Pain Medicine, 00(0), 2022, 1–6
https://doi.org/10.1093/pm/pnac111
Advance Access Publication Date: 22 July 2022
Original Research Article

The Pain Clinic for Older People

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Conflict of interest: The authors declare that there is no conflict of interest with regard to the publication of this article.

Received on 26 April 2022; revised on 15 July 2022; Accepted on 18 July 2022

Abstract

Objective. Multidisciplinary pain clinics have an established role in the management of persistent pain, but there is little evidence to support this approach in an older population. This study describes the characteristics and pain outcomes of patients attending a pain clinic designed exclusively for older people. **Methods**. A retrospective audit was performed of outcomes of the Pain Clinic for Older People (PCOP) in 2015–2019. Response to treatment was determined by change in Brief Pain Inventory (BPI) scores at initial attendance and after a treatment program. Clinically meaningful improvement was defined by the Initiative on Methods, Measurement, and Pain Assessment in Clinical Trials (IMMPACT) consensus criteria of ≥30% improvement in average pain and one-point improvement in pain interference. Results were compared with the national benchmark collated by the electronic Persistent Pain Outcomes Collaboration (ePPOC), which reports the combined results from 67 participating Australian and New Zealand pain services. **Results.** Patients attending the PCOP had a mean age of 80.5 years and had high rates of frailty (84%), cognitive impairment (30%), and multimorbidity. Significant reductions in BPI average pain and BPI pain interference scores were achieved. Clinically meaningful improvement in BPI average pain was achieved in 63% of patients attending the PCOP who were 65–74 years of age and in 46% of patients who were ≥75 years of age, which met the national benchmark set by ePPOC of 40% for both age groups. Clinically meaningful improvement in BPI pain interference was achieved in 69% of those attending the PCOP who were 65–74 years of age and in 66% of those who were ≥75 years of age, comparable to the ePPOC benchmark of 71% and 65% for the respective age groups. **Conclusion**. PCOP clients achieved significant and meaningful improvements in their pain outcomes that satisfied the national benchmark. Advanced age, cognitive impairment, frailty and multimorbidity should not be regarded as barriers to benefit from a pain clinic specifically designed for older people.

Key Words: Older Adults; Frailty; Multimorbidity; Cognitive Function; Pain Clinic Models; Comprehensive Geriatric Assessment

Introduction

The prevalence of chronic pain increases with advancing age. A recent study of 14,155 Australians more than 70 years of age found that 41% of males and 50% of females experienced pain on most days. The pain was of moderate or severe intensity in 25%, and 41% found that it interfered with their daily activities. Pain severity and interference from pain were higher in those with advanced old age of 80 years or greater [1]. These findings are similar to findings in other countries [2, 3].

Multidisciplinary pain management is the recommended approach for people with troublesome pain that has persisted despite standard therapies [4]. This recommendation is based largely on studies of young and middle-aged adults. Studies that included older people have largely focused on those less than 75 years of age, often without major comorbidities [5]. Compared with younger adults attending specialist pain services, older patients have a greater burden of physical problems and underlying pathology [6, 7]. Chronic pain is highly

associated with frailty, cognitive impairment, and multimorbidity, but mainstream pain clinics might not have the training and staffing profile to deal with older people with these conditions [8]. Moreover, common age-related comorbidities, such as cognitive impairment, might be perceived as barriers to benefiting from attendance at a pain management clinic [9].

The aims of the present project were to describe the characteristics of patients attending a pain clinic exclusively for older people and to explore the changes in pain outcomes of the young old (65–74 years of age) and those of advanced older age (75 years of age or greater) and to compare these outcomes with those of the national benchmark, the electronic Persistent Pain Outcomes Collaboration (ePPOC) [10]. The ePPOC collects a standardized set of data from 67 participating pain services in Australia and New Zealand (AU/NZ) to provide benchmarking and promote best outcomes.

The Pain Clinic for Older People

The Pain Clinic for Older People (PCOP) was established in 2012 within the Department of Geriatric Medicine at St Vincent's Hospital Melbourne, Australia. It is located within the same health service as a large mainstream pain clinic and combines the practices of multidisciplinary pain management as described by the International Association for the Study of Pain (IASP) [11] and Comprehensive Geriatric Assessment (CGA) [12]. CGA has been shown to lead to better clinical outcomes for frail older adults when compared with usual care across a range of clinical areas and is the gold standard for managing the complex health needs of older individuals. The PCOP offers expertise in the care of older people, including those with advanced old age, medical comorbidities, frailty, and cognitive impairment.

