriatrics, etc.).[CPCs] Psychologists are salaried, but only one is trained in acceptance and pain management therapy.[CPCs] Co-payment (ticket modérateur) applies only to medical consultations.[CPCs] Paramedical consultations (e.g., nurses, psychologists) are free, leading to saturation (e.g., nurse can only see 6 patients per day for 1-hour consultations).[CPCs] No financial link with anaesthesiologists who perform reimbursable technical acts.[CPCs] Lack of recognition for intellectual work: Cognitive and consultative efforts are undervalued and underfunded.[CPCs] Multidisciplinary consultations NIHDI “multidisciplinary consultation” codes focus on acute pain (at a specific time) and predefined pathologies (e.g., fibromyalgia with diffuse pain is excluded, while sciatica or gonarthrosis are included with justification).[CPCs] Lack of financial remuneration for longer consultations Consultation time vs. Reimbursement: Consultations often exceed one hour (including reporting), but reimbursement is limited.[CPCs]
<i>Resources: lack in training</i>
Doctors lack training on the psychological impact of pain as a consequence rather than a cause.[Patient association] Multidisciplinarity is not adequately taught in healthcare education.[CPCs] Lack of knowledge in primary care affects the effectiveness of therapy provided in CPCs.[CPCs]

**Recognition of CPCs: lack of quality assurance**

Quality of pain treatment is not dependent on official recognition of centres.[CPCs]

Few conditions tied to recognition; lack of control over CPC operations.[CPCs]

35 centres designated, but fewer than 5 truly apply the BPS (biopsychosocial) model.[CPCs] Other centres mix triage with billing codes; patients are shuffled between centres.[CPCs]

Insufficient decision-making power in **CPC steering committee**: [CPCs]

- Activity reports show non-compliance with guidelines, but no action is taken
- No budget or mandate for control
- When it was still a convention, there was more oversight and a larger budget (per patient file)
- Transition to FOD agreement: expansion from 9 to 35 centres without quality assurance.

Lack of **political priority** from the ministry.[CPCs]

No clear vision on chronic pain management; government requirements focus mainly on functional recovery.[CPCs]

Current reforms further reduce consultation time, even for complex chronic pain intake.[CPCs]

Proposal to stop CPC recognition is not feasible: hospitals won't invest in psychologists, risking closure of many CPCs.[CPCs]

Non-recognized CPCs survive by billing patients directly, risking loss of expertise and interdisciplinary care.[CPCs]

3 ACTIONS POINTS SUGGESTED BY BELGIAN PATIENT ASSOCIATIONS AND HCPS FROM CPCs

Table 11 – Overview of reported solutions for the action domain on patient empowerment

Action points	Reported solutions
Language proficiency	Patients should be encouraged to achieve a basic knowledge of the national language (French or Dutch).[CPCs]
Peer and family support	Peer support • Offer a range of support formats which can be tailored to each patient's needs and preferences.[patient associations] Examples of support formats are: ○ remote support groups (e.g. via Teams) ○ use of social media, which can encourage dynamic exchanges and testimonials, especially when moderated by a HCP ○ individual sessions for patients who are feeling uncomfortable in group settings.[Patient association] • Strengthen Patient association to enable peer support and create spaces for family involvement (e.g., meetings, resource centres).[Patient association] • A dedicated budget to support the patient associations to establish partnerships between associations and to set up peer patient-groups ('pairs aidants').[Patient association] • Support patient-expert programs (e.g. PEC, LUSS) financially, as these roles are currently voluntary.[Patient association] • Create a national chronic pain association to unify efforts, possibly under LUSS, which is willing to facilitate this initiative.[Patient association] Family support • Create support groups for spouses to help them understand what the patient is going through and to encourage behaviour change.[Patient association] • Inform and educate families and colleagues about the illness to foster understanding (e.g., through CPCs, creating dedicated spaces for relatives). Organize information sessions for the patient's family and close circle, explaining pain mechanisms to foster understanding and support.[Patient association] • Recognize and support caregivers at the societal level, providing resources to help them fulfil their role.[Patient association] • Financial support from sickness funds for family meetings, including reimbursement for psychologists' consultation time within care pathways.[Patient association]
Shared-decision making	• Implement shared decision-making, including goal setting and expectation management.[Patient association]



Table 12 - Overview of reported solutions for the action domain on BPS management

