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Improving adherence to guidelines for spine pain care: what tools could support primary care clinicians in conforming to guidelines?

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ABSTRACT

Background Spine pain is one of the most common conditions seen in primary care and is often treated with ineffective, aggressive interventions, such as prescription pain medications, imagery and referrals to surgery. Aggressive treatments are associated with negative side effects and high costs while conservative care has lower risks and costs and equivalent or better outcomes. Despite multiple well-publicised treatment guidelines and educational efforts recommending conservative care, primary care clinicians (PCCs) widely continue to prescribe aggressive, low-value care for spine pain.

Methods In this qualitative study semistructured interviews were conducted with PCCs treating spine pain patients to learn what prevents clinicians from following guidelines and what tools or support could promote conservative care. Interviews were conducted by telephone, transcribed and coded for thematic analysis.

Results Forty PCCs in academic and private practice were interviewed. Key reflections included that while familiar with guidelines recommending conservative treatment, they did not find guidelines useful or relevant to care decisions for individual patients. They believed that there is an insufficient body of real-world evidence supporting positive outcomes for conservative care and guidance recommendations. They indicated that spine pain patients frequently request aggressive care. These requests, combined with the PCCs' commitment to reaching shared treatment decisions with patients, formed a key reason for pursuing aggressive care. PCCs reported not being familiar with risk-screening tools for spine patients but indicated that such screens might increase their confidence to recommend conservative care to low-risk patients.

Conclusions PCCs may be more willing to give conservative, guideline-consistent care for spine pain if they had tools to assist in making patient-specific evaluations and in countering requests for unneeded aggressive care. Such tools would include both patient risk screens and shared decision-making aids that include elements for resolving patient demands for inappropriate care.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Continuing low rates of adherence to clinical practice guidelines' recommendations for conservative care for spine pain patients are well documented. Similarly, the high costs of unneeded aggressive care for spine pain and the association of that aggressive care with poor outcomes and complications are also well established.

WHAT THIS STUDY ADDSWHAT THIS STUDY ADDS

⇒ This study adds primary care clinicians' (PCC) views, drawn from semistructured interviews, that despite being fully aware of spine pain guidelines they see those guidelines as too rigid to apply to individual patients and would be more likely to follow guidelines if patient-specific tools were available to evaluate and communicate with patients about benefits of conservative care.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ This study offers specific suggestions for supports that PCCs indicate would assist them in giving the conservative care recommended by guidelines for spine pain. More broadly, we suggest that clinical practice guidelines could avoid being dismissed as too rigid if they included suggestions for tools—such as brief screens and shared decision-making aids—that could be used in implementing their recommendations.

INTRODUCTION

Spine pain is one of the most common and costly complaints seen in US primary care, accounting for approximately $134.5 billion in health spending in 2016.[1 2] As much as 60% or $80 billion of this care is low value—involving unnecessary prescription pain medications, early imaging and referrals to surgery—and counter to guidelines for acute spine care.[3 4] Multiple US and international clinical guidelines recommend 'conservative' or 'high value' care such as coaching, physical therapy (PT), reassurance, advice to remain physically active and use non-pharmaceutical pain relief such as heat and massage.[5 6] Such guidelines are supported by initiatives such

as JAMA Internal Medicine's *Less is More Series* and the American Board of Internal Medicine's *Choosing Wisely Campaign*.[7 8] Despite these efforts, aggressive, low-value interventions for spine pain and uncomplicated low back pain (LBP) continue to be widely used and to lead to complications and poor outcomes.[3 9 10] Most aggressive care for spine pain is initiated in patients' visits to a primary care clinician (PCC).[11] Encouraging PCCs' use of conservative care could, therefore, both save costs and reduce negative outcomes and disability.

PCCs' use of low-value aggressive care has been attributed to factors such as pressure from patients for tests and procedures to relieve their discomfort, clinicians' concerns about patient dissatisfaction, insufficient visit time and fear of litigation from patients.[12–15] Other key barriers include clinicians' unfamiliarity with or resistance to the proliferation of guidelines directed at primary care.[3 7 11 16]

There is considerably less research into what tools can help PCCs overcome such barriers. This study conducted interviews with PCCs to ask what most impedes conservative, high-value care, what supports could help them overcome those barriers, and their views concerning attempts to move practice patterns towards more conservative care.

METHODS

Design

This was a qualitative study based on in-depth, semistructured interviews with 40 practising PCCs. These interviews were conducted to support the design of a randomised trial still in progress that compares patient-reported outcomes for alternative models of spine pain care.

