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MEDTECH

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**Vx® THERAPY**  
P R O G R A M

Bio | Psycho | Social

PATIENT 0978



# PATIENT OUTCOMES REPORT





**HARVARD**  
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# EXECUTIVE SUMMARY

## Patient 0978 Summary

**Patient:** Patient 0978 is a 67-year-old male presenting for pain in his lower back, hips, knees, and left foot originating from a car accident in 2018. At the time of consultation, his average pain levels were at an 8. He was experiencing high levels of stress from his pain and limitations in physical functioning.

**Protocol:** The patient's physician prescribed the Vx Pain Relief Program. He was enrolled in the home-based Virtual Reality Therapy for 90 days. A Vx headset containing proprietary software was provided and the patient was paired with a specialized clinician best suited to address his behavioral health needs. The patient was instructed to use the headset 1-2 times a day, selecting specialized programs to provide relief for pain, release tension, or prolong a sense of well being. Weekly phone consultations were scheduled with his clinician. Each session ranged from 30-60 minutes with regular reevaluations. The clinician directed the program, ensured compliance, and provided further education on how to generalize skills taught by the Vx headset. The clinician shared this information with the physician, who monitored the patient's progress.

### Clinical Results:

*Patient experienced...*

- 50% decrease in average pain levels from time of initial consultation to discharge, with reduction per Vx session ranging from 0%-83%, with pain relief lasting a reported 3.5 hours
- 100% improvement in pain catastrophizing, and reduced the time spent focused on pain from 16 hours to 0
- Reduced anxiety, depression, fatigue, sleep disturbance, and pain interference
- Increased physical function and participation in social roles
- Reported substantial improvements in physical functioning, increasing his ability to walk from 30 minutes with severe pain at time of consult to 2 hours with mild to no pain by discharge
- Ability to do household tasks increased from 10% of chores with severe pain to 90% with mild pain, and he reported a heightened pain tolerance

## Patient Testimonials

"My ability to do chores and mentally accept pain has increased"

"My pain relief is unimaginable. I can move easier and focus better...I'm interested in life again"

"Thanks to Vx, I was able to spend a week socializing without the pain overwhelming me"

"My pain was so low that I didn't need to take my pain meds today. My anxiety down, I'm sleeping better... I'm really happy with [Vx Therapy]"

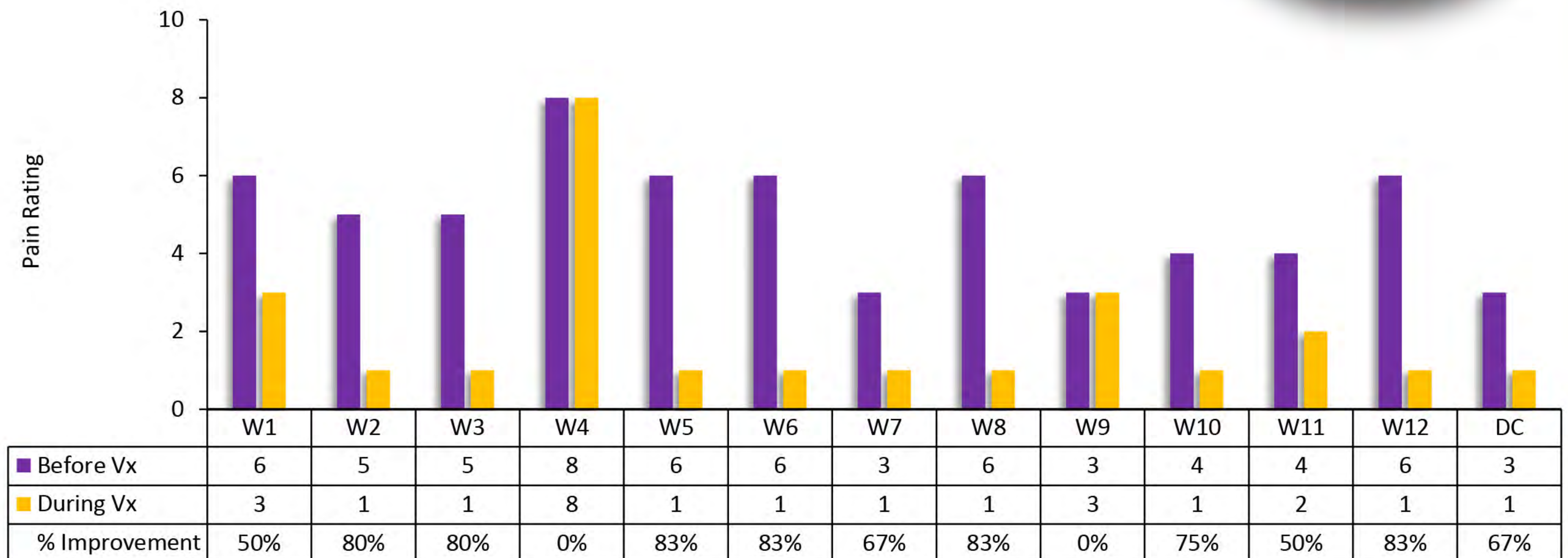
"At times I'm pain free. I'm learning to ignore it"



