Supplementary Data

Supplementary Table S1. Individual Responses from 72 Primary Care Providers on Their Initial Management Plan for Acute/Subacute and Chronic Low Back Pain

Participant	*Familiar with ACP Y/N*	*Comfort with NPT Y/N*	*Initial recommendation for management of LBP*	
			Acute/Subacute	*Chronic*
Clinic A				
A-1	Y	N	I tell patients to use an OTC NSAID if the pain is bad. I encourage them to not just sit around as the lack of mobility can worsen their pain.	The first thing I try is a trial at rehab [physical therapy], I give them at least a month to try and improve before I'll try an additional therapeutic. The back takes time to heal and strengthen, so you have to give it some time.
A-2	Y	Y	I try Motrin first. Sometimes I'll have them try naproxen if it is more significant pain.	I send the majority of my patients to evaluation by PM&R [physiatrist]. This optimizes their exercise and gives them a change to recover. I have some patients that have bad pain and have strong desire to trial steroids, for which I sometimes will trial injections.
A-3	Y	N	Daily heat packs and PRN NSAIDs. Stay active and nonsedentary.	My first step is usually rehab [physical therapy] and daily exercise.
A-4	n/a			
A-5	Y	Y	Aspirin is usually a good first step. Up and out of bed.	We tend to send nearly all of our patients to rehab [physical therapy] initially. If that fails, then will try stepwise approach of NSAIDs, then steroid injections if persistent.
A-6	n/a			
A-7	Y	Y	Aspirin.	I usually will try Flexeril first to try and relax the back.
A-8	Y	Y	I initially will suggest heat to the local area and continued activity (even if it hurts).	Nonpharmacologic therapies are the preferred option. Things like continued activity, assessment by PM&R [physiatrist], and acupuncture. If those fail, I will try muscle relaxant, then steroid injections if really debilitating.
A-9	n/a			
A-10	N	Y	Motrin is my usual go-to.	I don't know if there is a right approach, but my only rule is no opioids. However, in terms of what I usually start with, probably muscle relaxant first.
A-11	Y	Y	I take a staged approach—I have patients try a mix of heat packs and nonsedentary activity levels. If they are still having pain, then I have them try NSAIDs mostly so they are able to tolerate ambulation. Lastly, I will write them for Flexeril if they are having significant pain.	I think the right approach is to give patients a chance to improve without medicines. This typically means referral to rehab [physical therapy]. However, if they are having pain, people tend to not do as well with rehab, so most patients leave my office with referral to rehab and a Flexeril prescription.
A-12	Y	Y	A mix of Advil, heat, and continued ambulation/activity. I just caution them not to be more active then they typically are, that they should not regress in terms of amount of walking and moving around.	I have had a fair amount of success with rehab [physical therapy], yoga, and exercise. That is my typically first approach.
A-13	Y	N	I stress the importance of a continued active lifestyle and either muscle relaxant or OTC NSAIDs. I typically reserve the muscle relaxant for patients who are really pushing for a prescription.	Usually at this point the pain in significant, thus I try rehab [physical therapy] first, but I [also] usually refer patients to pain specialist. I do not prescribe opioids.
A-14	Y	Y	I have patents try Motrin and continued activity.	Muscle relaxant.