Action points	Reported solutions
<i>Care pathway</i>	- Develop and implement a chronic pain care pathway, which aims to prevent functional loss and promote early functional recovery and to avoid over-medicalization.[CPCs] [Patient association] Following key-elements were reported: A truly multidisciplinary and holistic approach, integrating physical and psychological care, evaluation of the pain, consultation with a psychologist, multidisciplinary meetings, and the need of a referral physician.[Patient association] - Provide clear explanations of the care pathway and the purpose of each referral for the patient.[Patient association] (In CPC) encourage patient engagement and link it to certain conditions (e.g., participation requirements).[CPCs] This pathway should be considered as a stepped care model [CPCs] - Start in primary care, build up to secondary and tertiary care (CPCs), and allow for step-down transitions.[CPCs] - Requires shared vision and knowledge among primary care providers.[CPCs] - The more complex the patient is, the earlier a multimodal approach should start (based on risk factors).[CPCs] - Transitional care model with pre-operative assessment of risk factors (e.g., opioid use) to guide perioperative care and early detection of risk factors for chronicity.[CPCs] - Dedicated secretary for scheduling who knows each professional's expertise to direct patients to the right specialist.[CPCs] - Care closer to the patient: In an ideal world, care is organized locally, but requires sufficient knowledge and engagement from primary care. Example: low back pain care pathway — tools and expertise must be available in primary care.[CPCs] International models and best practices [CPCs] - Sweden: Patients must follow a care pathway before surgery; no incentive for surgeons to operate prematurely. - Netherlands: Steps taken to reduce unnecessary technical interventions. - UK & Germany: Some pain centres led by rehabilitation professionals or psychologists
<i>BPS components: patient education</i>	Knowledge about the disease profoundly transforms the patient's experience [Patient association] - Patient associations should be introduced to the BPS approach through different formats, such as short films featuring practical examples).[Patient association] - Train patient ambassadors for chronic pain (similar to MS ambassadors) to: - Explain chronic pain in training sessions or through videos [Patient association] - Provide hospital-based support and mediation for patients and families [Patient association] - Offer information on lifestyle adjustments and encourage goal setting with the physician.[Patient association] - Provide patient education on the value of the BPS model and the interaction between mind and body.[Patient association]

- Provide information and access to complementary care (e.g. essential oils, sophrology, medication, thermal care) but some associations preferred to make a clear distinction between medical care and well-being in order to minimize the risk of non-scientific practices.[Patient association]

Structured patient education programs (example: 6-week sessions helped acceptance).[Patient association]

- Psychoeducational workshops: [CPCs]
 - for groups of 8 patients
 - Only after an individual psychology session (€50)
 - Led by a pair: occupational therapist (salaried) + psychologist (salaried) or occupational therapist (salaried) + physiotherapist (K20 + €20 per workshop)
 - 2-hour sessions (topics: emotions, pain system, physical activity, relaxation/sophrology, nutrition).
 - Duration: 7 weeks, 1 session/week
 - No formal evaluation of results, but patient satisfaction self-assessments show positive outcomes
 - Problem: Lack of staff (center cannot handle enough patients).

Patients' communication skills

- A shift in patient attitude is needed: patients should come better prepared to consultations, be able to clearly express their pain concerns, be well informed about the treatment options and be actively engaged in dialogue with the HCPs.[Patient association]

Access to information

- Establish a dedicated helpline or an orientation platform for patients.[Patient association]
- Large information sessions (in the evening or similar to maternity classes) for patients with chronic pain, regardless of its origin or pathology.[CPCs]
- Provide clear, understandable information for patients (example: UK model).[CPCs]
- Develop simple, accessible tools for healthcare providers (videos, apps) to support patient education.[CPCs]
- Launch media campaigns to raise awareness about reintegration and coping strategies.[CPCs]
- Offer digital health technologies as one option among a broader set of healthcare solutions, and a personalized approach is needed.[Patient association]
- A dedicated budget to support the patient associations to develop targeted information (in different formats) for their patient members.[Patient association]

BPS components: physical activity

- Develop physiotherapy centres for safe, small-group exercise.[Patient association]
- Adapt "exercise on prescription" programs to address fear of movement.[Patient association]
- Expand community-based initiatives like water exercises with proper supervision.[Patient association]