## Reduction in Pain Using Vx Therapy

### INSIGHT:

DECREASED PAIN LEVELS DURING VX USE DEMONSTRATE EFFECTIVENESS OF VX AS AN ANALGESIC

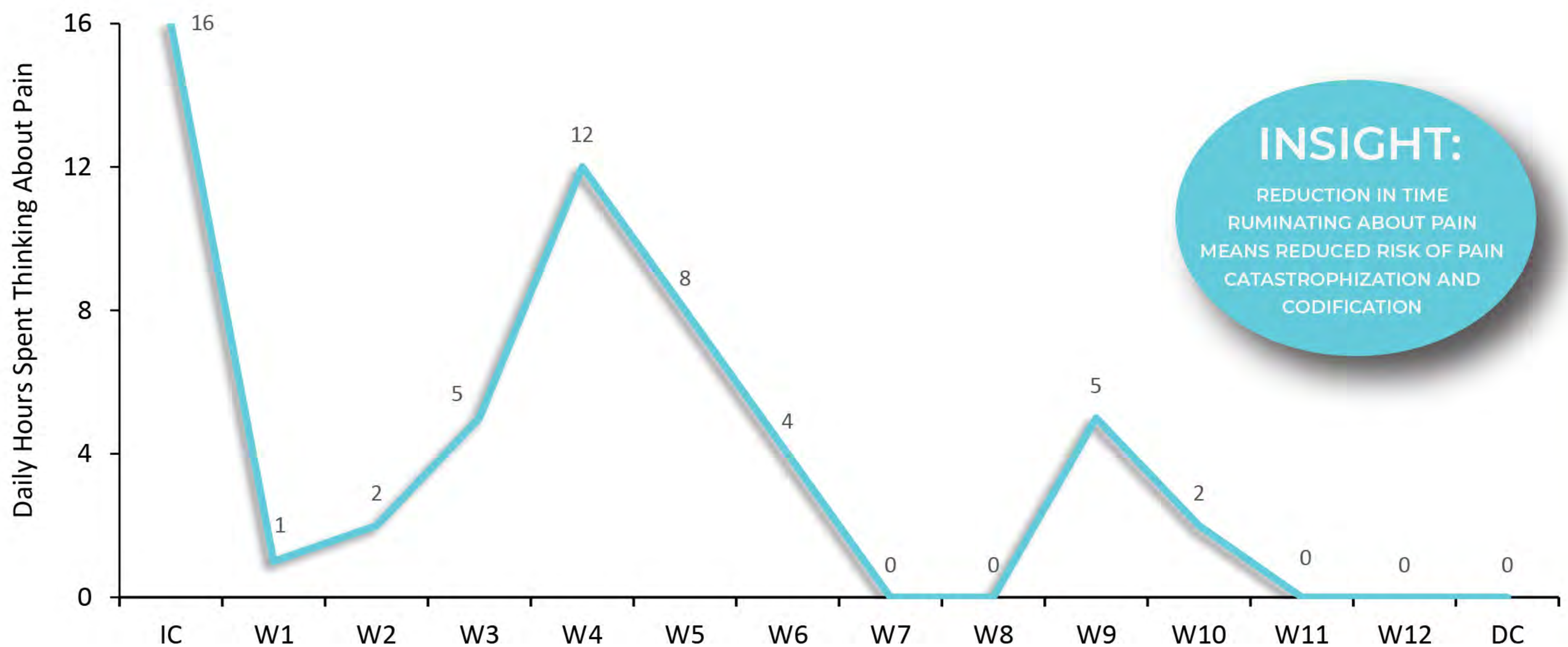


PATIENT EXPERIENCED AN AVERAGE OF 62% REDUCTION IN PAIN WHILE USING THE VX THERAPY HEADSET

## Average Daily Hours Spent Thinking About Pain

### INSIGHT:

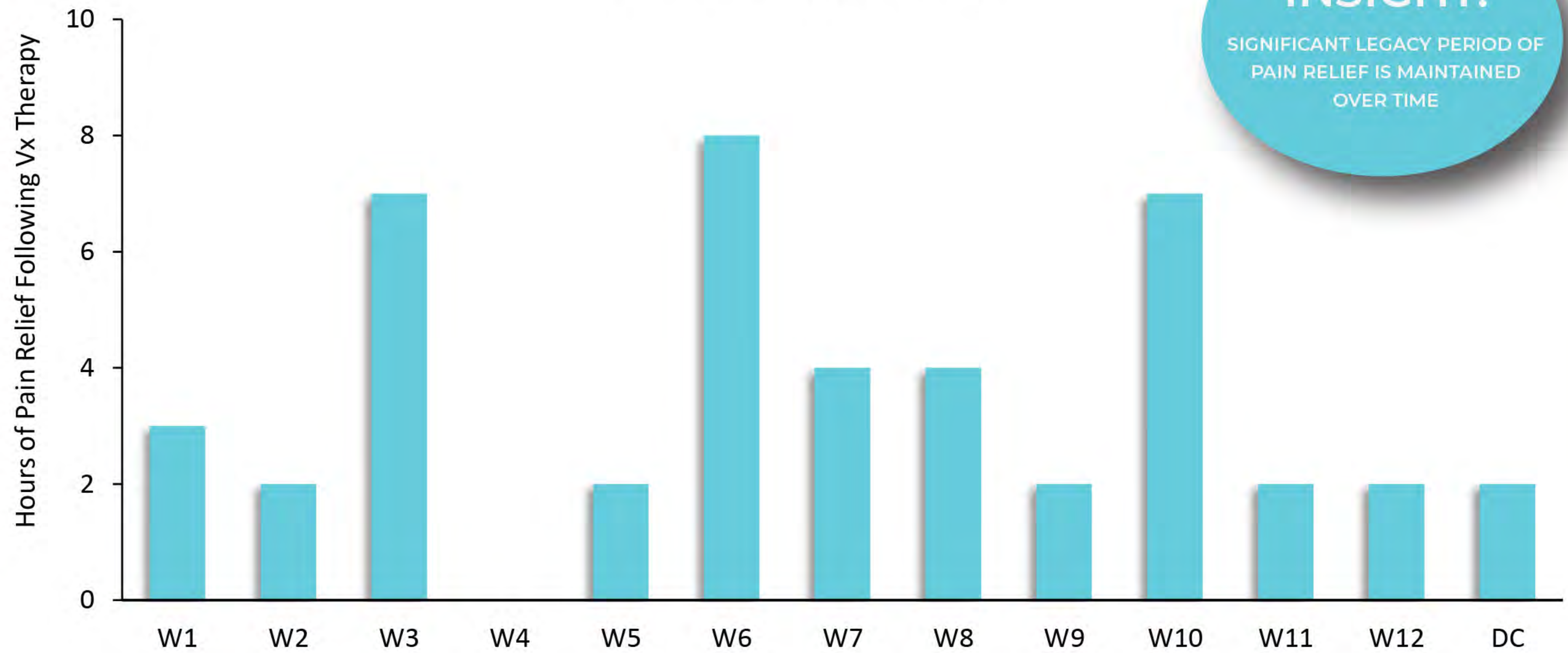
REDUCTION IN TIME RUMINATING ABOUT PAIN MEANS REDUCED RISK OF PAIN CATASTROPHIZATION AND CODIFICATION