(*continued*)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP	
			Acute/Subacute	*Chronic*
A-15	Y	Y	I tell my patients to try local heat three times a day with intermittent aspirin throughout the day for the first couple days after the initial injury. The goal is pain control of course but also to maintain the ability to move around to the back doesn't lock up due to laying around all day.	PM&R [physiatrist].
A-16	Y	N	Motrin.	I refer patients to a pain specialist. A lot of Drs. will do physical therapy and exercise first, but if pain isn't controlled, people tend to not to fully participate in physical rehabilitation [physical therapy].
A-17	Y	Y	Heat packs are what I suggest first and I stress not letting the pain limit their ambulation. You would be surprised the effects of walking in prevent the back from further tightening up.	Muscle relaxant.
A-18	Y	N	I usually will try PRN OTC Motrin or muscle relaxant.	I think the most important thing is to optimize the lower back. This usually means strengthening for the surrounding MSK system. I have patients work on strength and continued exercise first.
A-19	N	Y	I encourage patients to stay active, use heat packs, and use aspirin for pain flares.	I think Flexeril works pretty well and it gives patients a chance to get stronger. There isn't really a right answer of how to approach these patients as long as opioids are not involved.
A-20	Y	Y	Motrin.	There are many different ways to approach chronic back pain. It all depends on the individual patient and examination. There are a whole range of options such as rehab [physical therapy], exercise, yoga, mindfulness, Tai Chi, chiropractor care. I do not really have a preferred approach but I discuss it with the patient and make a shared decision.
A-21	N	Y	NSAIDs and continued normal levels of activity.	Rehab [physical therapy] and exercise. I make sure to give them enough time to have a possible improvement ($\sim$1 month minimum). Then I reassess. I avoid opioids.
A-22	N	N	I suggest over-the-counter Aspirin or Motrin because patients usually want a medicine. I tell all my patients the biggest component of recovery is to continue to ambulate. Sitting around all day makes the back lock up and worsens pain.	I think it is really crucial to get patients plugged into rehab [physical therapy] for targeted exercises and strengthening. If the pain is debilitating then steroid injection.
A-23	Y	Y	I typically will write a prescription for Motrin 800 mg PRN and emphasis on the importance of not regressing in terms of physical motion.	Physical therapy and muscle relaxant.
A-24	n/a			
A-25	Y	Y	NSAID are a good first option that I try. Can also do muscle relaxant—depends on the patient's preference and description of the pain onset. I tell all patients to continue moving around.	Rehab [physical therapy] and exercise are really the first-line therapy for chronic back pain. I start there.

(*continued*)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP	
			Acute/Subacute	*Chronic*
A-26	N	N	First, I have patients try a mix of activity and heat. If they are still having pain, or it worsens, then I typically suggest PRN aspirin.	Rehab [physical therapy] and exercise.
A-27	Y	Y	I have patients do a combination of Advil, activity, and local heat.	Exercise and Flexeril. The relaxant mainly to allow for activity, which is what you are hoping drives the stability of LBP.
A-28	Y	Y	I usually suggest aspirin or Motrin plus or minus Flexeril if there back feels tight. Regardless, I want them ambulating and stretching daily.	Rehab [physical therapy], exercise, and steroids [injection] if pain becomes really bad.
A-29	N	N	In terms of medicine, I usually start with Motrin or Flexeril. I also tell all patients that they have to continue being up and about. Exercise and movement go a long way if not overdone.	I tend to like to offer rehab [physical therapy] with exercise as an option. If the patient is open to it, I like to have them see a chiropractor if possible. Chiropractors are really good at getting the history of the lower back MSK based on their examination and imaging. I find it helpful.
Clinic B				
B-1	Y	Y	I typically try to use nonpharmacologic approaches first, such as continued exercise and heat therapy. If that fails, I recommend PRN Advil.	I don't know if there is necessarily one approach to chronic LBP. I try to individualize for patients. I commonly start with rehab [physical therapy] assessment and exercise. But sometimes I will initially refer patients to acupuncture, massage therapy, or yoga depending on their preference. Everything is individualized. JP has a fair amount of yoga, acupuncture, massage practitioners that are quite excellent with back pain.
B-2	Y	N	The goal is really to help the back recover by strengthening support muscles via continued activity and prevent it from locking up. I use a mix of heat, NSAIDs and muscle relaxant.	I find rehab [physical therapy] to be a good place to start. I sometimes will utilize yoga, acupuncture, massage therapy for patients.
B-3	Y	Y	I have patients try PRN Motrin and sometimes Flexeril, with the goal of allowing for consistent ambulation and activity to promote healing.	Rehab [physical therapy], yoga, mindfulness. I try to give patient a chance to improve without medications. However, if pain becomes limiting, then I will trial injections.
B-4	Y	N	I want all of my patients up and about. Sitting around being sedentary only exacerbates the pain. I usually prescribe Flexeril and PRN NSAIDs.	Our clinic tends to have people try to optimize physical maneuvers such as exercise, rehab [physical therapy], massage therapy, and acupuncture. If the pain worsens, then we try injections.
B-5	Y	N	Heat and NSAIDs for pain. Ambulation out of bed for healing.	Patients usually should see PM&R first to try and optimize their anatomy. I usually prescribe them muscle relaxant to help with demand of rehab activity [physical therapy].
B-6	N	N	NSAIDs.	Rehab [physical therapy], exercise, yoga, massage therapy. If the pain is bad, then will try injections if patient desires.
B-7	Y	N	NSAIDs, Flexeril, and no changes in activity level. Avoid lying around for days.	I first try to get people into see rehab [physical therapy] and have at least a month of sessions and home exercises. If that fails will trial PRN NSAIDs.
B-8	Y	N	Aspirin.	Rehab [physical therapy] while imaging is pending (if needed).

