

## SEEK IMMEDIATE MEDICAL ATTENTION (HEART ATTACK OR MENINGITIS SYMPTOMS)

People in this category have reported symptoms that indicate a possible heart attack or meningitis.

These symptoms include:

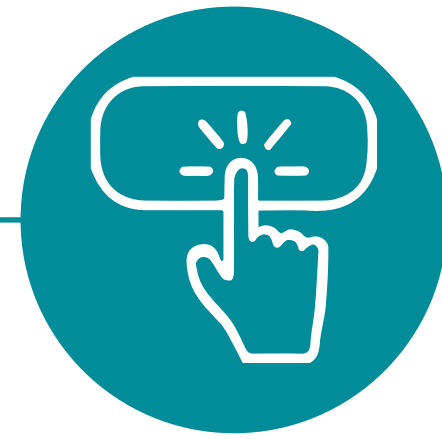
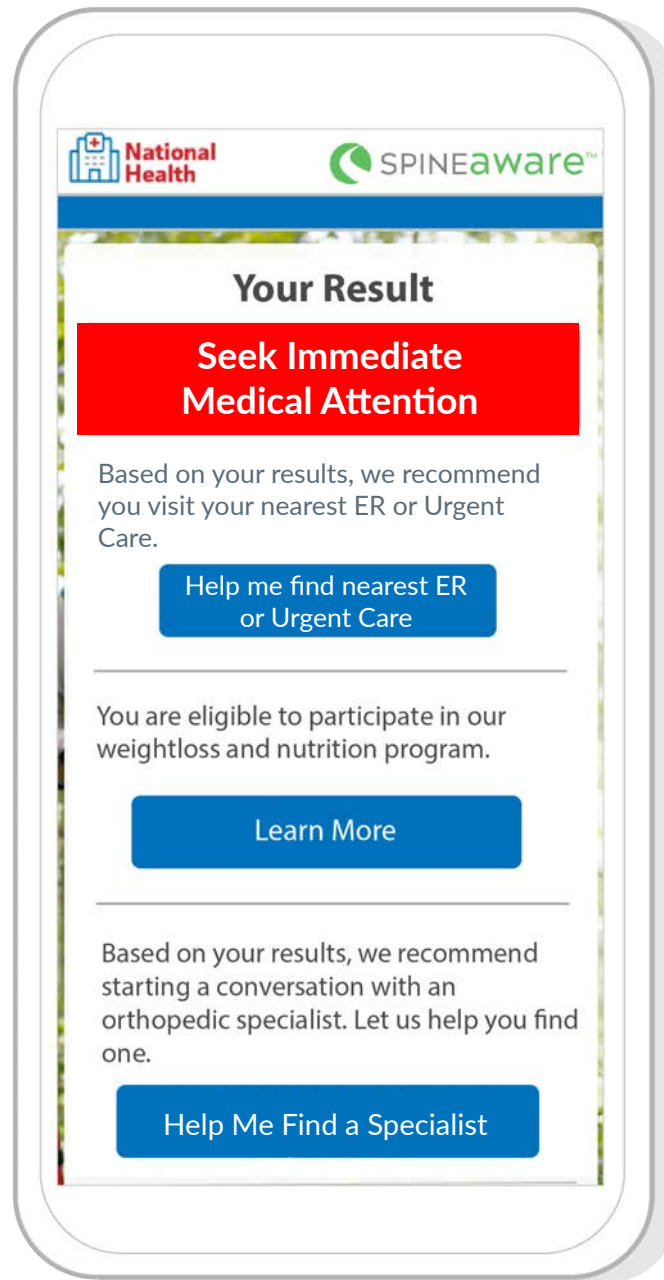
- Upper back pain with discomfort or pressure in the chest
- Upper back pain with a fever, headache, and inability to touch chin to chest

People who select either of these options will be urged to seek immediate medical attention for their symptoms, regardless of spine impairment.

In addition to these potentially serious symptoms, individuals in this category may have some degree of spine impairment and/or other lifestyle-related risk factors. These risk factors may include overweight or obesity and fewer than 150 minutes of moderate physical activity per week.

Following evaluation of their current symptom(s), these individuals may benefit from information regarding spine health and its risk factors.

### GOAL: REFERRAL TO THE NEAREST ED OR URGENT CARE



#### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Locating a nearby ED or urgent care center.
- Appointment scheduling.



#### FOLLOW UP

Follow up with the user as soon as possible to:

- Refer them to the nearest ED or urgent care clinic for further evaluation.



#### NURTURING

Customize your nurturing content to explain:

- When spine pain may be caused by something more serious.
- Treatments and therapies for spine pain and orthopedic conditions.
- Signs, symptoms, and risk factors for different orthopedic conditions.