THE PATIENT HAD A 100% DECREASE IN TIME LOST DUE TO FOCUSING ON PAIN, GOING FROM 16 HOURS A DAY TO 0 BY DISCHARGE



## Hours of Pain Relief Following Vx Therapy Session

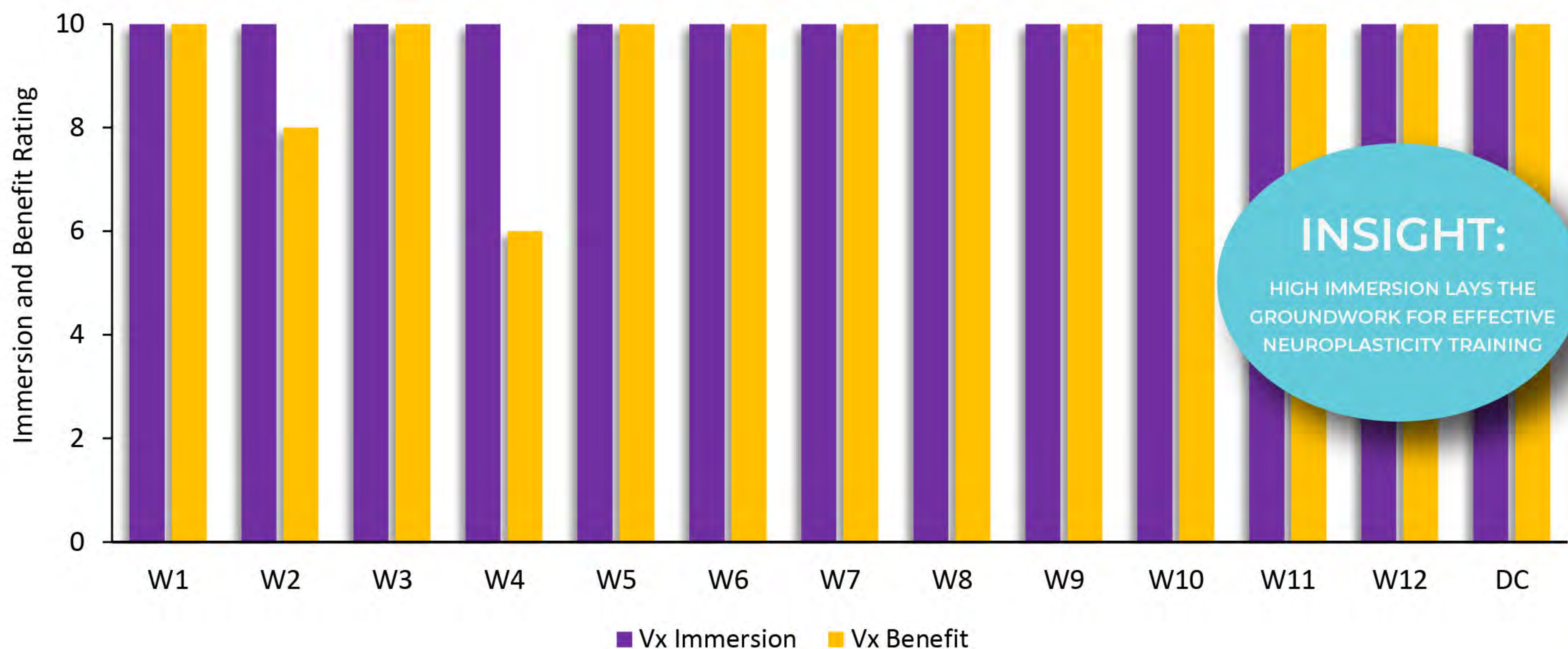


### INSIGHT:

SIGNIFICANT LEGACY PERIOD OF PAIN RELIEF IS MAINTAINED OVER TIME

PATIENT EXPERIENCED AN AVERAGE OF 3 HOURS AND 30 MINUTES OF PAIN RELIEF FOLLOWING VIRTUAL REALITY THERAPY

## Patient Perception: Immersion and Benefit Rating



### INSIGHT:

HIGH IMMERSION LAYS THE GROUNDWORK FOR EFFECTIVE NEUROPLASTICITY TRAINING

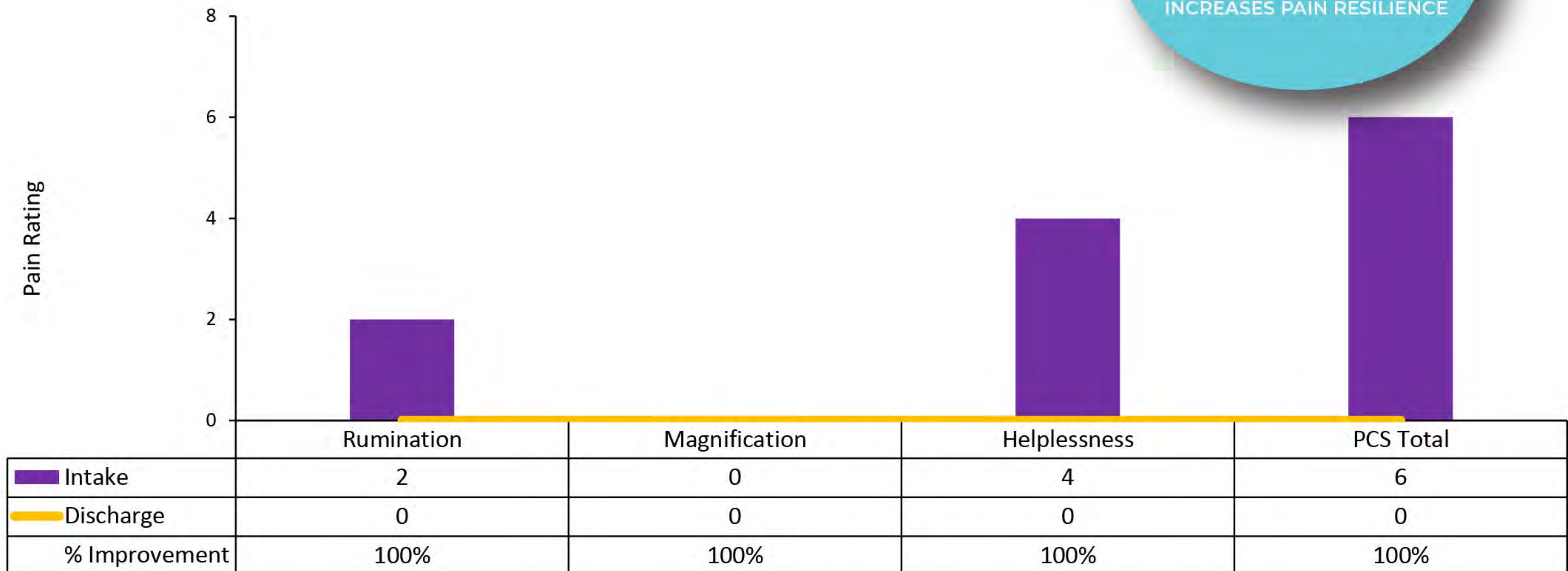
PATIENT 0978 EXPERIENCED A HIGH LEVEL OF REPORTED IMMERSION AND BENEFIT, WITH THE DIPS CORRESPONDING WITH SPIKES IN PAIN IN THE EARLY PART OF HIS PROGRAM