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SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP	
			Acute/Subacute	*Chronic*
B-9	Y	N	I typically like to try a combination of muscle relaxant and NSAIDs with the hope of increasing movement.	Rehab [physical therapy], relaxant, and exercise.
B-10	Y	N	NSAIDs, heat, muscle relaxant.	I have a sort of chronic back pain pathway. Everything is individualized of course, but generally, I want patients to see a rehab doctor [PM&R] and have several weeks of targeted exercise. I encourage patients to do participate in acupuncture, yoga, chiropractor care if within their means.
B-11	Y	N	NSAIDs, relaxant, and activity.	Rehab [physical therapy], then referral to pain specialist if no improvement.
B-12	Y	N	Heat, NSAIDs, and activity.	I have had a lot of success with the combination of rehab [physical therapy], exercise, acupuncture, and massage. However, the latter two are often pricey, but if I can, I try to get patients to partake.
B-13	n/a			
B-14	Y	Y	Activity and NSAIDs/muscle relaxant.	My first-line treatment is rehab [physical therapy] and exercise. If the pain doesn't improve and becomes limiting, referral to [pain] specialist. If pain becomes limiting, injection is last line, no opioids.
B-15	Y	Y	Activity and heat. NSAIDs/muscle relaxant if patient really wants.	I think the combination of rehab [physical therapy], targeted exercise, and at least one of the following is a good start: acupuncture, chiropractor, massage.
B-16	Y	N	Activity and NSAIDs.	Activity and rehab [physical therapy].
B-17	Y	N	NSAIDs and activity plus or minus muscle relaxant.	Rehab [physical therapy] and continued activity. No opioids.
B-18	Y	N	Heat, activity, and muscle relaxant or NSAID. I tend to give patients a prescription for a muscle relaxant when they leave the office in order for them to try if NSAIDs are not working.	Muscle relaxant and rehab [physical therapy]. If examination shows dermatomal pattern or signs of compression, will trial gabapentin if kidney function ok and not too elderly.
B-19	Y	Y	Heat and activity, then NSAID if they really need it.	Rehab [physical therapy] and exercise are pretty standard and easy to get patients into. If able and patient agrees, I will often offer massage therapy, acupuncture, yoga, or mindfulness.
B-20	n/a			
B-21	Y	N	I tend to try Advil first.	Rehab [physical therapy], muscle relaxant, and injections if very severe.
B-22	Y	Y	NSAIDs and activity plus or minus muscle relaxant depending on the description of pain.	Rehab [physical therapy] and exercise. I will often introduce the patient to the idea of seeing an acupuncturist or a chiropractor. I am happy to refer if patient is open to it.
B-23	n/a			
B-24	N	N	OTC NSAIDs PRN.	Rehab [physical therapy] and muscle relaxant. Neurontin [gabapentin] for compression. Then if fails at next visit (at least 2 months of adequate therapy) will trial injections.
B-25	Y	Y	I try to tier my interventions: heat and movement first. Then if that fails, NSAIDs/muscle relaxant.	Rehab [physical therapy] is standard of care, but I also education patients about the benefits of massage, yoga, acupuncture for pain relief.