Staffing of the PCOP has been modified from the IASP guidelines for pain clinics [11]. The multidisciplinary team includes a physician qualified in geriatric medicine and pain medicine, an aged care nurse practitioner, a physical therapist, a clinical psychologist and trainee geriatricians. Clerical support and the location and architecture of the clinic have been modified for the needs of the target population. Interpreters and other allied health and medical specialties are available on request. Protocols were established to eliminate barriers to attendance by older people [13]. A comprehensive geriatric assessment and pain assessment are combined in one extended visit, lasting up to 3 hours. The assessment may be spread over two visits if required, but most patients prefer a single visit. A collective assessment by health professionals from different disciplines is undertaken for the convenience of the patient and to avoid the need for the patient to repeat the history multiple times. Access to the clinic is easy, by public transport or with close parking. Patients are encouraged to attend with a support person such as a relative. There are no financial barriers, or fees for professional services, under Australia's universal health insurance scheme.

Screening for common geriatric syndromes, such as cognitive impairment, frailty, multimorbidity, mobility limitation and falls, mood disorders, and polypharmacy is routinely undertaken at the initial attendance. An individualized treatment plan based on the CGA is developed for each patient. Pain management programs offered by the PCOP typically cover pain education, medication review and recommendations, physical rehabilitation, psychosocial treatments, and, where appropriate, management of comorbid conditions. A bespoke approach is used to enhance compliance. For example, there is a wide range of options for physical rehabilitation, with no evidence to support the superiority of one approach over another. The options are discussed with the patient, who then decides which one they prefer. These include community rehabilitation centers, exercise classes, private physiotherapists, Pilates, aquatic therapy, and walking programs. Most patients are encouraged to have a 20-minute walk outside their house each day. Compliance is enhanced when this is combined with an enjoyable or meaningful activity, such as walking to visit a friend, a park, or church or going out for a coffee. To reduce the burden of travel, we endeavor to deliver physical rehabilitation and psychological treatments close to where the person lives, not necessarily in the clinic.

Group therapy sessions, often a feature of pain clinics, are not offered in the PCOP, because of the heterogeneity of the patients attending the clinic, including language, cognition, and functional ability. Patients requiring interventional pain management approaches are referred to facilities offering these services. Recommendations are not confined to pain management and often include suggestions covering a broad range of issues. All recommendations are communicated to the referring general practitioner (family physician), whose role is to coordinate and implement the plan. The patient is also sent a personalized letter outlining the assessment and key recommendations that can be shared with their family and care providers, drawing them into the therapeutic team.

Response to the program is assessed at a review appointment, usually 3 to 4 months after the initial assessment. Most patients can be discharged at this stage; however, a small number require ongoing support of the clinic.

Methods

A retrospective audit of attendees of the PCOP in 2015–2019 was undertaken. Baseline demographic data for the variables of age, gender, and number and types of medications were collected. On CGA, frailty was measured with the Clinical Frailty Scale [14]. Cognition was evaluated with the standardized Mini-Mental State Examination (sMMSE) [15], with cognitive impairment defined as sMMSE score $\leq$26 [16] or a Rowland

Universal Dementia Assessment Scale [17] score of ≤22 for people who do not have English as their first language. The number and severity of comorbidities were assessed with the Cumulative Illness Rating Scale [18].

Longitudinal changes in pre- to post-treatment BPI average pain and BPI pain interference scores were assessed with paired *t* tests for subgroups defined according to age ranges 65–74 and ≥75 years. Statistical significance was set at $P < 0.05$.

Clinically important improvement was defined by the IMMPACT criteria of ≥30% improvement in BPI average pain and one-point improvement for BPI pain interference [19] for the defined age groups. The percentages of PCOP patients achieving clinically important improvement in BPI pain and pain interference were benchmarked against results published by the ePPOC Patient Outcomes Report [20]. To align with the ePPOC reporting procedure, only patients with pain scores ≥5 at baseline (i.e., at least moderate or worse average pain or interference from pain) were included in this part of the analysis. Further comparative data were made available by the ePPOC statisticians on request.