## Pain Catastrophizing Intake Compared to Discharge

### INSIGHT:

GATE THEORY AT WORK...  
POSITIVE EMOTIONAL STATE  
INCREASES PAIN RESILIENCE

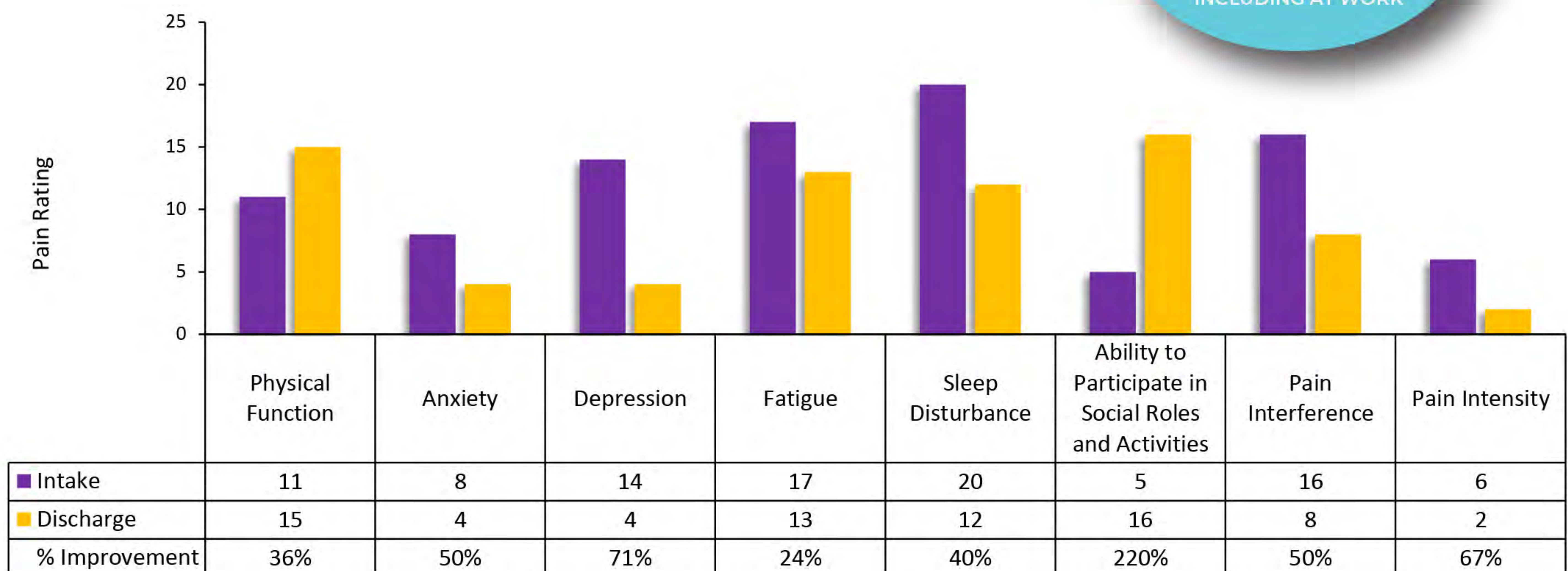


PATIENT EXPERIENCED A 100% IMPROVEMENT FOR PAIN CATASTROPHIZING

## PROMIS-29: Intake Compared to Discharge

### INSIGHT:

IMPROVED OUTCOME MEASURES  
TRANSLATE INTO AN INCREASED  
LEVEL OF FUNCTIONING,  
INCLUDING AT WORK



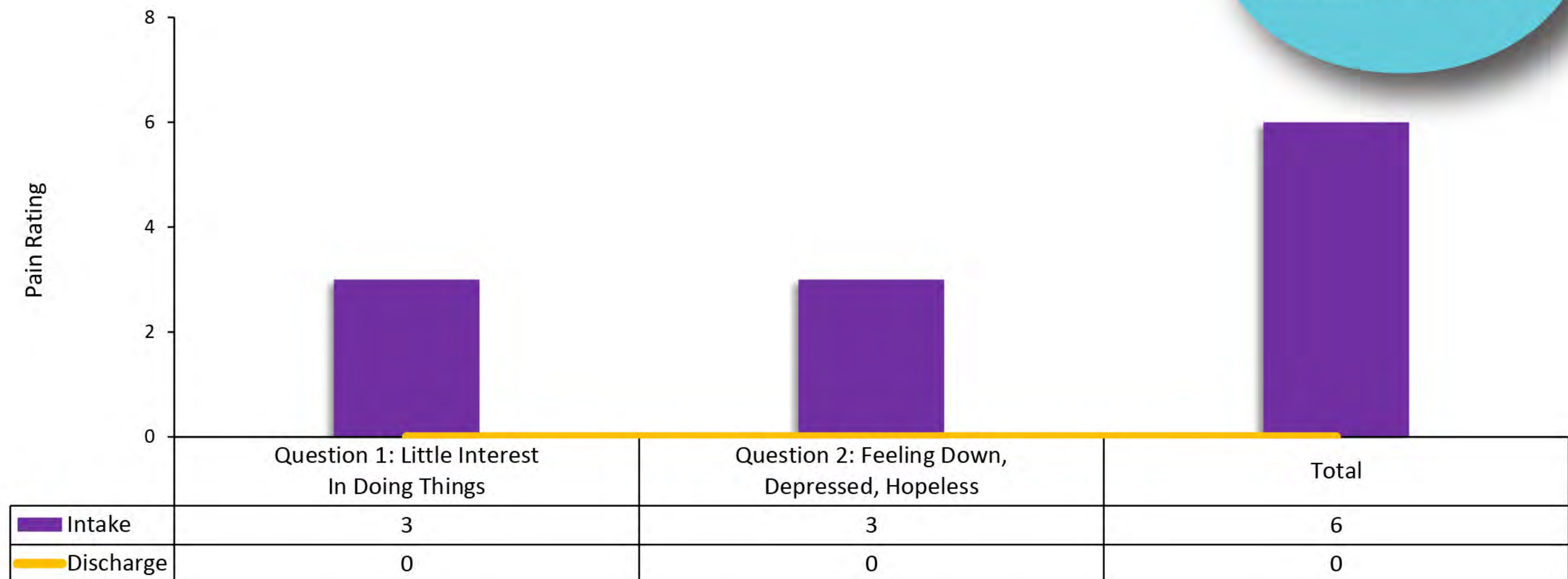
THE PATIENT EXPERIENCED IMPROVEMENTS IN ALL AREAS MEASURED BY THE PROMIS-29, WITH THE HIGHEST IMPROVEMENTS SEEN IN PARTICIPATION IN SOCIAL ROLES AND ACTIVITIES