	Establish movement centres in CPCs and hospitals, supervised by physiotherapists, where specialists can refer patients directly.[Patient association]
<i>BPS components: psychological support</i>	- Use mobile mental health teams (e.g., 107) for free, home-based psychological support, improving accessibility and reducing stigma.[Patient association] - Financial support from sickness funds for family meetings, including reimbursement for psychologists' consultation time within care pathways.[Patient association] - Ensure specialized pain psychologists are available in both CPC and primary care.[Patient association] - Organize psychoeducational workshops (2-hour sessions (topics: emotions, pain system, physical activity, relaxation/sophrology, nutrition)).[CPCs]
<i>BPS components: social support</i>	- Integrate social workers systematically into BPS care planning.[Patient association] - Integrate regular psychosocial check-ups with a psychologist and social worker as part of the care pathway, even for patients who are following therapy. This would create a point of contact for patients, improve information flow and enhance the early identification of patients in need for referral to CPCs.[Patient association]
<i>BPS components: professional reintegration/return to work</i>	- Adopt a case-by-case approach with competent insurance doctors, focusing on support and work accommodations rather than repression.[Patient association] - Strengthen RTW pathways—in quantity and quality: expand opportunities and improve job adaptations to prevent long-term sickness.[Patient association] - Give AVIQ a larger role in coordinating and supporting RTW.[Patient association] - Provide career reorientation support (reskilling/upskilling and guidance). Broaden eligibility for return-to-work incentives to include adapted roles or new positions.[Patient association] - Recognize chronic pain similarly to disability: use incentives (e.g., minimum hiring targets) and protect employers from penalties for medically justified absences—provided chronic pain recognition is consistently granted.[Patient association] - Integrate occupational health (médecine du travail) into RTW planning.[Patient association] - Deploy job coaching models (e.g., like Rheumanet) with multidisciplinary skills, psychological, and social assessments—extended to chronic pain.[Patient association] - Support meaningful volunteering with guidance for those unable to work.[Patient association] - Simplify administrative procedures for workplace reintegration and provide support for patients with low digital literacy.[Patient association] - Ensure that medical assessments are conducted by a multidisciplinary team and that reports are properly reviewed. In Belgium, doctors are expected to assess functional work capacity, but they cannot visit workplaces or accurately evaluate possible adjustments.[Patient association] - The “Back to Work” project (1 day/week) has limited success in restoring functional capacity for most patients.[CPCs]

- A structured reintegration process is essential to prevent pain from worsening and to maintain social value. Conditionality and engagement: introduce conditional measures to encourage societal and work integration.[CPCs]
- Build public and institutional awareness and support for reintegration of chronic pain patients into the workforce.[CPCs]

Table 13 – Overview of reported solutions for the action domain on accessibility

Action points	Reported solutions
<i>Financial accessibility</i>	At patient level • Introduce a personal care budget per patient to allow personalized care packages and remove barriers. This budget could also open conversations with patients about available options.[Patient association] • The elaboration of a care pathway that fully integrates the BPS approach.[Patient association] • Make psychological care more affordable (currently around €50 per session), as patients often need more support than they can financially manage.[CPCs] • Financial co-responsibility: Having patients pay themselves for the consultations (in CPCs).[CPCs] • A social worker could assist the patient in navigating costs.[Patient association] • Introduce a small co-payment for paramedical consultations (though currently rejected for legal reasons — caution around MAF thresholds) (in CPC).[CPCs] At system level • Improve funding for healthcare system resources to reduce pressure on professionals.[Patient association] • Increase the number of psychologists specialized in chronic pain and CBT in both primary care and CPC.[Patient association] • Expand reimbursement for psychological care to improve accessibility.[CPCs] • Increase funding for Chronic Pain Centres (CPCs), including support for intervention activities in primary care.[CPCs] • Stratify complaint severity to allocate budgets appropriately.[CPCs]
<i>Availability of care services</i>	Consultation time (in primary care) • Allocate more time for GP consultations, especially for chronic pain patients.[Patient association] • Dedicated time needed for the HCPs in primary care to inform and educate the patient about the BPS approach.[Patient association] • Equip primary care to handle chronic pain patients and provide secondary prevention during the subacute phase.[CPCs] Availability of CPCs