Statistics software programs Microsoft Excel (Microsoft Corporation, Redmond, WA, USA) and IBM SPSS Statistics (v26) (IBM Corporation, Armonk, NY, USA) were used for the analysis.

Written consent for data collection was obtained from PCOP patients, or authorized persons, before the assessment. Ethics approval was obtained from the St Vincent's Hospital Human Research Ethics Committee (HREC—018/19).

Results

The PCOP database contained 203 patients. Pre- and post-treatment measurements were available in 65% of PCOP patients. The mean time to follow-up assessment for the PCOP was 19 weeks.

The mean age of PCOP patients was 80.5 years (range 59.3–98.0), with 97% of the patients older than 65 years and 77% older than 75 years. See Table 1. In contrast, across the AU/NZ services reporting to ePPOC (total of 13,479 patients), the mean age of patients was 50.1 years, with 15.4% of patients older than 65 years and 5% older than 75 years.

Cognitive impairment (sMMSE ≤26) was present in 29.7% of patients. Those with cognitive impairment scored predominantly in the mild to moderate range (93.9%), corresponding to sMMSE scores between 10 and 24, with few with severe dementia. For those who were of non–English-speaking background, 18.5% had a Rowland Universal Dementia Assessment Scale score of ≤22, indicating cognitive impairment. See Table 1.

PCOP patients had an average of 7.3 comorbidities out of a maximum of 14 on the Cumulative Illness Rating Scale. At least one severe comorbidity was present in 74.9%. Another indicator of the presence of comorbidity was medication prescriptions. The average number of medications used on a daily basis was 10.5, ranging from 0 to 28, with 57.6% taking opioids, 43.8% taking antidepressants, and 36% taking anticonvulsants at initial assessment. See Table 1.

Table 1. PCOP baseline demographic information

N	203
Female, n (%)	152 (74.9)
Age, years, n (%)	
18–49	0 (0)
50–64	6 (3.0)
65–74	40 (19.7)
≥75	157 (77.3)
Frailty, CFS >4, n/N (%)	169/201 (84.1)
Cognitive impairment, sMMSE ≤26, n/N (%)	41/138 (29.7)
Mild cognitive impairment, sMMSE 21–24, n/N (%)	21/33 (63.6)
Moderate cognitive impairment, sMMSE 10–20, n/N (%)	10/33 (30.3)
Severe cognitive impairment, sMMSE <10, n/N (%)	2/33 (6.1)
RUDAS <22, n/N (%)	12/65 (18.5)
CIRS mean number of co-morbidities, n	7.3
Opioid use, n/N (%)	117/203 (57.6)
Antidepressants, n/N (%)	89/203 (43.8)
Anticonvulsants, n/N (%)	73/203 (36.0)
Number of medications, mean (SD)	10.5 (4.88)

CFS = Clinical Frailty Scale; RUDAS = Rowland Universal Dementia Assessment Scale; CIRS = Cumulative Illness Rating Scale; SD = standard deviation.

On the Clinical Frailty Scale, 84.1% of PCOP patients were considered frail. The majority (52%) rated as vulnerable or mildly frail with Clinical Frailty Scale scores of 4 or 5; 25% rated as moderately frail with a score of 6.

Equivalent data on cognition, comorbidity, and frailty measures were not available for patients seen at AU/NZ services participating in ePPOC.

In the PCOP cohort, the average duration of pain was 185.2 months (standard deviation 185.8, range 3–840). Pain lasting longer than 5 years was present in 72.6% of PCOP patients. Patients reported pain in an average of four pain sites. BPI average pain intensity and BPI pain interference scores were similar for the PCOP and ePPOC databases. See Tables 2 and 3.

PCOP Treatment Outcomes

In the 65- to 74-year-old cohort, the mean difference in BPI average pain scores before and after treatment was significant at –1.7 (95% confidence interval [CI]: –2.5 to –0.9; $t(28) = 4.10$; $P < .001$). In those 75 years of age or older, there was a significant mean reduction in BPI average pain of –1.3 (95% CI: –1.8 to –0.8; $t(97) = 5.1$; $P < 0.001$). See Table 2.

Significant reductions in mean BPI pain interference scores were also achieved. In the 65- to 74-year-old group, there was a reduction of –2.8 (95% CI: –3.9 to −1.7; $t(28) = 5.0$; $P < 0.001$). In those 75 years of age or older, there was a reduction of –1.7 (95% CI: –2.3 to −1.1; $t(92) = 5.6$; $P < 0.001$). See Table 3.