## PHQ-2 Intake Compared to Discharge

### INSIGHT:

GATE THEORY AT WORK...  
POSITIVE EMOTIONAL STATE  
INCREASES PAIN RESILIENCE

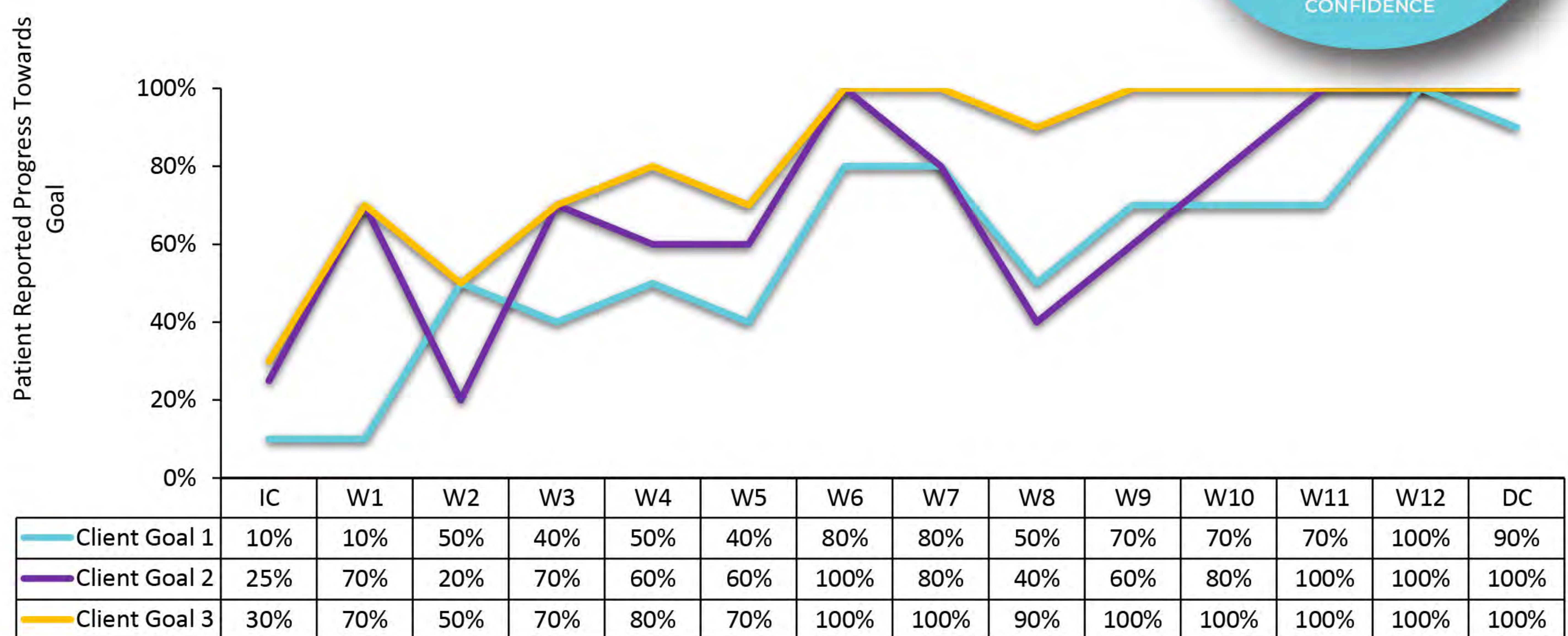


THE PATIENT SAW A 100% IMPROVEMENT IN SCORES ON THE PHQ-2

## Client Goals - Big Picture

### INSIGHT:

SETTING MEANINGFUL,  
PERSONALIZED GOALS AND  
ATTAINING THEM REINFORCES  
PATIENT COMPLIANCE AND  
CONFIDENCE

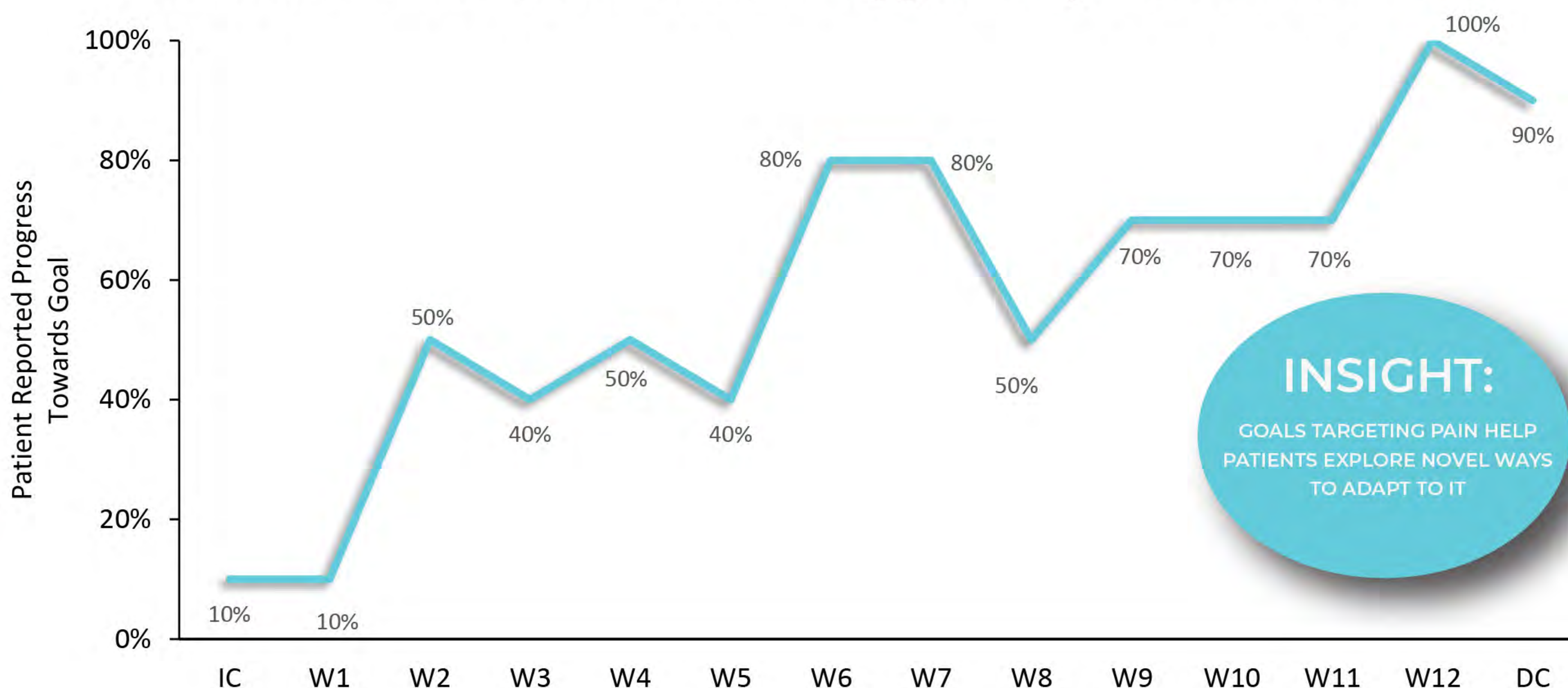


THE PATIENT EXPERIENCED STEADY SUCCESS IN ALL HIS GOALS AND HAD SUCCESSFULLY MET MASTERY CRITERION FOR ALL THREE BY DISCHARGE





## Client Goal 1: Reduction of Pain Triggered by Household Chores



### INSIGHT:

GOALS TARGETING PAIN HELP PATIENTS EXPLORE NOVEL WAYS TO ADAPT TO IT

THE PATIENT WAS ABLE TO COMPLETE 10% OF HOUSEHOLD CHORES WITH HIGH LEVELS OF PAIN AT THE INITIAL CONSULT. BY DISCHARGE, THE PATIENT WAS ABLE TO COMPLETE 90% OF ALL CHORES WITH MINIMAL PAIN

## Client Goal 2: Increase Mobility by Increasing Pain Tolerance



### INSIGHT:

GREAT PROXY FOR ENHANCED PRODUCTIVITY AT WORK AND ABILITY TO RETURN TO WORK

AT THE INITIAL CONSULT, THE PATIENT COULD ONLY WALK FOR 30 MINUTES WITH SEVERE PAIN. PATIENT WAS ABLE TO WALK 2 HOURS WITH MILD PAIN BY THE END OF THE PROGRAM



Client Goal 3: Increase Pain Acceptance



**INSIGHT:**  
IMPROVING EMOTIONAL AND  
BEHAVIORAL HEALTH CAN HELP  
PAIN PATIENTS REGAIN A  
SENSE OF CONTROL

PATIENT REPORTED A LOW PAIN TOLERANCE AT THE INITIAL CONSULT. BY WEEK 6, THE PATIENT EXPERIENCED 233% INCREASE IN PAIN TOLERANCE THAT STAYED WITHIN MASTERY CRITERION OF 90% OR HIGHER UNTIL DISCHARGE

NOTE:

The following attachments are actual redacted reports for patient 0978. The Initial, Discharge and two Re-Evaluation reports were chosen from the weekly reports to illustrate important milestones during therapy.





## Initial Consultation - Vx Pain Relief Program

**Patient Name:**

**Physician:**

**Personal Clinician:**



**Visit Date:** 10-04-19

**Patient Date of Birth:**



Date of Injury: 07-05-18

Mechanism of Onset: Patient was involved in an automobile accident at work. Patient reports pain in lower back, hip, both knees, and left foot.

Pain Rating Prior to Program (1-10):

Best: 6

Worst: 10

Average: 8

Relevant Past Medical History (last 5 years): N/A

Opioid Usage History Prior to Program:

Name: N/A

Amount of time spent thinking of pain per day (hrs/min): 16

Patient is currently working 0 hours per week and current level of function at work is 0%.

Using a scale of 1 (no awareness) to 10 (total awareness), current awareness of:

Pain: 10

Anxiety: 9

### Symptoms

Body parts involved: Patient reports pain in lower back, hip, both knees, and left foot.

Characteristics: stabbing, electricity, pins/needles, sharp, dull, ache, burning

Difficulty performing: walking, standing, bending, twisting, sleeping, concentrating on tasks, activities of daily living

Patient statement about symptoms: Patient said that his pain is so bad that on occasion he wishes he were "dead."

Feel better: standing, walking, extension, lying down, watching TV, listening to music, meditation activities, self talk

Feel worse: sitting, standing, walking, extension, bending forward, sleeping, climbing, lying down, stress, anxiety

Details: Patient said that moving around helps the pain.

### Goal #1

Desired goal: Patient wants to be able to complete chores without taking a break and with decreased pain.