	• Expansion of the number of recognized CPCs to increase the financial accessibility for the patients.[CPCs] • Expand CPC services to include reimbursable wellness interventions to support patients and prevent unsafe alternative practices.[Patient association] Smaller, specialized CPCs [CPCs] • In the future, large CPCs may be unnecessary — only a few centres with high-level expertise would remain.[CPCs] Reform CPC structure [CPCs] • CPCs should act as consultants, not coordinators for primary care (avoiding a paternalistic model), but available when care stalls.[CPCs] • Long-term goal: phase out large CPCs, retain small expert centre.[CPCs] • Transform CPCs into facilitators of a primary care network, offering support only for truly complex cases.[CPCs] • Enable CPCs to operate in the field, actively supporting and training primary care providers.[CPCs] • Actual reassessment of the functioning, funding, and missions of the recognized centres (including requesting the last 10 reports sent to primary care or an on-site visit).[CPCs] Initiatives like A. Berquin's model [CPCs] • Larger primary care practices with integrated psychology and physiotherapy. • Pain specialists act as consultants. • CPC representatives visit group practices to organize multidisciplinary meetings (e.g., "LAC-mobile").
<i>Staffing</i>	• Increase the number of psychologists specialized in chronic pain and CBT in both primary care and CPC.[Patient association] • Involve psychiatrists (though challenging because patients often refuse, and direct interaction between the team and psychiatrist is needed to explain the situation, which is hard to organize).[CPCs] • Reintroduce the idea of a pain expert by experience in every multidisciplinary pain centre to improve patient engagement, listening, and information sharing (including patient rights).[Patient association] • Create a non-discipline-specific algologist role based on knowledge, not technical skills. Should be open to various professionals (e.g., physical medicine doctors, nurses). Algologists should focus on diagnosis and referral, not mastering all techniques.[CPCs]

Table 14 – Overview of reported solutions for the action domain on collaboration

Action points	Reported solutions
<i>Multidisciplinary composition of the care team</i>	- Encourage group practices for GPs, which often integrate psychologists and alternative therapies (yoga, Pilates, acupuncture), making care more accessible and reducing stigma.[CPCs] Also larger primary care practices with integrated psychology and physiotherapy, in which pain specialists act as consultants. CPC representatives visit group practices to organize multidisciplinary meetings (e.g., "LAC-mobile").[CPCs] - Create an intermediate service between physical medicine and the CDC for secondary prevention and early relief at the subacute stage.[CPCs]
<i>Multidisciplinary meetings</i>	- Integrated consultations involving multiple professionals with the patient (and their family).[CPCs] - Creation of co-consultations between GPs, psychotherapists and/or physiotherapists: this would enhance understanding of specific health conditions and reinforce the legitimacy of patients' experiences (e.g. recognizing the psychotherapist' role in managing migraines) [Patient association] - Secure funding for multidisciplinary consultations for complex cases (e.g., Münchausen syndrome, a true psychiatric disorder where the patient simulates illness and has a very high suicide risk) in CPCs.[CPCs]
<i>Care coordination</i>	- Introduce care coordinators to: [Patient association] - Inform and involve families. - Act as a link between patients and their social environment. - Assist isolated patients in finding trusted support. - Provide a care coordination for patients in need for it [Patient association] - Extend the NIHDI-funded pilot projects on case-managers to other diseases (e.g. Lyme disease, sickle cell disease, fibromyalgia) or to chronic pain management [Patient association] - Enable shared patient records and better use of digital tools (e.g. MySanté), with time allocated for professionals to update and consult them.[Patient association] - Implement care coordinators within primary care zones who know the care landscape and can refer patients appropriately.[Patient association] This role could be filled by a pain nurse in a group practice or a local coordinator per primary care zone.[Patient association] - Local authorities should promote awareness of care coordinators among patients. Note: Coordination should not become an extra barrier—direct referrals should remain possible.[Patient association]
<i>Interprofessional collaboration</i>	Shared communication tools Enable shared patient records and better use of digital tools (e.g., MySanté), with time allocated for professionals to update and consult them.[Patient association]



- Phone calls from the CPCs to the general practitioner (in addition to sending a very detailed report each time to primary care, including minutes of multidisciplinary meetings and individual evaluations by each HCP).[CPCs]
- A shared record system like BelRai: acceptable if implemented at the Belgian level, accessible to all (Walloon network and each hospital's IT system), where every professional (including paramedics) could add notes.[CPCs]

Triage and referral

- GPs should apply the BPS model and are best positioned to guide referrals.[CPCs]