Participants

We recruited 40 PCCs using two criteria: currently in full-time primary care practice; and seeing at least four spine pain patients per week. A professional recruiting agency identified eligible clinicians drawing from a cross section of US geographic regions, academic and private practice, rural, suburban and urban locations, and licensure (medical doctor, doctor of osteopathy or nurse practitioner). Institutional Review Board review was not requested because interviews were exclusively with clinicians, concerned only their expert opinions about prevailing treatment selection considerations and collected no individual patient information.

Data collection

A semistructured interview guide was developed asking what barriers to conservative care respondents encountered, what tools or guidelines they used in making treatment decisions and what might help them to select conservative care. A draft version of the interview guide was piloted with 10 PCCs after which further prompts were added concerning support tools that could assist in selecting care. The final version of the interview guide was then used in telephone interviews with 40 PCCs. These interviews were conducted one on one by telephone by a single PhD research interviewer who was otherwise unknown to the participants. She confirmed that participants met criteria and consented to the interview and to its recording. Interviews lasted 55–65 min. Participants were asked at the end of each interview if they wanted to add any additional comments or amend any views they had expressed. They were also sent a draft report of interview findings and invited to comment. Participants were paid an honorarium of $100.00.

Patient and public involvement

Background work to support development of the interview guide included two pilots that surveyed spine pain patients referred to conservative care for their perceptions of their PCC's treatment decisions and for their willingness to accept and adhere to conservative care.

Analysis

Interviews were recorded, transcribed verbatim, and the transcripts analysed using Dedoose software (V.8.3.10), a qualitative analysis software program that identifies and codes concepts. A lead coder developed the initial coding set, and a second coded a sample of 20 interview transcripts. The sample was found to have a 93% agreement with the content occurrences of the lead coder. Coding concepts were organised by themes and subthemes and frequencies were noted. Concept data saturation was assessed as the interviews proceeded: at the 14th interview 76% of concepts had been identified and by the 27th interview 95% of concepts had been identified.

RESULTS

Profiles of the 40 PCCs recruited and interviewed for this study are presented in table 1.

Four key themes, described below, were found in the analysis of the interview transcripts. A summary of themes can be found in table 2.

Clinical guideline recommendations too general to guide treatment decisions

Most of the PCCs (29 of the 40 or 73%) reported that they were generally aware of guideline recommendations for conservative care of spine pain but were not influenced by them in making treatment decisions. Participants saw guidelines as too general to be applied to individual patients. One internist stated, '*The guidelines are just not flexible enough for these spine patients. No two of them are alike. I have to use my judgement and experience in selecting treatment for them*'. Another stated, '*I think we have an algorithm for when to do an MRI of the spine. I glanced at that once, but usually I just use my gut … to decide. I know I should follow algorithms, but sometimes just judgement is a good thing*'.

Research evidence for low-intensity care is not clear and not convincing

The clinicians were also uncertain that sufficient evidence supports conservative care recommendations. While some (24 of the 40 or 60%) indicated conservative care might

Table 1 Characteristics of PCC interviewees

Characteristic	n (%)
Provider type	
Medical doctor (MD)	28 (70)
Doctor of osteopathy (DO)	3 (9)
Nurse practitioner (NP)	9 (23)
Total number interviewed	40
Clinician specialty (physicians only)	
Family medicine	10 (25)
Internal medicine	21 (53)
Years in practice: average (range)	17 (4–32)
Practice type	
Community clinic	1 (3)
Outpatient clinic	14 (35)
Private practice	16 (40)
University health services	9 (23)
Regional location of practice	
New England	9 (23)
Mid-Atlantic	4 (10)
Midwest	5 (13)
Southeast	13 (33)
West	9 (23)
Practice location	
Urban	17 (43)
Suburban	19 (48)
Rural	4 (10)
Number of spine pain patients seen per week	
4–9	15 (38)
10–19	14 (35)
20–39	7 (18)
>39	4 (10)

PCC, primary care clinician.

Table 2 Summary of themes

Theme: PCC views	Subthemes
Guideline recommendations for conservative care of spine pain	Aware of guideline recommendations
	Guidelines too rigid and categorical to guide individual patient treatment decisions
	Examination and patient reports and clinician's instinct more influential than guidelines
Strength of research supporting guideline recommendations	Scepticism that strong real-world evidence supports guideline recommendations for conservative care
	Particular concern regarding lack of sufficient long-term outcomes
	Would find useful to have long-term outcome study findings for conservative care
Patient risk assessment tools	Do not use risk assessment tools
	Little awareness that well-validated tools are available
	Would find useful screener that can confirm patient at low risk for chronic condition
Patient requests for aggressive care	Spine pain patients believed to frequently request aggressive treatments
	Value placed on reaching joint decisions with patients

PCC, primary care clinician.

have some evidence of positive short-term outcomes, there was more concern about lack of evidence from real-world studies for long-term outcomes. An internist suggested *'long-term there is almost no difference whatsoever… other than related to secondary financial gain or medical legal issues*'. A family practitioner commented that *'aggressive treatment may get them to pain relief sooner and beyond that we just don't know*'.