Current ability (1-10): 1





Current level of function: Patient said that chores are "impossible at the moment."

Short term goal: Patient would like to complete chores with one break and moderate pain only.

Long term goal: Patient would like to complete chores with minimal pain and without breaks.

**Goal #2**

Desired goal: Patient would like to walk up to 2 hours daily with mild pain only.

Current ability (1-10): 2

Current level of function: Patient can walk for 30 min daily with moderate to severe pain.

Short term goal: Patient would like to walk for 1 hour daily with moderate pain only.

Long term goal: Patient would like to walk for 2 hours daily with mild pain only.

**Goal #3**

Desired goal: Patient would like to learn to accept mild to moderate pain.

Current ability (1-10): 3

Current level of function: Patient reports low acceptance when pain is severe.

Short term goal: Patient would like to increase acceptance of moderate pain.

Long term goal: Patient would like to increase acceptance of mild to moderate pain.

**Operating Vx Virtual Reality Therapy Device**

- Reviewed treatment protocols and how to operate Vx Virtual Therapy Device.
- Patient able to set up Distraction Session.
- Patient able to set up Relaxation Session.

Patient is comfortable operating Vx Virtual Therapy Device and understands treatment.

**Assessment and Plan**

Impairments: range of motion, impaired activity tolerance, pain limiting function, inability to focus due to pain, sleep deficit, strength deficit, increased anxiety, decreased endurance

Plan: Patient to follow Vx Pain Relief Program with clinical oversight per physician order.

Recommendations/Summary: It is recommended that patient continue to follow the Vx Pain relief Program. Patient was encouraged to use Vx distraction programs on a consistent basis during the first phase of treatment. Patient reported depression symptoms triggered by pain. Symptoms include, lack of interest in previously enjoyable activities. Personal clinician will monitor for increased mental health symptoms during weekly calls to patient. Client's first weekly call will occur on 10/12/19.

[REDACTED]  
This document was electronically signed on 10-08-19 at 01:34p by [REDACTED].





## Re-Evaluation

**Patient Name:** [REDACTED]

**Physician:** [REDACTED]

**Personal Clinician:** [REDACTED]

**Visit Date:** 10-19-19

**Patient Date of Birth:** [REDACTED]

### Patient Status Update

Average pain level prior to starting Virtual Reality Therapy (1-10): 5

Amount of time spent thinking of pain per day (hrs/min): 2 hrs

Patient is currently working 0 hours per week and current level of function at work is 0%.

Pain decreasing while using Virtual Reality Therapy (VRT).

Details: Patient reported no pain during his Vx sessions.

Average pain level during VRT sessions (1-10): 1

Length of time after VRT session that pain stays decreased (hrs/min): 2hrs

Using a scale of 1 (no immersion) to 10 (total immersion), the perceived immersion level during VRT: 10

Using a scale of 1 (no benefit) to 10 (extreme benefit), the patient rated the benefit of his VRT sessions: 8

Additional comments on immersion and benefits of VRT: Patient reported total immersion and significantly decrease pain levels during and after Vx sessions. Patient was able to vacuum since starting Vx treatment. Also said that he is getting into a more normal chore routine.

Using a scale of 1 (no awareness) to 10 (total awareness), current awareness of:

Pain: 3

Anxiety: 1

### Symptoms

Body parts involved: Lower back, both knees and hip.

Characteristics: pins/needles, burning

Difficulty performing: twisting, sleeping, concentrating on tasks, activities of daily living

Patient statement about symptoms: Patient said that his knee and back pain has decreased the most. Patient said that his hips are still in significant pain. Patient also noticed more pins/needles pain than usual.

Feel better: sitting, standing, walking, extension, bending forward, climbing, lying down, watching TV, listening to music, meditation activities

Feel worse: sitting, standing, walking, extension, bending forward, sleeping, climbing, lying down, stress, anxiety, activity

### Goal #1

Desired goal: Patient wants to be able to complete chores without taking a break and with decreased pain.





Current ability (1-10): 5

Current level of function: Patient noticed an increased ability to do chores such as vacuuming with decreased pain.

Short term goal: Patient would like to complete chores with one break and moderate pain only.

Long term goal: Patient would like to complete chores with minimal pain and without breaks.

## Goal #2

Desired goal: Patient would like to walk up to 2 hours daily with mild pain only.

Current ability (1-10): 2

Current level of function: Patient went shopping had significant hip pain after about 30 min.

Short term goal: Patient would like to walk for 1 hour daily with moderate pain only.

Long term goal: Patient would like to walk for 2 hours daily with mild pain only.

## Goal #3

Desired goal: Patient would like to learn to accept mild to moderate pain.

Current ability (1-10): 5

Current level of function: Patient has increased acceptance of pain.

Short term goal: Patient would like to increase acceptance of moderate pain.

Long term goal: Patient would like to increase acceptance of mild to moderate pain.

## Program Performance

Patient has followed Vx Pain Relief Program without difficulty.

Patient has concerns about operating Vx Virtual Therapy Device.

Concerns: Patient is distracted by low memory warnings and wants new programs to view.

## Assessment and Plan

Impairments:

- increase in range of motion
- no change in activity tolerance
- increase in pain limiting function
- no change in strength
- no change in endurance
- increase focus due to pain
- no change in anxiety levels
- no change in sleep

Plan: Patient to follow Vx Pain Relief Program with clinical oversight per physician order.

Recommendations/Summary: Patient is using the Vx as prescribed and without significant technical issues. Patient reported a significant decrease in pain and anxiety during and after Vx sessions. Patient said that his ability to do chores and to mentally accept pain has increased. Patient also noted increased range of motion and ability to concentrate/focus. Patient said that the thought of the pain decreasing on such a significant level was "unimaginable." Patient also noticed decreased depression symptoms and said that interest and pleasure in doing chores and reading has increased. Patient said that he is taking Kratom for pain and mood/anxiety issues. Patient said that he is worried he might become dependent on Kratom. This clinician encouraged Patient to consult with his PMD regarding Kratom use. This clinician will call on Friday for his next Weekly Call.

## PHQ-2

Over the last 2 weeks, how often have you been bothered by the following problems?

|                                                | Initial Score | Re-Evaluation Score | Improvement % |
|------------------------------------------------|---------------|---------------------|---------------|
| 1. Little interest or pleasure in doing things | 3             | 1                   | 67%           |
| 2. Feeling down, depressed or hopeless         | 3             | 1                   | 67%           |





|       |   |   |     |
|-------|---|---|-----|
| Total | 6 | 2 | 67% |
|-------|---|---|-----|

Patient has improved their overall PHQ-2 score from a 6 to a 2 for an overall improvement of 67%.

## Roland Morris

|                                      |                      |              |                      |
|--------------------------------------|----------------------|--------------|----------------------|
|                                      | <b>Initial Score</b> | <b>Score</b> | <b>Improvement %</b> |
| 0 = No Disability, 24=Max Disability | 15                   | 7            | 53%                  |

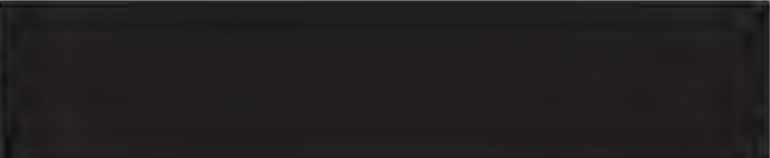
Patient has improved their overall Roland Morris score from a 15 to a 7 for an overall improvement of 53%.