Risk stratification for chronicity

- Local initiative: Secretary trained to identify at-risk patients (because she works in the room where pain specialists perform technical procedures).[CPCs]
- Time slots kept open to fast-track pre-chronic patients (especially those at risk of complex regional pain syndrome).[CPCs]
- Preoperative contacts with surgeons for at-risk patients (based on type of surgery, age, medical history, etc.).[CPCs]
- Facilitate identification of chronification risk factors (provide tools).[CPCs]
- Integrate regular psychosocial check-ups with a psychologist and social worker as part of the care pathway, even for patients who are following therapy. This would create a point of contact for patients, improve information flow and enhance the early identification of patients in need for referral to CPCs [Patient association]
- Raise awareness among all healthcare professionals to avoid iatrogenic messages (e.g., a surgeon saying it's abnormal to have pain three weeks after surgery).[CPCs]

Table 15 – Overview of reported solutions for the action domain on training

Action domains	Reported action points
Training for HCPs	Attitudinal skills • Trainings for HCPs should also focus on attitudinal skills, such as showing empathy and validation of the complaints [Patient association] • Train GPs in active listening and shared decision-making.[Patient association] Education programs for HCPs • Organize regular trainings on chronic pain and BPS approach for all types of HCPs, in particular psychologists [Patient association] • Train GPs to refer early to CPC when initial treatment fails.[Patient association]

	• Ensure basic and ongoing training for HCPs that is not only theoretical but includes positive reinforcement through peer supervision (e.g., once a month). Training should occur at the right time in the curriculum (neither too early nor too late) and favour small group discussions rather than large lectures.[CPCs] <i>Example:</i> At ISEI, third-year nursing students have a pain-focused day led by the multidisciplinary team at St-Luc, with afternoon workshops to discuss complex cases from internships. • Provide additional training for GPs and peripheral physiotherapists on chronic pain and the BPS approach.[CPCs] Interprofessional education • Teach collaboration and role clarity across disciplines during initial training (see project W. Munneke).[CPCs] • Enable multidisciplinary managers (MM) who participated in Anne's project to become trainers/facilitators themselves, acting as local champions.[CPCs] • Create a mobile team of trainers (since there is no single effective model) [CPCs] • CPC as educator: support and train primary care providers.[CPCs]
<i>Awareness in general public</i>	Increase public awareness about chronic pain and invisible illnesses through education and campaigns [Patient association] • Launch public awareness campaigns (via different media channels) to educate the general population and enhance understanding of the BPS model among both patients and HCPs [Patient association] Start with health education in schools: Gain insight into patients' life trajectories [CPCs]

Table 16 – Overview of reported solutions for the action domain on national plan

Action points	Reported solutions
<i>Registry</i>	• Calculate the societal cost of chronic pain (with accurate and precise figures regarding work-related impact) to influence policy decisions, even in a context of budget restrictions [Patient association] • Creating a national chronic pain registry would help document the true scale of chronic pain in Belgium, provide robust data to support patient advocacy, and serve as a valuable foundation for research.[Patient association]
<i>Recognition of chronic pain as pathology</i>	• Officially recognize chronic pain (especially fibromyalgia) as a distinct pathology, including undiagnosed pain ("grey zone") [Patient association] • Promote recognition of chronic pain as a legitimate condition at the societal and policy level.[Patient association] • Officially recognize chronic pain as a condition at the national level.[Patient association]



Need for a organizational chronic pain model

- Create a specific legal status for chronic pain patients, independent of the underlying diagnosis, to ensure uniform reimbursement and access to care.[Patient association]

Need for an organizational chronic pain model with:

- Improvement of organization and capacity in primary care to reduce dependency on CPC.[Patient association]
- Definition of tertiary care needs: clear criteria for who needs third-line care, estimate how many patients in Belgium require this and how many centres are needed.[CPCs]

On macrolevel: A broader view on the healthcare system is needed: [CPCs]

- Avoid dominance of billing-code medicine.
- Don't isolate chronic pain; integrate it into a broader healthcare perspective.
- Move away from "repair medicine" where patients are stuck in the same trajectory (e.g., obesity, billing-code-driven care).
- Projects on chronic pain must go beyond current boundaries.

Budgeting: Stratify complaint severity to allocate budgets appropriately. Implement a more accurate referral pattern and capped financing system.[CPCs]

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