PCCs indicated that real-world outcome evidence could help them to persuade patients to accept conservative care. One family practitioner stated, '*if there was a study that would show it doesn't really make a difference, if you go through all these tests and studies and take all these medicines, and you end up the same way… then that would probably be beneficial*'. An internist commented that '*it would be useful to have… some evidence-based scientific paper on back or neck pain long-term outcomes that I could quote to patients*'.

Clinicians do not use assessment tools to identify patients appropriate for conservative care

A majority (27 of 40 or 68%) of the PCCs reported not using spine patient risk assessment screens and were unaware that there were screeners to identify patients at risk of progression to chronic spine pain. One family practitioner, when asked if she used a risk assessment tool, replied, '*I use an opiate risk tool to assess the risk of developing dependence, but I'm not aware of a risk tool for assessing whether they're likely to develop chronic pain… that could be useful in both evaluating and explaining conservative treatment to a patient*'. An internist commented, '*I find it useful to ask the patient if this has been a reoccurring condition and how many times—that's my only risk assessment*'.

Clinicians concede to patient requests for aggressive care

A majority (25 of 40 or 63%) of the PCCs reported that a key barrier to conservative care is spine pain patients' expectations that they should be treated with aggressive care. The most common patient request (by 25 of the 40 PCCs or 73%) was for prescription pain medications. One internist observed '*over-the-counter medicines are … not very welcome by patients… If I tell them…you don't need a*

prescription… they are pretty unhappy and think this has been a huge waste of their time'. The second most common request was for MRIs (reported by 24 of the 40 or 60%). One nurse practitioner commented, '*there is a lot of pressure from these patients to do MRIs, to be very aggressive*'.

Participants offered descriptors of spine patients requesting aggressive care. These included '*demanding and anxious*', '*having had high-intensity care previously*', '*lacking time for low intensity treatments like PT*', having '*low coping skills*' and having '*multiple comorbidities*'. These patients were viewed as best managed by giving them the aggressive care they requested. An internist suggested '*people who are anxious or stressed … aren't willing and aren't able to learn from our interaction*'. A family practitioner commented, *'if after I explain the recommended conservative approach, patients are still insistent on aggressive care, I usually comply with their requests*'. And another explained, '*I am not someone who absolutely wouldn't order a study because it's unlikely to be medically helpful. I do order them because it's what's going to make patients be more accepting of their condition and that helps them recover too*'.

The PCCs all expressed commitment to reaching agreement with patients on treatments. They reported consistently asking spine patients' views on treatment options. Involving patients in treatment selection was described as necessary to obtain compliance with prescribed care. One internist explained, *'If the patient doesn't accept the treatment, they won't follow it. I ask them for their treatment preferences… we have to take that into consideration… it's their decision*'.

DISCUSSION

Much of the literature suggests that PCCs are generally unaware of guideline recommendations.[17 18] Our participants, however, stated that they were generally aware of guideline recommendations for conservative care. But while they were aware of the guidelines, some of their views—such as belief that there is no long-term outcome research supporting conservative care recommendations and their lack of awareness of patient risk stratification tools—indicated a lack of understanding of the guidelines or less than full familiarity with them. The PCCs' willingness to dismiss the guidelines as too general and too rigid to be useful in selecting care for individual patients, as not supported by long-term research, and their lack of knowledge of patient risk stratification tools must be interpreted as indications of either lack of attention to and/or lack of education in established best practice standards and tools.

The PCCs preferred relying on their experience and skill to assess patients' history, complaints and preferences rather than guidelines in reaching treatment decisions or in explaining them to patients. This is consistent with findings from a systemic review of studies concerning barriers to adherence to LBP guidelines that documented views that guidelines 'constrain clinical practice' and are difficult to apply to individual patients.[11]

Our interviewees described the current body of evidence for conservative care as insufficient and particularly cited the lack of direct comparisons between aggressive and conservative care for long-term outcomes. There is, however, published real-world evidence supporting conservative care guidelines for spine pain such as the National Institute for Health and Care Excellence guidance for LBP and sciatica, the Dartmouth Medical School's Spine Patient Outcomes Research Trial (SPORT) study.[19] This would indicate either a lack of familiarity with evidence supporting guidelines and/or a reluctance to accept and apply these findings to their care of spine pain patients.