Table 2. BPI Pain intensity scores for average pain (single domain), before and after treatment, by age group

			BPI Average Pain (Single Domain)		
Age, years	Database	Patients, n (%)	Before Treatment, Mean (SD)	After Treatment, Mean (SD)	Change, Mean (SD) [95% CI]
All adults	ePPOC	5,199 (100%)	5.7 (1.8)	4.6 (2.1)	–1.1 (1.9) [–1.2 to –1.1]
	PCOP	132 (100%)	5.8 (1.7)	4.5 (2.2)	–1.3 (2.5) [–1.7 to –0.9]
65–74	ePPOC	402 (8%)	5.8 (1.8)	4.5 (2.3)	–1.3 (2.2) [–1.5 to –1.1]
	PCOP	29 (22%)	5.6 (1.8)	3.9 (1.7)	–1.7 (2.3) [–2.5 to –0.9]
≥75	ePPOC	145 (3%)	5.9 (1.9)	4.8 (2.2)	–1.1 (2.1) [–1.4 to –0.8]
	PCOP	98 (74%)	5.9 (1.7)	4.6 (2.2)	–1.3 (2.5) [–1.8 to –0.8]

SD = standard deviation.

Table 3. BPI pain interference scores for general activity (single domain), before and after treatment, by age group

			BPI General Activity (Single Domain)		
Age, years	Database	Patients, n (%)	Before Treatment, Mean (SD)	After Treatment, Mean (SD)	Change, Mean (SD) [95% CI]
All adults	ePPOC	5,229 (100%)	7.0 (2.2)	5.2 (2.7)	–1.8 (N/A)
	PCOP	127 (100%)	6.7 (2.6)	4.7 (2.7)	–2.0 (3.0) [–2.5 to –1.5]
65–74	ePPOC	411 (8%)	6.7 (2.3)	4.6 (2.8)	–2.1 (N/A)
	PCOP	29 (23%)	6.9 (2.4)	4.1 (2.4)	–2.8 (3.0) [–3.9 to –1.7]
≥75	ePPOC	149 (3%)	6.3 (2.5)	5.0 (2.9)	–1.3 (N/A)
	PCOP	93 (73%)	6.6 (2.7)	4.8 (2.8)	–1.7 (3.0) [–2.3 to –1.1]

SD = standard deviation.

After the intervention, clinically meaningful improvement in BPI average pain scores was calculated for those with baseline scores ≥5 (n = 104). Clinically meaningful improvement occurred in 63% of PCOP patients 65–74 years of age and in 46% of PCOP patients 75 years of age or older. This met the national benchmark of 40% for those attending other AU/NZ services reporting to ePPOC. See Table 4.

Clinically meaningful improvement in BPI pain interference was calculated in PCOP patients with baseline pain scores ≥5 (n = 127). Clinically meaningful improvement occurred in 69% of PCOP patients in the 65- to 74-year-old cohort and in 66% of PCOP patients in the ≥75-year-old group. This was comparable to the national benchmarks of 71% and 65% of AU/NZ patients in the respective age groups. See Table 5.

Discussion

Patients 65 years of age or older represent 15% of all attendees of mainstream pain services in Australia and New Zealand, which is directly proportional to the population; however, given the increased prevalence of chronic pain in older people, this might be an underrepresentation of need. Nevertheless, these data do not support the findings of now dated studies that older age is an absolute barrier to attending a pain clinic.

People ≥75 years of age achieved outcomes similar to those of people <75 years of age, including patients with complex age-related conditions such as multimorbidity, polypharmacy, frailty, and cognitive impairment. The improvements in the PCOP patients were on the same order of magnitude as in the younger and less frail patients attending other AU/NZ services reporting to ePPOC. The results are likely to be meaningful to the individual.

Comprehensive geriatric assessment [21] has been demonstrated to produce better outcomes than usual care for selected older individuals in various disciplines, such as orthogeriatrics [22], perioperative care [23], and oncology [24], and it has now been successfully integrated into a chronic pain clinic. Given the aging of the population, there appears to be a greater need for specialist pain services, combining the practices of pain medicine with geriatric medicine.