## PROMIS 29

*Note: Raw data is converted to Tscore with mean of 50 and SD of 10*

|                                                       | <b>Initial Consult</b> | <b>Re-Evaluation</b> | <b>Improvement</b> |
|-------------------------------------------------------|------------------------|----------------------|--------------------|
| Physical Function                                     | 11                     | 17                   | 55%                |
| Anxiety                                               | 8                      | 7                    | 12%                |
| Depression                                            | 14                     | 10                   | 29%                |
| Fatigue                                               | 17                     | 8                    | 53%                |
| Sleep Disturbance                                     | 20                     | 11                   | 45%                |
| Ability to Participate in Social Roles and Activities | 5                      | 12                   | 140%               |
| Pain Interference                                     | 16                     | 5                    | 69%                |
| <br>Pain Intensity                                    | <br>6                  | <br>3                | <br>50%            |

In the past 7 days: Patient has improved in the following categories: Physical Function: 55%, Anxiety: 12%, Depression: 29%, Fatigue: 53%, Sleep Disturbance: 45%, Ability to Participate in Social Roles/Activities: 140%, and Pain Interference: 69%. Patient has not improved in the following categories: . Patient's pain intensity has decreased by: 50%.

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## Re-Evaluation

**Patient Name:** [REDACTED]  
**Physician:** [REDACTED]  
**Personal Clinician:** [REDACTED]

**Visit Date:** 12-14-19  
**Patient Date of Birth:** [REDACTED]

### Patient Status Update

Average pain level prior to starting Virtual Reality Therapy (1-10): 3

Amount of time spent thinking of pain per day (hrs/min): 5hrs

Patient is currently working 0 hours per week and current level of function at work is 0%.

Pain decreasing while using Virtual Reality Therapy (VRT).

Details: Patient has not used the Vx but said his "brain is learning" to ignore pain.

Average pain level during VRT sessions (1-10): 3

Length of time after VRT session that pain stays decreased (hrs/min): 2

Using a scale of 1 (no immersion) to 10 (total immersion), the perceived immersion level during VRT: 10

Using a scale of 1 (no benefit) to 10 (extreme benefit), the patient rated the benefit of his VRT sessions: 10

Additional comments on immersion and benefits of VRT: Patient said that his pain is not increasing even though he didn't use the Vx this week.

Using a scale of 1 (no awareness) to 10 (total awareness), current awareness of:

Pain: 3

Anxiety: 1

### Symptoms

Body parts involved: Patient reports pain in lower back, hip, both knees, and left foot.

Characteristics: dull, ache

Difficulty performing: bending, sleeping

Patient statement about symptoms: Patient said that he still cannot engage in certain movements and that his symptoms remain unchanged. He did report decreased pain intensity.

Feel better: walking, bending forward, sleeping, climbing

Feel worse: walking, bending forward, sleeping, climbing, stress, anxiety, activity

### Goal #1

Desired goal: Patient wants to be able to complete chores without taking a break and with decreased pain.

Current ability (1-10): 7

Current level of function: Patient reported meeting this short term goal.





Short term goal: Patient would like to complete chores with one break and moderate pain only.  
Long term goal: Patient would like to complete chores with minimal pain and without breaks.

## Goal #2

Desired goal: Patient would like to walk up to 2 hours daily with mild pain only.  
Current ability (1-10): 6  
Current level of function: Patient reports progress toward his short term goal.  
Short term goal: Patient would like to walk for 1 hour daily with moderate pain only.  
Long term goal: Patient would like to walk for 2 hours daily with mild pain only.

## Goal #3

Desired goal: Patient would like to learn to accept mild to moderate pain.  
Current ability (1-10): 10  
Current level of function: Patient reports meeting this long term goal.  
Short term goal: Patient would like to increase acceptance of moderate pain.  
Long term goal: Patient would like to increase acceptance of mild to moderate pain.

## Program Performance

Patient has followed Vx Pain Relief Program without difficulty.

Patient comfortable operating Vx Virtual Therapy Device and understands treatment.

## Assessment and Plan

Impairments:

- increase in range of motion
- increase in activity tolerance
- increase in pain limiting function
- no change in strength
- increase in endurance
- increase focus due to pain
- decrease in anxiety levels
- increase in sleep

Plan: Patient to follow Vx Pain Relief Program with clinical oversight per physician order.

Recommendations/Summary: Patient completed a 30 day re-evaluation. Patient did not use this week due to workers compensation issues. Patient reports a significant decrease in pain during and after Vx sessions over the course of treatment. Patient said that his "brain is learning" to ignore pain. Patient said that the Vx helps him to manage pain, decrease anxiety, and to increase sleep quality/duration, endurance, daily activities, and focus. Patient has met a short term goal and a long term goal. Also made progress toward another goal. Patient did not report any technical issues, completed all questionnaires and scheduled his next call.

## PHQ-2

Over the last 2 weeks, how often have you been bothered by the following problems?

|                                                | Initial Score | Re-Evaluation Score | Improvement % |
|------------------------------------------------|---------------|---------------------|---------------|
| 1. Little interest or pleasure in doing things | 3             | 0                   | 100%          |
| 2. Feeling down, depressed or hopeless         | 3             | 0                   | 100%          |
| Total                                          | 6             | 0                   | 100%          |

Patient has improved their overall PHQ-2 score from a 6 to a 0 for an overall improvement of 100%.

## PHQ-2







Over the last 2 weeks, how often have you been bothered by the following problems?

|                                                | Initial Score | Re-Evaluation Score | Improvement % |
|------------------------------------------------|---------------|---------------------|---------------|
| 1. Little interest or pleasure in doing things | 3             | 0                   | 100%          |
| 2. Feeling down, depressed or hopeless         | 3             | 0                   | 100%          |
| Total                                          | 6             | 0                   | 100%          |

Patient has improved their overall PHQ-2 score from a 6 to a 0 for an overall improvement of 100%.

## Roland Morris

|                                      | Initial Score | Score | Improvement % |
|--------------------------------------|---------------|-------|---------------|
| 0 = No Disability, 24=Max Disability | 15            | 6     | 60%           |

Patient has improved their overall Roland Morris score from a 15 to a 6 for an overall improvement of 60%.

## Roland Morris

|                                      | Initial Score | Score | Improvement % |
|--------------------------------------|---------------|-------|---------------|
| 0 = No Disability, 24=Max Disability | 15            | 6     | 60%           |

Patient has improved their overall Roland Morris score from a 15 to a 6 for an overall improvement of 60%.

## PROMIS 29

*Note: Raw data is converted to Tscore with mean of 50 and SD of 10*

|                                                       | Initial Consult | Re-Evaluation | Improvement |
|-------------------------------------------------------|-----------------|---------------|-------------|
| Physical Function                                     | 11              | 16            | 45%         |
| Anxiety                                               | 8               | 7             | 12%         |
| Depression                                            | 14              | 4             | 71%         |
| Fatigue                                               | 17              | 8             | 53%         |
| Sleep Disturbance                                     | 20              | 13            | 35%         |
| Ability to Participate in Social Roles and Activities | 5               | 17            | 240%        |
| Pain Interference                                     | 16              | 11            | 31%         |
| Pain Intensity                                        | 6               | 4             | 33%         |

In the past 7 days: Patient has improved in the following categories: Physical Function: 45%, Anxiety: 12%, Depression: 71%, Fatigue: 53%, Sleep Disturbance: 35%, Ability to Participate in Social Roles/Activities: 240%, and Pain Interference: 31%. Patient has not improved in the following categories: . Patient's pain intensity has decreased by: 33%.