A tool that could help PCCs follow guidelines would be a spine pain risk assessment screen. One of the best validated of these is the STarT Back tool, a brief, nine-item questionnaire that identifies spine pain patients at risk of poor functional outcomes.[3] Roughly 90% of spine pain patients screen at low risk and appropriate for conservative care. This tool is available without fee online. Yet, none of our PCCs indicated using a validated screening tool, giving reasons such as being unaware of such screens, not having them or insufficient time to use them. This suggests that making screens such as the STarT Back available in clinical practice and emphasising their brief administration time may facilitate following guidelines. Risk assessment tools for other chronic conditions have been well accepted in primary care, especially when the tool can be embedded in an electronic medical record.[20]

The PCCs indicated that while they often initially suggest conservative care, they do not insist if patients request aggressive care. Patient demands for aggressive care have been well documented and were reconfirmed in our interviews. Our participants, however, further explained this barrier by noting the importance of reaching joint treatment decisions with patients. Shared decision-making was viewed both as a cultural norm that is key to patient-centric care and as needed to obtain patient adherence. Reaching a treatment decision with patient agreement was seen as more important than concordance with guidelines.

PCCs' commitment to shared decision-making could be used to support guidelines by offering shared decision-making tools that include elements to help clinicians navigate patients' requests for unneeded aggressive care. While multiple shared decision-making tools for spine pain are available, their components do not include resolving patient requests for inappropriate aggressive care.[21] These tools would be more effective in supporting PCCs in giving conservative care if they could help resolve patient requests for counterindicated care. Such shared decision-making tools would require research beyond the scope of this study into the views of patients who ask for aggressive care and what approaches would be most effective in persuading them to accept conservative care.

Limitations

There are several limitations to this study. We did not have access to medical records of our PCCs' patients and could not independently verify their reported patterns of care for acute spine patients. Our sample of 40 PCCs included internists, family practitioners, nurse practitioners and doctors of osteopathy, but the number of interviews did not permit us to make comparisons among licensure groups. Nor could we determine how representative their views were of PCCs in general.

There may also be bias in our sample towards commercially funded fee for service insurance care over capitated managed care. While we describe our PCCs' practice types, we did not collect the insurance mix of their patients. It is possible that if we had been able to recruit from closed, managed care systems, we would have collected different PCC views.

CONCLUSIONS

This study addresses from the provider viewpoint the barriers between guideline recommendations and their implementation in clinical practice. Our interviews with PCCs who frequently treat spine pain suggest that guideline recommendations for conservative care are frequently not followed for two main reasons: PCCs' perception of inadequate evidence of long-term outcomes for the conservative care; and PCCs' perception that they have few viable alternatives to acceding to patient requests for counterguideline aggressive care. Guidelines were easily dismissed by PCCs as too categorical to apply to individual patients. To avoid such dismissals—especially likely when patients request counter-recommendation care—two efforts are needed. First, research is needed into how to make PCCs more aware of the existing real-world evidence that supports guidelines for conservative care. Second, stronger efforts are needed to encourage PCCs to use existing risk stratification tools that identify the large majority of patients appropriate for conservative care.

Spine patient risk stratification tools are currently available. As noted above, one of the best validated, the STarT Back, is available free online and identifies patients at low risk and appropriate for conservative care (roughly 90% of patients) and those at high risk for chronic pain.[22 23]

A shared decision-making tool that addresses patient requests for counter-recommended care, is not currently available but such a section could be added to one of the existing spine pain shared decision-making tools. In the interest of achieving higher PCC adherence to spine pain guidelines, steps should be taken to both make the screener tools available to PCCs and to develop a shared decision-making tool that includes a segment concerning response to patient requests for counterindicated care.

Addressing the broader issue of general guideline compliance in clinical care, our subject of spine pain care may elicit particularly emphatic views from PCCs because they see this condition so frequently and because these patients' discomfort leads to demands for aggressive, counter-recommended care. Our findings concerning spine pain may be more pronounced than the views that would be collected in interviews concerning a less common condition or patients in less discomfort. However, it seems likely that guidelines for other conditions would also benefit from stipulating what decision tools are available to help PCCs implement the recommendations. Guideline authors should consider including in their recommendations mention of tools appropriate for use in implementation steps such as evaluating patients and/or making treatment selections with patients. They should also consider taking supporting steps to broadly disseminate research and the availability of tools to support implementation of their recommendations.

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Competing interests None declared.

Patient and public involvement Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants. This study did not collect any patient data, descriptors, survey or interview responses. Clinician experts were interviewed. The Stanford University IRB does not conduct IRB reviews for clinician interviews concerning patterns of care and clinical decision and no patient information or identifications are included. Participants gave informed consent to participate in the study before taking part.

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