Compared with the existing literature, this study is unique in describing a population with advanced age and a severe degree of multimorbidity, cognitive impairment, and frailty. Previous studies have been of short duration (≤12 weeks), had limited cultural diversity in study populations, and included only those <75 years of age without major comorbidities [25]. In contrast, we present the results of all patients attending the PCOP who had initial and follow-up data. On average, our reassessment took place after 19 weeks, which speaks to the durability of response.

Limitations

Failure to return after initial assessment is a frequent problem in pain clinics. It is a limitation of this study, raising the possibility of selection bias. No conclusions

Table 4. Frequency of clinically meaningful change in BPI pain intensity by age group

		Patients Achieving a Clinically Important Improvement in BPI Average Pain, % (n)			
Age, years	Database	None (<10%)	Minimal (10–29%)	Moderate (30–49%)	Substantial (≥50%)
All adults	ePPOC	37% (1,477)	30% (1185)	15% (588)	18% (724)
	PCOP	31% (32)	20% (21)	23% (24)	26% (27)
65–74	ePPOC	33% (105)	27% (86)	18% (57)	22% (69)
	PCOP	21% (4)	16% (3)	42% (8)	21% (4)
≥75	ePPOC	30% (34)	30% (35)	20% (23)	20% (23)
	PCOP	33% (26)	22% (17)	18% (14)	28% (22)

Table 5. Frequency of clinically meaningful change in BPI pain interference by age group

	Database	
Age, years	ePPOC, % (n/N)	PCOP, % (n/N)
All adults >18	69% (3,110/4,520)	67% (85/127)
65–74	71% (243/344)	69% (20/29)
≥75	65% (75/116)	66% (61/93)

can be drawn about the outcomes of patients who did not return. Our attrition rate of 35% compares favorably to other pain clinics across AU/NZ (quoted as up to 80–90% at many centers reporting to ePPOC) [26]. Not all available data were directly comparable between the PCOP and ePPOC, although the present study has resulted in greater alignment of the PCOP dataset with the ePPOC. This study focused on only two items of the BPI, and other relevant outcomes on the BPI, such as mood, walking ability, and sleep, were not examined and would be salient in the design of future studies. Compliance with recommendations was not assessed across both cohorts. Evaluation was unblinded, which introduces risk of bias.

Although the highest level of evidence for benefit from a treatment comes from randomized control trials, pain clinics are not conducive to these trials because of the heterogenous nature of patients and the individualized interventions that are offered. As there was no control group for the intervention, we cannot draw conclusions about the exact role of the CGA in determining the outcomes. Furthermore, there was no adjustment for confounders such as sex, race, education level, level of social support, or pain type.

The clients in the PCOP might not generalizable to or representative of all older people with chronic pain, such as those at the extremes of cognitive impairment and frailty or those in aged care facilities. It would be important to assess the reproducibility of these results in other pain clinics designed for older people.

Conclusion

The aging of the population will result in greater demand for specialist pain services that meet the needs of an older and frailer population with age-related health issues. The presence of advanced age, cognitive impairment, frailty, and multimorbidity was not a barrier to achieving significant and meaningful improvements in a multidisciplinary pain clinic designed for older people.

Acknowledgments

We acknowledge the ePPOC at the University of Wollongong for ongoing guidance and for making the ePPOC data available.