#### REFERRAL TO NEAREST ED OR URGENT CARE

- This group has symptoms that warrant more urgent treatment for a condition that is likely not back- or neck-specific.



#### EXAMPLE PERSONA



Kayla is 43 years old and employed in childcare. She recently had to take time off of work because of a fever she contracted from a child at the center.

Yesterday, Kayla started experiencing mild neck pain and other symptoms that are unusual for her. Her symptoms had not improved, and she had no idea what might be causing them, so she searched online and found this assessment.

While completing the assessment, she indicated that she had a fever, headache & and an inability to touch her chin to her chest. She doesn't know where the stiffness could have come from and is alarmed to learn that her symptoms might be a sign of something serious.

## SEEK MEDICAL ATTENTION (INCONTINENCE SYMPTOMS)

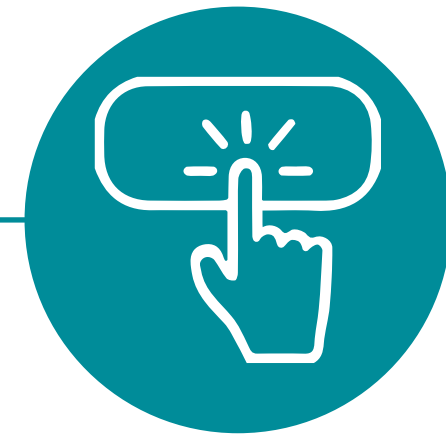
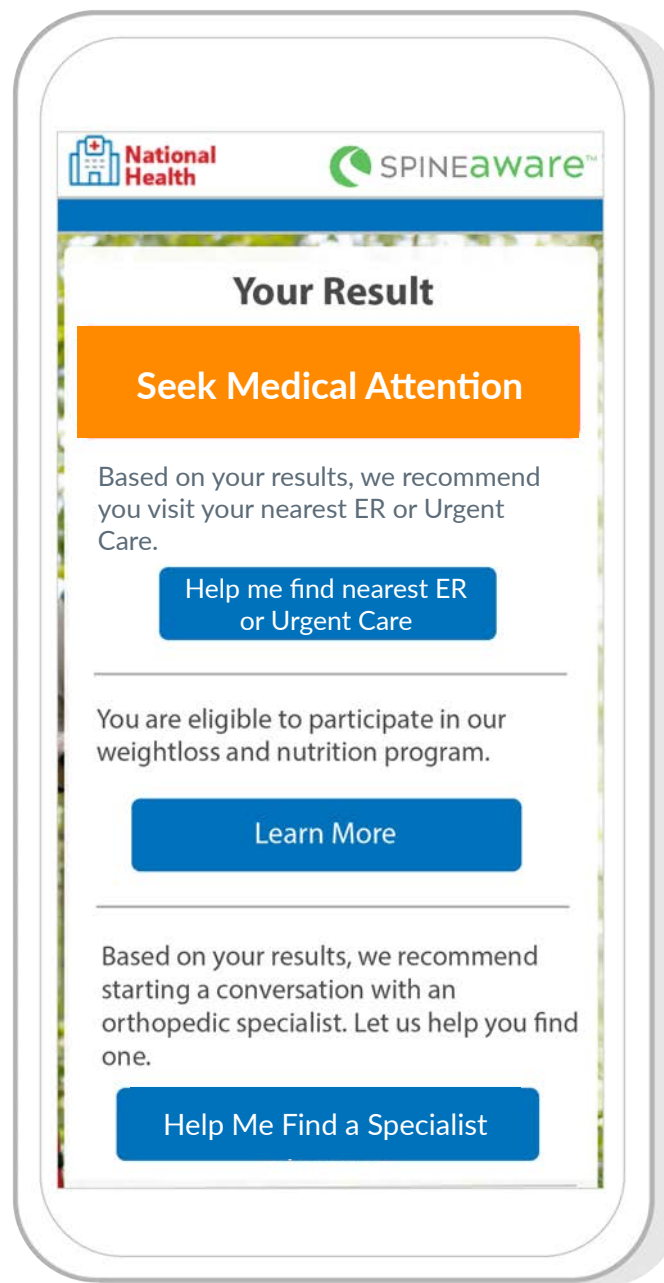
People in this category have reported back pain with sudden loss of control over urine or stool (incontinence), which indicates possible nerve damage or another more serious condition.

Users who report this symptom are urged to seek medical attention for their incontinence as soon as they can, regardless of spine impairment.

In addition to incontinence with back pain, individuals in this category may have spine impairment and/or other lifestyle-related risk factors. Risk factors may include overweight or obesity and fewer than 150 minutes of moderate physical activity per week.

Following evaluation of their current symptom(s), these individuals may benefit from information regarding spine health and its risk factors.

### GOAL: REFERRAL TO NEAREST ED OR URGENT CARE



#### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Locating a nearby ED or urgent care center.
- Appointment scheduling.