## PROMIS 29

*Note: Raw data is converted to Tscore with mean of 50 and SD of 10*





|                                                       | Initial Consult | Re-Evaluation | Improvement |
|-------------------------------------------------------|-----------------|---------------|-------------|
| Physical Function                                     | 11              | 16            | 45%         |
| Anxiety                                               | 8               | 7             | 12%         |
| Depression                                            | 14              | 4             | 71%         |
| Fatigue                                               | 17              | 8             | 53%         |
| Sleep Disturbance                                     | 20              | 13            | 35%         |
| Ability to Participate in Social Roles and Activities | 5               | 17            | 240%        |
| Pain Interference                                     | 16              | 11            | 31%         |
| Pain Intensity                                        | 6               | 4             | 33%         |

In the past 7 days: Patient has improved in the following categories: Physical Function: 45%, Anxiety: 12%, Depression: 71%, Fatigue: 53%, Sleep Disturbance: 35%, Ability to Participate in Social Roles/Activities: 240%, and Pain Interference: 31%. Patient has not improved in the following categories: . Patient's pain intensity has decreased by: 33%.

[REDACTED]

This document was electronically signed on 12-17-19 at 09:32p by [REDACTED].





## Discharge

**Patient Name:** [REDACTED]

**Physician:** [REDACTED]

**Personal Clinician:** [REDACTED]

**Visit Date:** 01-14-20

**Patient Date of Birth:** [REDACTED]

### Patient Status Update

Average pain level prior to starting Virtual Reality Therapy (1-10): 3

Amount of time spent thinking of pain per day (hrs/min): 0

Patient is currently working 0 hours per week and current level of function at work is 0%.

Pain decreasing while using Virtual Reality Therapy (VRT).

Average pain level during VRT sessions (1-10): 1

Length of time after VRT session that pain stays decreased (hrs/min): 2hrs

Using a scale of 1 (no immersion) to 10 (total immersion), the perceived immersion level during VRT: 10

Using a scale of 1 (no benefit) to 10 (extreme benefit), the patient rated the benefit of his VRT sessions: 10

Additional comments on immersion and benefits of VRT: Patient said "everything is positive overall an excellent experience." Patient said that the Vx got his "mind off the pain completely."

Using a scale of 1 (no awareness) to 10 (total awareness), current awareness of:

Pain: 2

Anxiety: 1

### Symptoms

Body parts involved:

Patient reports pain in lower back, hip, both knees, and left foot.

Characteristics: stabbing, dull, ache

Difficulty performing: standing, concentrating on tasks, activities of daily living

Patient statement about symptoms: Patient said that he is walking with decreased pain and increased stamina.

Feel better: walking, bending forward

Feel worse: walking, bending forward, sleeping, anxiety

### Goal #1

Desired goal: Patient wants to be able to complete chores without taking a break and with decreased pain.

Current ability (1-10): 9

Current level of function: Patient met long term goal.

Short term goal: Patient would like to complete chores with one break and moderate pain only.





Long term goal: Patient would like to complete chores with minimal pain and without breaks.

## Goal #2

Desired goal: Patient would like to walk up to 2 hours daily with mild pain only.

Current ability (1-10): 10

Current level of function: Patient met long term goal.

Short term goal: Patient would like to walk for 1 hour daily with moderate pain only.

Long term goal: Patient would like to walk for 2 hours daily with mild pain only.

## Goal #3

Desired goal: Patient would like to learn to accept mild to moderate pain.

Current ability (1-10): 10

Current level of function: Patient met long term goal.

Short term goal: Patient would like to increase acceptance of moderate pain.

Long term goal: Patient would like to increase acceptance of mild to moderate pain.

## Program Performance

Patient has followed Vx Pain Relief Program without difficulty.

Patient comfortable operating Vx Virtual Therapy Device and understands treatment.

## Assessment and Plan

Impairments:

- increase in range of motion
- increase in activity tolerance
- increase in pain limiting function
- increase in strength
- increase in endurance
- increase focus due to pain
- decrease in anxiety levels
- increase in sleep

Plan: Patient to follow Vx Pain Relief Program with clinical oversight per physician order.

Recommendations/Summary: Patient completed the discharge call. Patient used the Vx system as prescribed. Patient reported a significant decrease in pain during and after Vx sessions over the past 90 days of treatment. Patient reported meeting all of his long term goals. Patient said "everything is positive overall an excellent experience." Patient said that the Vx got his "mind off the pain completely." Patient did not report any technical issues and completed all questionnaires. Patient said he will send the Vx back ASAP.

## PHQ-2

Over the last 2 weeks, how often have you been bothered by the following problems?

|                                                | Initial Score | Discharge Score | Improvement % |
|------------------------------------------------|---------------|-----------------|---------------|
| 1. Little interest or pleasure in doing things | 3             | 0               | 100%          |
| 2. Feeling down, depressed or hopeless         | 3             | 0               | 100%          |
| Total                                          | 6             | 0               | 100%          |

Patient has improved their overall PHQ-2 score from a 6 to a 0 for an overall improvement of 100%.

## Roland Morris

| Initial Score | Score | Improvement % |
|---------------|-------|---------------|
|               |       |               |





0 = No Disability, 24=Max Disability

15

7

53%

Patient has improved their overall Roland Morris score from a 15 to a 7 for an overall improvement of 53%.

**PROMIS 29**

Note: Raw data is converted to Tscore with mean of 50 and SD of 10

|                                                       | Initial Consult | Discharge | Improvement |
|-------------------------------------------------------|-----------------|-----------|-------------|
| Physical Function                                     | 11              | 15        | 36%         |
| Anxiety                                               | 8               | 4         | 50%         |
| Depression                                            | 14              | 4         | 71%         |
| Fatigue                                               | 17              | 13        | 24%         |
| Sleep Disturbance                                     | 20              | 12        | 40%         |
| Ability to Participate in Social Roles and Activities | 5               | 16        | 220%        |
| Pain Interference                                     | 16              | 8         | 50%         |
| Pain Intensity                                        | 6               | 2         | 67%         |

In the past 7 days: Patient has improved in the following categories: Physical Function: 36%, Anxiety: 50%, Depression: 71%, Fatigue: 24%, Sleep Disturbance: 40%, Ability to Participate in Social Roles/Activities: 220%, and Pain Interference: 50%. Patient has not improved in the following categories: . Patient's pain intensity has decreased by: 67%.

**Pain Catastrophizing Scale**

|                                                                                        | Baseline Score          | Discharge Score         | Improvement % |
|----------------------------------------------------------------------------------------|-------------------------|-------------------------|---------------|
| <b>Rumination</b><br>"I can't stop thinking about how much it hurts"                   | 2 Under 50th percentile | 0 Under 50th percentile | 100.00%       |
| <b>Magnification</b><br>"I worry that something serious may happen"                    | 0 Under 50th percentile | 0 Under 50th percentile | 100.00%       |
| <b>Helplessness</b><br>"There is nothing I can do to reduce the intensity of the pain" | 4 Under 50th percentile | 0 Under 50th percentile | 100.00%       |
| <b>PCS Total</b>                                                                       | 6 Under 50th percentile | 0 Under 50th percentile | 100.00%       |

Patient has improved in their overall PC score, improving from an overall low risk for development of chronicity to a low risk

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