(*continued*)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP: Acute/Subacute	Initial recommendation for management of LBP: Chronic
B-26	N	N	I believe the recommendations are for nonpharmacologic therapy, but I find that heat/activity mixed with NSAIDs or muscle relaxant works better.	First try exercise and rehab [physical therapy], then try NSAIDs or gabapentin if stenotic. Then refer to pain specialist or injections.
B-27	Y	N	I try to stress the importance of staying active and keeping a routine. However, this can be hard due to pain. If the pain worsens, then I tell patients to use PRN NSAIDS or muscle relaxant. I usually prescribe those as PRN during the visit.	Rehab [physical therapy] assessment and continued exercise. Chiropractor referral is often useful as a start.
Clinic C				
C-1	Y	N	I typically start with Motrin as a test trial.	I think the biggest thing is staying active to avoid further decline in back stability. I want all my patients exercising if able and in rehab [physical therapy] if possible. That is a minimum. If patients are having pain that limits their function, I consider local injections.
C-2	Y	N	Well initially I try to give them time to try and recover on their own with just therapeutic therapies (heat) and continued activity as tolerated. If patient strongly desires a medication, I start with OTC NSAIDs. I don't really have a preference for which drug.	I refer them to rehab [physical therapy] for a minimum of a month of work. Then I re-evaluate thereafter.
C-3	Y	N	Advil for pain. Which is usually helpful because I stress the importance of continuing a healthy level of motion. If someone goes on daily walks, I tell them to continue to do daily walks despite pain. If they work out, I tell them to continue that practice within reason.	I will frequently help the patient come up with a routine/plan for continued exercise and strengthening of low back and core. I will refer to a pain specialist if pain persists over time.
C-4	N	N	I usually will start with Motrin, heat packs, and nonoverexerting physical activity.	It's tough to tell what is chronic and what is acute or chronic. So in these patients I will usually try them on a muscle relaxant first so that they can continue to strengthen/stabilize that area via rehab [physical therapy] and exercise.
C-5	Y	Y	I want all my patients with LBP to go for a minimum of a 20-min daily walk. Heat is often useful. Depending on the patient, I will sometimes recommend an NSAID or muscle relaxant.	All of my patients that come in and report new chronic back pain get referred to rehab [physical therapy] and start an exercise plan. I think a lot of the folks are just deconditioned. However, depending on the examination, I will often send patients to see a chiropractic or massage therapist on the first visit.
C-6	n/a			
C-7	Y	Y	You would be surprised how well localized heat therapy can be. I want my patients to keep moving around to prevent their back from tightening up and so heat is often integral for pain treatment after patients get a bit tight throughout the day. If patients feel strongly about a medicine for analgesia, I typically use NSAIDs or a short course of Flexeril.	I do not really have one approach. It all depends on the patient. I try to keep the full box of tools open. I think rehab [physical therapy], exercise therapy, chiropractic/massage therapy can be beneficial and, depending on the patient's openness, can even try acupuncture or yoga.