#### FOLLOW UP

Follow up with the user as soon as possible to:

- Refer them to the nearest ED or urgent care for further assessment.
- Review the results report with them and explain their results.
- Discuss possible options for treatment and answer any questions they have about their next steps.



#### NURTURING

Customize your nurturing content to explain:

- When spine pain may be caused by something more serious.
- Treatments and therapies for spine pain and orthopedic conditions.
- Signs, symptoms, and risk factors for different orthopedic conditions.



#### REFERRAL TO NEAREST ED OR URGENT CARE

- This group has symptoms that will likely warrant more urgent treatment.
- In most cases, users in this group should be under the care of a primary care physician or orthopedic specialist.



#### EXAMPLE PERSONA



Johnna is a 64-year-old female. She is physically inactive, has obesity, and smokes cigarettes daily.

Johnna has had mid-back pain for a long time. Typically, her back pain comes and goes, and she categorizes it as moderate intensity.

A few days ago, her pain became more constant and she began to leak urine while watching TV. This alarmed her, so she took the online assessment.

## SEE A DOCTOR SOON (NERVE OR SPINAL DAMAGE SYMPTOMS)

People in this category have reported at least 1 symptom that indicates possible damage to the spine. They are urged to seek medical attention for their symptom(s), regardless of spine impairment.

In addition to at least 1 of the following symptoms, users may have spine impairment and other lifestyle-related risk factors.

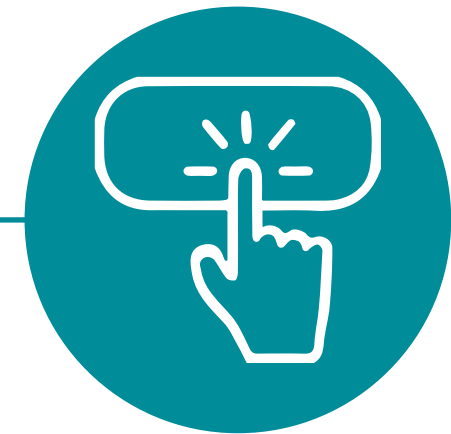
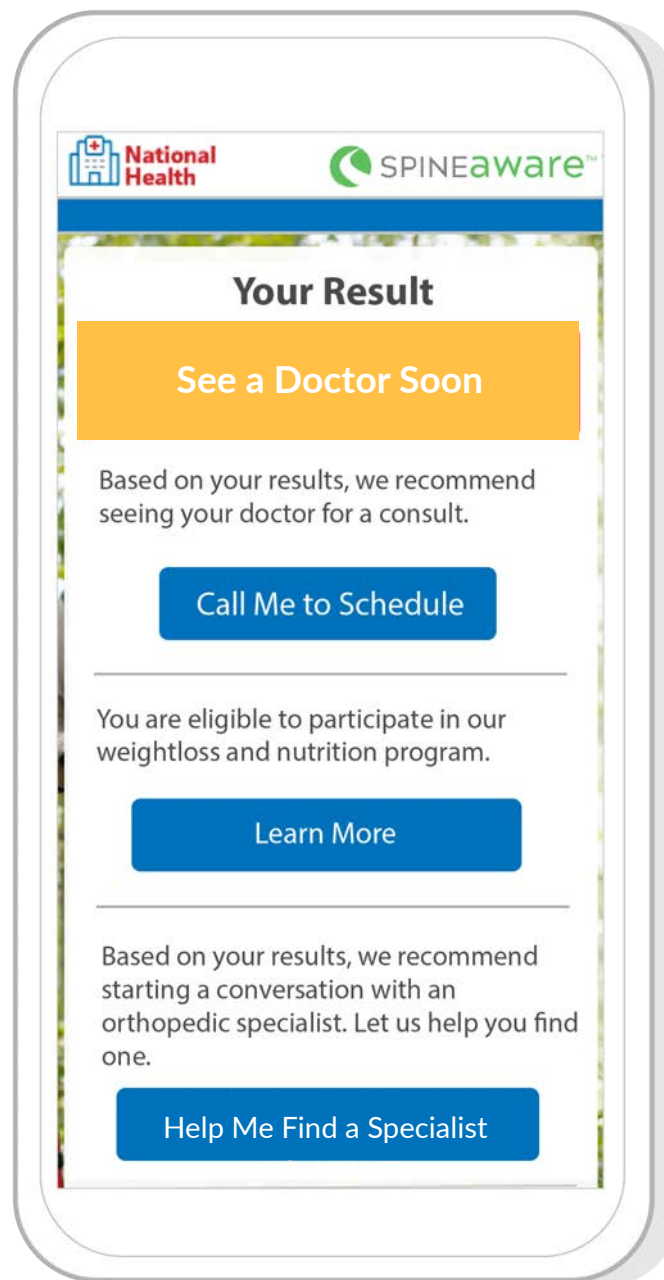
### Pain-related symptoms:

- Pain that gets progressively worse
- Pain that is worse when lying down or that wakes the person up at night
- Severe pain that does not allow the person to get comfortable
- Pain traveling down the person's legs below the knee
- History of back pain, but this episode is different/worse

### Other symptoms:

- Weakness or numbness in the buttocks, thigh, leg, or pelvis
- Numbness, tingling, or weakness in the arms, hands, or legs
- Difficulty walking, clumsiness, or weakness
- Swollen glands or a lump in the neck
- Difficulty swallowing or breathing along with the pain
- Burning with urination or blood in urine
- Redness or swelling on the back or spine
- Unexplained fever with back pain
- Unintentional weight loss

## GOAL: REFERRAL TO SPINE SPECIALIST FOR EVALUATION



### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Appointment scheduling with a spine specialist.
- Orthopedic services offered by your organization.



### FOLLOW UP

Follow up with the user as soon as possible to:

- Refer them to a spine specialist for further assessment.
- Review the results report with them and explain their results.
- Discuss possible options for treatment and answer any questions they have about their next steps.



### NURTURING

Customize your nurturing content to explain:

- Who should see a spine specialist and when.
- Treatments and therapies for nerve- or damage-related spine pain.
- Signs, symptoms, and risk factors for different orthopedic conditions.



### REFERRAL TO SPINE SPECIALIST VIA PRIMARY CARE

- Users in this group should be referred to a spine specialist for assessment and possible imaging tests.
- In most cases, users in this group should be under the care of a spine specialist.



### EXAMPLE PERSONA

Vik is a 62-year-old male. He works in an office where he regularly has to lift and carry heavy boxes but has not experienced any significant back pain as a result.

Vik recently helped a neighbor move dirt in her garden. He tweaked his back lifting a bag of soil, causing severe pain in his lower back at the time.

Since then, he's been experiencing numbness and weakness in his right thigh. He's tried icing the area, stretching exercises, and massage, but nothing is helping. His pain is impacting his ability to function at work.



# SEVERE SPINE IMPAIRMENT

People in this category have a total score of 56 or higher on the Pain Disability Index (PDI), indicating severe spine impairment.

The PDI asks people to rate how spine pain impacts seven areas of daily living, including:

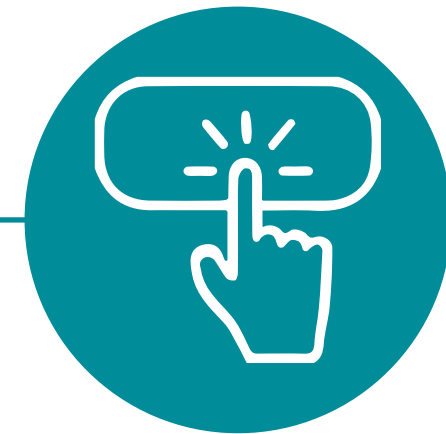
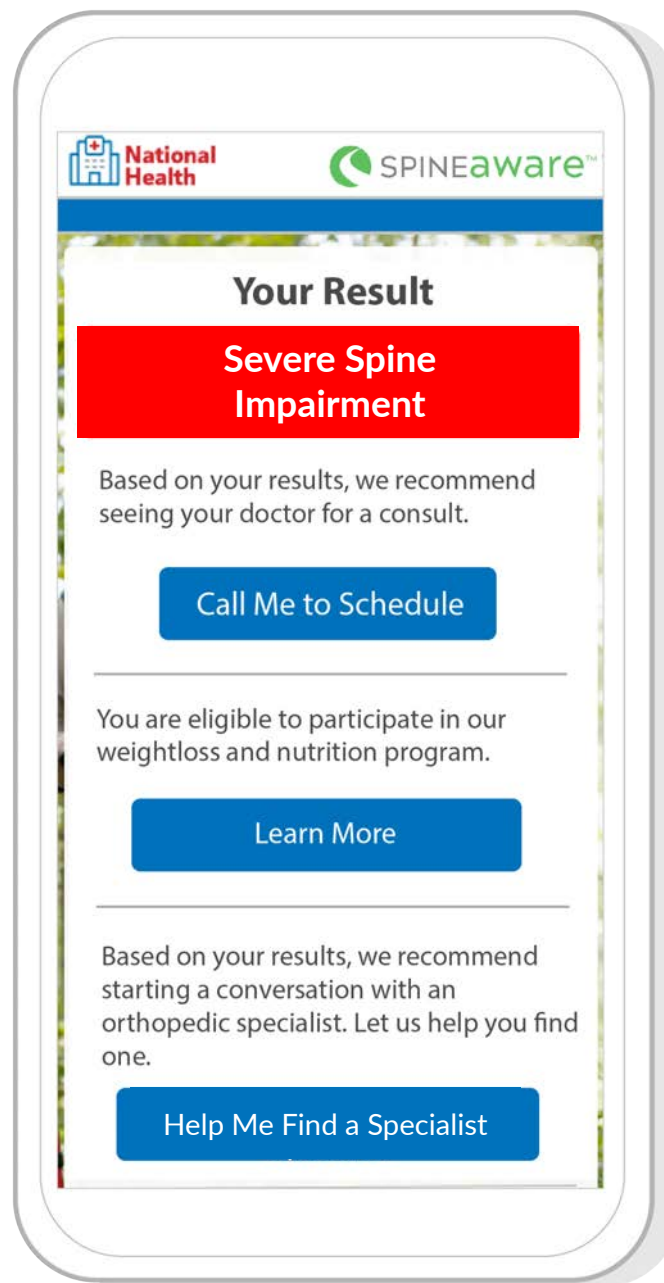
- family and home responsibilities
- recreation
- social activities
- occupation

