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# Purpose of this Document

The Michigan Arthroplasty Registry Collaborative Quality Initiative (MARCQI) is a collaboration of Michigan hospitals funded by Blue Cross Blue Shield of Michigan/Blue Care Network whose goal is to improve the quality of care to patients having a total hip or knee replacement. It is the mission of MARCQI and participating members to make Michigan the best place in the world to have a joint replacement surgery.

Your office has decided to work with MARCQI and other providers across Michigan to obtain Patient Reported Outcome (PRO) surveys on patients that have their hip or knee joint replaced. PRO collection is a very powerful tool that helps provider's better care for both the individual patient completing the PRO survey, as well as other patients across Michigan who will be having joint replacements in the future.

While a doctor can judge the clinical outcome of the surgery, only the patient can convey how much they have improved after surgery. Your patients are being asked to complete a survey about how their health and lifestyle have been affected by hip or knee pain and/or stiffness. The patients will be asked the same questions before surgery and at regular intervals after surgery, so the doctor can measure the patient's progress. The survey consists of 19–20 questions and usually takes less than five minutes for a patient to complete.

A successful PRO collection system requires a committed doctor and office staff. This document is intended to guide you through the process of successfully setting up a PROs collection system in your office; however the ultimate success rate will depend on the effort of the doctor and staff. In 2015, The MARCQI PROs committee conducted an eight month Clinic Module pilot and successfully obtained a pre-op and a post-op PRO for over 80% of patients. The committee recommends the use of a tablet for PRO collection in the office; however your office may adapt this process to best meet the individual needs of your office by using paper and/or email collection methods. A back-up paper system should be accessible in the event that the Clinic Module is unavailable.

## Materials Needed

In order to successfully implement a PRO Collection system, you will need the following:

- A minimum of two internet accessible electronic tablets, laptops, or computer kiosks for patient use. Procurement, set up, and maintenance of the chosen device is the responsibility of the office.
- An internet connection (for best compatibility, we recommend Chrome, Firefox, or IE9 and newer).
- A minimum of two office employees committed to PRO collection.
- Support of surgeons in the office.
- Paper PRO forms for internet or computer downtime.
- Attend a PRO training webinar provided by the MARCQI Coordinating Center.

## PRO Collection Process Overview





### Sign into the MARCQI database with your Quick Registration User ID

- Pre-op PROs are collected when an elective Hip or Knee replacement/revision is scheduled (for patients 18 years and older).
- ➤ Post-op PROs are collected after surgery at 5-13 weeks post-op, 1, 2, 5, and 10 years post-op.



#### Register the patient and case in the MARCQI Database

- Perform a search to determine if patient exists in the database.
- > If patient is found, confirm birthdate and proceed to add a new case.
- If patient is not found, proceed to add the patient and case.
- Save the information and log out of Quick Registration.



### Sign into the MARCQI database with your Clinic Module or PRO User ID

- Verify that the "Welcome" screen is visible on the tablet or kiosk.
- Explain the survey to the patient and offer assistance if needed.
- The patient will be prompted to answer 18-20 questions, which should take less than 5 minutes.



### Receive the tablet and results from the patient

- > Staff will record the displayed survey score in the patient's record and provide the exit ID of 1234 to return to the "Welcome" Screen.
- ➤ If the patient provided an email address, a PRO survey link will be sent electronically at 5-13 weeks, 1, 2, 5, and 10 years post-operatively.



### Review PRO data in the database

- Individual patient scores and trends.
- Status reports to track collection efforts:
  - ✓ A pre-operative PROS completion list
  - ✓ A post-operative PROS forecast

## Clinic Module Overview

The Clinic Module is a secure webpage that is available through an internet connection via a tablet, laptop, computer kiosk, or email link. It is programmed to administer the HOOS JR<sup>1</sup>, KOOS JR<sup>2</sup>, PROMIS<sup>®3</sup>, and 3 supplemental CJR<sup>4</sup> questions. The data collected in the Clinic Module is transmitted securely via SSL protocol and meets HIPAA and HITECH Act privacy and security requirements.

The Clinic Module will populate the appropriate questionnaire, depending on which joint the patient is having replaced and will prompt the patient to answer each question, provide an email address, and display a final score upon completion. The scores are calculated upon completion of the surveys and can be recorded in the office record. All answers and scores are transmitted to the database in real time.