(*continued*)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP	
			Acute/Subacute	*Chronic*
C-8	Y	N	Aspirin, heat, and continued exercise or at least ambulation.	I think it is important to give patients a chance to improve by increasing the stability of their back. Thus, I usual will refer them to a trial of rehab [physical therapy]. I usually send them out with Flexeril to allow for full participation in rehab. If the pain becomes functionally limiting, I consider local steroids injections.
C-9	Y	N	I usually start with Motrin and up and out of bed therapies. I don't want patients lying around all day. If I am suspicious of a pulled muscle, I will sometimes use Flexeril	I always start with rehab [physical therapy]. I want patients to improve without pharmacologic treatment. I try to avoid medicines unless there is a significant lumbar stenosis on local examination [radicular pain]. In that case, I will trial a gabapentin or another neuropathic agent.
C-10	N	Y	Activity, NSAIDs, or muscle relaxant, but usually not both at the same time.	We are big fans of exercise and rehab [physical therapy] here. Some of my patients have had success with acupuncture, so I often will offer that. If pain is debilitating and they are struggling with activities of daily living or just very uncomfortable, I consider referring for steroid injections.
C-11	Y	Y	You stress the importance of ambulation. I usually use NSAIDs/muscle relaxant.	I usually refer patients to rehab [physical therapy] and emphasize exercise. Chiropractors are often useful and we have some ones locally that we have relationships with.
C-12	n/a			
C-13	Y	N	Activity and heat. NSAIDs and muscle relaxant can be used if patient really wants.	Rehab [physical therapy] and continued activity. If patient has stenosis with neuropathic pain, I will trial gabapentin if the pain is persistent.
C-14	n/a			
C-15	Y	N	NSAIDs.	My first line is typically continued ambulation/activity, massage therapy, and I usually want patients to see a chiropractor. I have had good success with those. If patients fail that regimen then I will try PRN NSAIDs for a short course. If pain remains and is limiting, will go to injections last.
C-16	Y	N	I always recommend walking and continued use of lower back muscles to help prevent local muscle spasms. To that end, heat is usually beneficial and NSAIDs for pain control, really with the aim of preventing underuse of the back muscles.	I am a huge fan of rehab [physical therapy] and exercise. You would be surprised at the number of people that is pain reducing for. If the pain is limiting, I don't personally suggest NSAIDs because there isn't an endpoint. I typically refer to a pain specialist when pain becomes limiting. I never prescribe opioids.
C-17	Y	Y	Heat, activity, and NSAIDs.	Tiered approach: Exercise, chiropractic, massage. If still persistent, will trial as needed NSAIDs.
C-18	N	Y	Advil. If patients are well enough to tolerate ambulation, I suggest that as able.	I tend to try muscle relaxant first. See how they respond and reassess on the subsequent visit.

(*continued*)

SUPPLEMENTARY TABLE S1. (CONTINUED)

Participant	Familiar with ACP Y/N	Comfort with NPT Y/N	Initial recommendation for management of LBP	
			Acute/Subacute	*Chronic*
C-19	Y	Y	I usually start with Flexeril, I counsel on the importance of activity. Some patients benefit from NSAIDs, so I sometimes add that as well.	I have all my patients do the usual pathway of exercise, rehab [physical therapy], and a chiropractor visit if they have never been before. I reserve NSAIDs for second line if the aforementioned fails and only for a short course PRN.
C-20	Y	N	NSAIDs and activity.	I usually want these patients to see a chiropractor early on which can be helpful. I also concurrently will send them to rehab [physical therapy] and advise continued activity. This all assuming they do not have red flags.
C-21	Y	Y	NSAIDs, activity, and heat.	Rehab [physical therapy] and activity.
C-22	N	N	Everyone gets the magic cure of walking. Patients have to continue to be active, almost as if they didn't injure there back. So I also will recommend muscle relaxant or NSAID mainly to help maintain an active lifestyle.	Our clinic does the typical pathway of exercise and continued activity. We also tend to be bigger proponents of massage and chiropractor therapy early on.
C-23	Y	N	NSAIDs and daily motion, at least 20 min a few times per day. It's a good way to reinforce physical activity.	Rehab [physical therapy] and muscle relaxant, I tend to use Flexeril.
C-24	Y	Y	Continued level of baseline activity is important. I also want patients to be exercising if they can tolerate it. I will sometimes recommend Advil or Motrin depending on the patient.	All of my LBP patients undergo rehab [physical therapy] evaluation. Anyone who comes in with back pain is recommended to continue activity as tolerated. If they have signs of neuropathic pain, nerve-related treatments are appropriate [gabapentin]. NSAIDs I usually try to avoid until the other interventions haven't worked.
C-25	Y	Y	I'll typically do Motrin if a patient asks me for pharmacologic therapy. I tell all patients to stay active and not be limited by the pain, which is why Motrin can be beneficial.	Rehab [physical therapy] and chiropractic evaluation. NSAIDs second line and gabapentin if nerve involved.
C-26	Y	Y	NSAIDs.	I usually refer patients to rehab [physical therapy] and encourage activity/exercise. If this fails, then I consider pain management.

ACP, American College of Physicians; LBP, low back pain; NSAID, nonsteroidal anti-inflammatory drug; OTC, over the counter; PM&R, physical medicine and rehabilitation; PRN, Pro Re Nata medication/treatment as needed.