Each question is graded on a scale from 0 (doesn't impact) to 10 (completely prevents).

In addition to severe impairment, users may also have lifestyle-related risk factors that contribute to current spine pain or impairment. These risk factors may include overweight or obesity and fewer than 150 minutes of moderate physical activity per week. People in this group do not report any of the potentially serious symptoms listed elsewhere.

For users in this group, intervention with an orthopedic specialist or surgeon may be warranted.

## GOAL: SCHEDULING A CONSULTATION WITH AN ORTHOPEDIC SURGEON



### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Appointment scheduling with an orthopedic surgeon.
- Orthopedic services available at your organization.



### FOLLOW UP

Follow up with the user as soon as possible to:

- Schedule an appointment with an orthopedic surgeon or specialist for further assessment.
- Review the results report with them and explain their results.
- Discuss possible options for treatment and answer any questions they have about their next steps.



### NURTURING

Customize your nurturing content to explain:

- Who should see an orthopedic surgeon, and when.
- Signs, symptoms, and risk factors for different orthopedic conditions.
- The importance of staying in touch with primary care for better spinal health.



### CONSULTATION WITH ORTHOPEDIC SURGEON

- Users in this group should see an orthopedic surgeon or specialist for consultation.
- This group is most likely to need orthopedic procedures and rehabilitative services.
- In most cases, users in this group should be under the care of a primary care physician and a dedicated orthopedic specialist.



### EXAMPLE PERSONA

Judith is a 73-year-old woman. She is underweight, smokes on a daily basis, and is sedentary with limited mobility outside of the home. She was diagnosed with osteoporosis at age 64 after experiencing mild back pain following a car accident.

She recently fell to the floor when trying to stand up from a chair. She didn't feel any significant pain at first, but the pain has dramatically increased in severity.

Judith indicates a 10 on the PDI scale for all but the "life support activities" and "occupation" areas of daily living. She is desperate for relief from the pain and is eager to return to her old lifestyle.

## MODERATE SPINE IMPAIRMENT

People in this category have a total score between 28 and 55 on the Pain Disability Index (PDI), indicating moderate spine impairment.

The PDI asks people to rate how spine pain impacts seven areas of daily living, including:

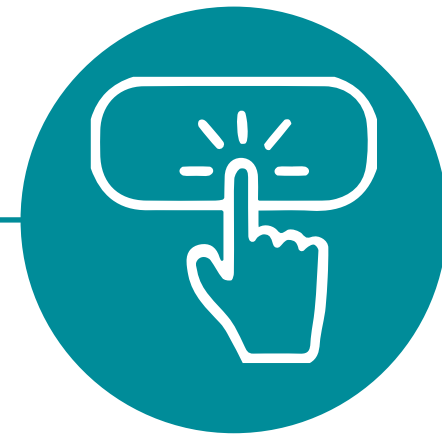
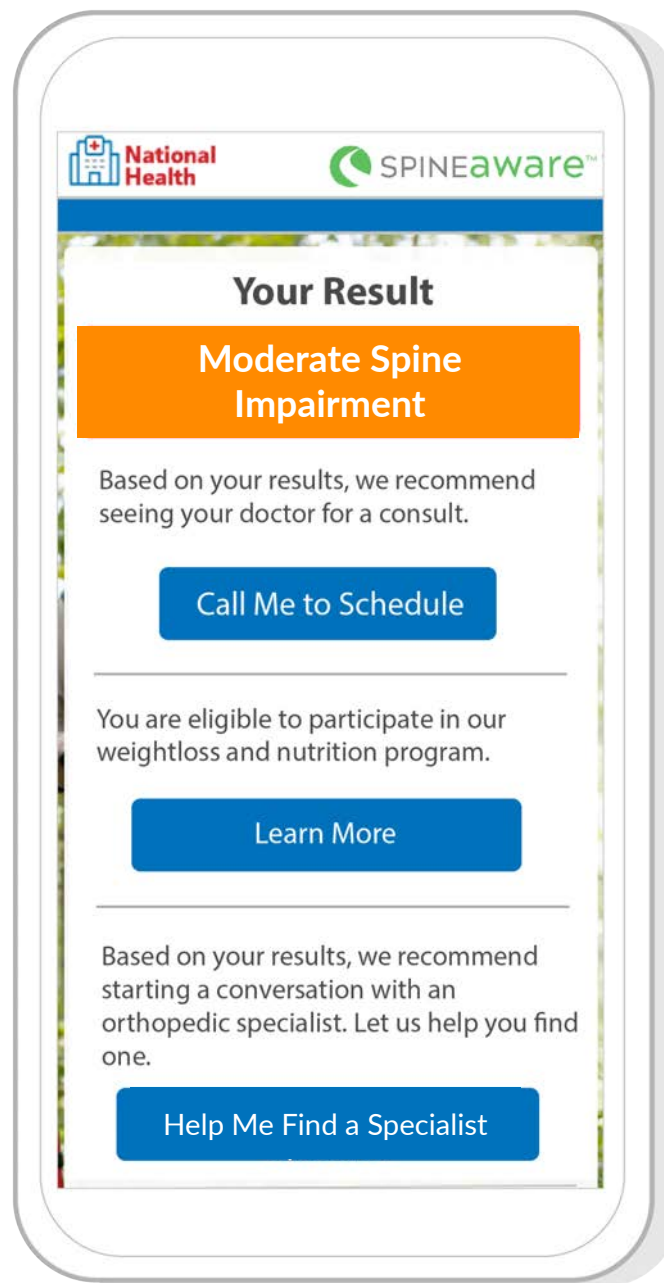
- family and home responsibilities
- recreation
- social activities
- occupation

Each question is graded on a scale from 0 (doesn't impact) to 10 (completely prevents).

In addition to moderate impairment, users may also have lifestyle-related risk factors that contribute to current spine pain or impairment. These risk factors may include overweight or obesity and fewer than 150 minutes of moderate physical activity per week. People in this group do not report any of the potentially serious symptoms listed elsewhere.

For users in this group, intervention with an orthopedic specialist or a physical therapist may be warranted.

### GOAL: SCHEDULING AN APPOINTMENT WITH AN ORTHOPEDIC SPECIALIST



#### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Appointment scheduling with an orthopedic specialist.
- Other orthopedic services available at your organization.



#### FOLLOW UP

Follow up with the user as soon as possible to:

- Schedule an appointment with an orthopedic specialist.
- Review the results report with them, and discuss ways to protect their spine and reduce further impairment.



#### NURTURING

Customize your nurturing content to explain:

- Who should see an orthopedic specialist, and when.
- Signs, symptoms, and risk factors for different orthopedic conditions.
- The importance of staying in touch with a primary care physician.



#### CONSULTATION WITH ORTHOPEDIC SPECIALIST

- Users in this group should see an orthopedic specialist for consultation.
- This group may have impairment that warrants orthopedic procedures or rehabilitative services.
- In most cases, users in this group should be under the care of a primary care physician or an orthopedic specialist.



#### EXAMPLE PERSONA

Rob is a 52-year-old man. He is overweight and quit smoking more than a year ago. He has had back pain for several years but has never sought treatment for it beyond massages and chiropractic care.

Rob recently began a new exercise regimen of strength training and running several times per week. While performing deadlifts, Rob experienced severe pain in his lower back. The pain got slightly better after resting for several days, but it's still impacting his life.

Rob indicates an 8 on the PDI scale for "family/home responsibilities," "recreation," "social activities," and "sexual behavior." Everything else is scored as a 5 on the PDI scale.



# MILD SPINE IMPAIRMENT

People in this category have a total score between 1 and 27 on the Pain Disability Index (PDI), indicating mild spine impairment.

The PDI asks people to rate how spine pain impacts seven areas of daily living, including:

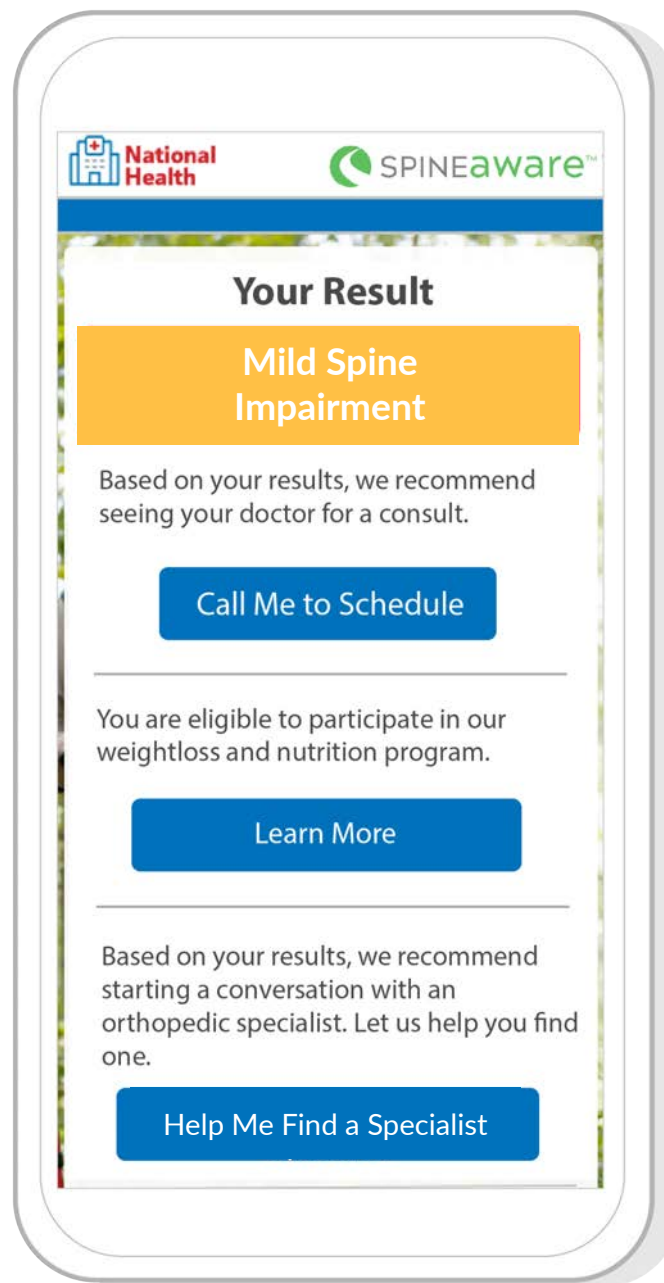
- family and home responsibilities
- recreation
- social activities
- occupation

Each question is graded on a scale from 0 (doesn't impact) to 10 (completely prevents).

In addition to mild impairment, users may also have lifestyle-related risk factors that contribute to current spine pain or impairment. These risk factors may include overweight or obesity and fewer than 150 minutes of moderate physical activity per week. People in this group do not report any of the potentially serious symptoms listed elsewhere.

For users in this group, intervention with primary care or a physical therapist may be warranted.

## GOAL: SCHEDULING A PRIMARY CARE VISIT FOR SPINE PAIN



### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Appointment scheduling with primary care.
- Wellness programs offered by your organization.



### FOLLOW UP

Follow up with the user as soon as possible to:

- Review the results report with them and explain their results.
- Encourage them to visit primary care to learn how to reduce pain and protect their spine.



### NURTURING

Customize your nurturing content to explain:

- Lifestyle changes that can reduce the risk of developing spine pain and osteoporosis.
- What a physical therapist can do for spine pain.
- The importance of staying in touch with a primary care physician.



### REFERRAL TO PHYSICAL THERAPY VIA PRIMARY CARE

- Users in this group should visit primary care to discuss factors that influence their spine pain and address their concerns.
- These users do not require any orthopedic procedures but may benefit from a referral to physical therapy services.