References

1. Gilmartin-Thomas JF, Ernst ME, et al.; ASPREE Investigators. Musculoskeletal pain experienced on most days is a common accompaniment of ageing amongst community-dwelling older Australians: A questionnaire-based study. J Aging Health 2021; 33(1–2):39–47.
2. Abdulla A, Bone M, Adams N, et al. Evidence-based clinical practice guidelines on management of pain in older people. Age Ageing 2013;42(2):151–3.
3. Patel KV, Guralnik JM, Dansie EJ, Turk DC. Prevalence and impact of pain among older adults in the United States: Findings from the 2011 National Health and Aging Trends Study. Pain 2013;154(12):2649–57.
4. Flor H, Fydrich T, Turk DC. Efficacy of multidisciplinary pain treatment centers: A meta-analytic review. Pain 1992;49(2):221–30.
5. Reid MC, Eccleston C, Pillemer K. Management of chronic pain in older adults. BMJ 2015;350:h532.
6. Cutler RB, Fishbain DA, Rosomoff RS, Rosomoff HL. Outcomes in treatment of pain in geriatric and younger age groups. Arch Phys Med Rehabil 1994;75(4):457–64.
7. Mailis-Gagnon A, Nicholson K, Yegneswaran B, Zurowski M. Pain characteristics of adults 65 years of age and older referred to a tertiary care pain clinic. Pain Res Manag J Can Pain Soc 2008;13(5):389–94.
8. Liberman O, Freud T, Peleg R, Keren A, Press Y. Chronic pain and geriatric syndromes in community-dwelling patients aged ≥65 years. J Pain Res 2018;11:1171–80.
9. Kee WG, Middaugh SJ, Redpath S, Hargadon R. Age as a factor in admission to chronic pain rehabilitation. Clin J Pain 1998;14 (2):121–8.
10. Tardif H, Arnold C, Hayes C, Eagar K. Establishment of the Australasian electronic Persistent Pain Outcomes Collaboration. Pain Med 2017;18(6):1007–18.
11. Sluka K, Turner J, Collett B, et al. Pain Treatment Services—IASP. Available at: https://www.iasp-pain.org/Education/Content.aspx?ItemNumber=1381. Accessed January 4, 2020.

12. Stuck AE, Siu AL, Wieland GD, Rubenstein LZ, Adams J. Comprehensive geriatric assessment: A meta-analysis of controlled trials. Lancet 1993;342(8878):1032–6.
13. Austrian JS, Kerns RD, Reid MC. Perceived barriers to trying self-management approaches for chronic pain in older persons. J Am Geriatr Soc 2005;53(5):856–61.
14. Rockwood K, Song X, MacKnight C, et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173 (5):489–95.
15. Molloy DW, Standish TI. A guide to the standardized Mini-Mental State Examination. Int Psychogeriatr 1997;9(Suppl 1):87–94. Discussion 143–50.
16. O'Bryant SE, Humphreys JD, Smith GE, et al. Detecting dementia with the Mini-Mental State Examination (MMSE) in highly educated individuals. Arch Neurol 2008;65(7):963–7.
17. Storey JE, Rowland JTJ, Basic D, Conforti DA, Dickson HG. The Rowland Universal Dementia Assessment Scale (RUDAS): A multicultural cognitive assessment scale. Int Psychogeriatr 2004; 16(1):13–31.
18. Linn BS, Linn MW, Gurel L. Cumulative Illness Rating Scale. J Am Geriatr Soc 1968;16(5):622–6.
19. Dworkin RH, Turk DC, Wyrwich KW, et al. Interpreting the clinical importance of treatment outcomes in chronic pain clinical trials: IMMPACT recommendations. J Pain 2008;9(2):105–21.
20. Blanchard M, Bryce M, White J, et al. Patient Outcomes in Pain Management: Enterprise One Paediatric Pain Management Service, 2018 Annual report for 1 January to 31 December 2018 (electronic Persistent Pain Outcomes Collaboration, Australian Health Services Research Institute, University of Wollongong, 2019).
21. Stuck AE, Egger M, Hammer A, Minder CE, Beck JC. Home visits to prevent nursing home admission and functional decline in elderly people: Systematic review and meta-regression analysis. JAMA 2002;287(8):1022–8.
22. Fisher AA, Davis MW, Rubenach SE, et al. Outcomes for older patients with hip fractures: The impact of orthopedic and geriatric medicine cocare. J Orthop Trauma 2006;20(3):172–8. discussion 179–80.
23. Partridge J, Sbai M, Dhesi J. Proactive care of older people undergoing surgery. Aging Clin Exp Res 2018;30(3):253–7.
24. Extermann M, Aapro M, Bernabei R et al.; Task Force on CGA of the International Society of Geriatric Oncology. Use of comprehensive geriatric assessment in older cancer patients: Recommendations from the task force on CGA of the International Society of Geriatric Oncology (SIOG). Crit Rev Oncol Hematol 2005;55(3):241–52.
25. Reid MC, Eccleston C, Pillemer K. Management of chronic pain in older adults. BMJ 2015;350:h532.
26. Colyer S. Pain services effective, but high drop-out rate concerns. Med J Austr InSight+ 2021;(15). Available at: https://insightplus.mja.com.au/2021/15/pain-services-effective-but-high-drop-out-rate-concerns/. Accessed June 22, 2022.