### EXAMPLE PERSONA

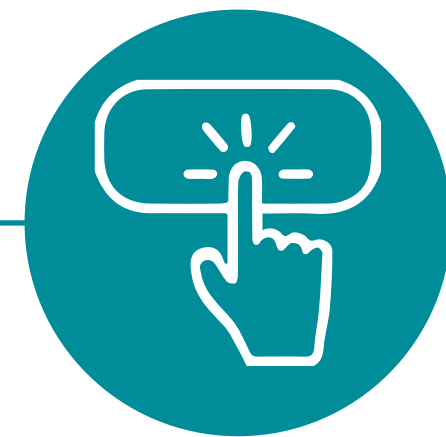
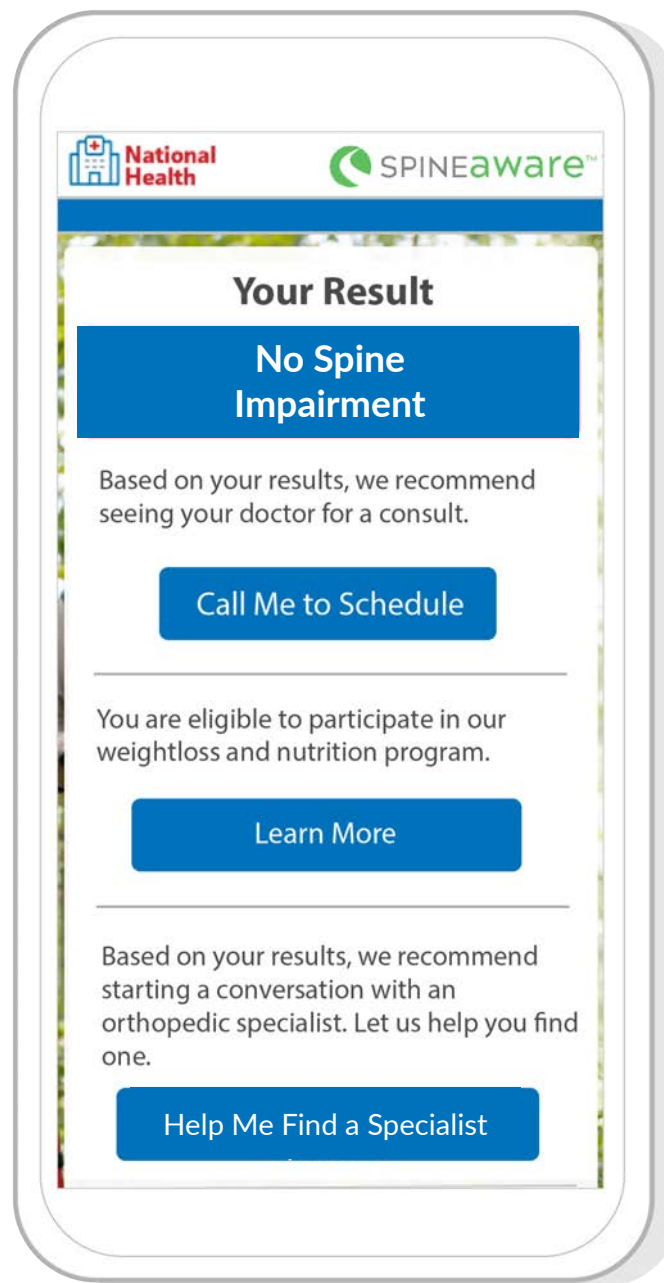


Lola is a 33-year-old woman. She has struggled for a few years with increasing mid-back pain and often avoids participating in events that require a lot of standing or walking because of her pain.

Lola's job is sedentary, so pain doesn't impact her ability to work. But she indicates a PDI score of 5 for "Family/Home Responsibilities," "Recreation," and "Social Activities." Everything else is scored as a 0 or 1 on the PDI scale.

Lola found this assessment when searching for ways to reduce pain.

## GOAL: EARLY INTERVENTION FOR LIFESTYLE-RELATED RISK FACTORS



### CUSTOMIZED CALL-TO-ACTION MESSAGES

Focus Call to Action (CTA) messaging in the follow-up section of portal on:

- Appointment scheduling with primary care.
- Health fairs and other events sponsored by your organization.
- Social media engagement or newsletter sign-ups.



### FOLLOW UP

Follow up with the user as soon as possible to:

- Review the results report with them and explain their results.
- Encourage them to visit primary care to discuss their results and learn about lifestyle changes that may protect their spine.



### NURTURING

Customize your nurturing content to explain:

- The importance of staying in touch with a primary care doctor.
- Lifestyle changes that can reduce the risk of developing spine pain an osteoporosis.
- Signs, symptoms, and risk factors for different orthopedic conditions.



### SCREENING FOR HEALTHY BEHAVIORS

- Users in this group should visit primary care to discuss factors that influence their risk of spine pain and address their concerns.
- These users typically do not require any intervention but may benefit from education about lifestyle risk factors for spine pain.



## NO SPINE IMPAIRMENT

People in this category have a total score of 0 on the Pain Disability Index (PDI), indicating no spine impairment.

The PDI asks people to rate how spine pain impacts seven areas of daily living, including:

- family and home responsibilities
- recreation
- social activities
- occupation

Each question is graded on a scale from 0 (doesn't impact) to 10 (completely prevents).

These users reported no impairment or pain in their spine, though they may have lifestyle-related risk factors that contribute to future spine pain or orthopedic conditions. This includes increased BMI, smoking, and low physical activity. People in this group do not report any of the potentially serious symptoms listed elsewhere.

For people in this group, encouraging healthy lifestyle habits to protect the spine is key. Because surgical intervention and physical therapy are not indicated for this group, early intervention from a primary care physician and wellness initiatives will best serve these individuals.

### EXAMPLE PERSONA



Cameron is a 32-year-old man. He is overweight, a daily smoker, and does not exercise.

His mother recently suffered a spine fracture due to osteoporosis, and he just learned that he's at an increased risk for the disease too.

Cameron found this assessment when searching for information about compression fractures and risk factors for osteoporosis. He isn't bothered by spine pain right now, so he indicates 0 for all 7 of the PDI questions.