# Obtaining Access to the Database and Clinic Module

The office staff will need two separate User IDs; one to access the database and register patients, and a second User ID for patient access to the PROS Clinic Module for survey completion. Signing in to both applications will be done through the same web link: <a href="https://marcqi.ortechsystems.com">https://marcqi.ortechsystems.com</a>. Each User ID will have different database access that will direct the user to the appropriate database screen.

Access can be obtained by submitting a User Registration Form to the MARCQI Coordinating Center. This form is available on the MARCQI.org website or by contacting the Coordinating Center directly. Once the appropriate paperwork is received by the Coordinating Center, the user will be granted access within 1–2 weeks. Along with obtaining the appropriate access, the office employee will be asked to attend a brief webinar (or view the recording) which explains the patient registration and clinic module process. Please contact the MARCQI Coordinating Center for registration forms and additional information.

# MARCQI Qualifying Cases

Pre-op PROs should be collected on patients over the age of 18 who are being scheduled for a hip or knee arthroplasty or revision. This includes the following scheduled, elective cases: uni-lateral, bi-compartmental, and tri-compartmental knee arthroplasties, total hip arthroplasties, and hip and knee arthroplasty revisions.

Post-op PROS should be collected on patients **between 5-13 weeks post-op** and again **between 9-13 months post-op**. MARCQI is also recommending PRO survey collection at 2, 5, and 10 years post-op.

<sup>1</sup>HOOS JR-Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement <sup>2</sup>KOOS JR- Knee Injury and Osteoarthritis Outcome Score for Joint Replacement

<sup>3</sup>PROMIS® 10-Patient-Reported Outcomes Measurement Information System

<sup>4</sup>CJR- Comprehensive Care for Joint Replacement

# Survey Intervals

Patients can complete the Clinic Module or paper survey at any time and as often as you choose; all results will be stored in the database for analysis. However, MARCQI recommends PRO capture according to the timeline below. The MARCQI application will use these timeframes for email notifications and tracking/reporting. The application will also assign follow-up labels to each survey collected based on these date calculations. Any surveys collected outside of the timeframes below will be accepted and stored in the database; however they will be labeled as an "Unscheduled" follow-up survey.



• Patients that provide an email address will also receive an auto-generated email at the following intervals:



# **Email Survey Completion**

The patient will be given the opportunity to submit an email address for post-operative PRO completion. When the patient provides their email address, an auto-generated email will be sent to the address on file at the designated intervals. Two additional reminder emails will be generated by the MARCQI application if the patient does not complete the survey after 48 hours. The auto emailer logic algorithm runs nightly and sends emails at the designated follow-up dates based on the date of surgery. See the <u>Auto Emailer Logic</u> section for specific auto-email date parameters.

The auto-generated email does not contain specific patient identifiers and will include a web link to the secure site where the patient can complete the PRO survey. For a sample patient email, refer to the <u>Sample Patient Email</u> section of this document. Each email link will expire within seven days. If the patient fails to complete the PRO survey via email link within seven days, the office staff will need to manually resend the email or obtain the PROs by other means.

The office will be alerted as to which patients are due for a PRO by means of the Post-op PRO forecast report, as described in the <u>Reports & Follow up</u> section of this manual. When using email to collect the post-operative surveys, the post-operative PROS notification emails will be generated according to the following schedule:

#### **Initial Post-op PRO**

- •1st email sent at 5 weeks Post-op
- •If no response after 48 hours, a reminder email is sent.
- If no response after 2 reminders, the PRO survey will need to be collected by other methods.
- Patient will remain on the Post-op PRO forecast until a survey is completed or until the patient is no longer in the 5-13 week post-op timeframe.



### 1, 2, 5, and 10 Year Post-op PRO

- Additional emails will be sent 3 months prior to the 1, 2, 5, and 10 year post-op marks.
- •If no response after 48 hours, a reminder email is sent.
- •If no response after 2 reminders, the PRO will need to be collected by other means.
- Patient will remain on the Post-op PRO forecast until a survey is completed or until the patient is no longer in the specified timeframe.

# Paper Survey Completion

A final option for PRO completion is by means of paper however, this is not recommended for routine collection. A copy of the paper surveys can be found in the <u>Paper Surveys</u> section of this manual. All surveys obtained on paper must be entered into the database by the office staff.

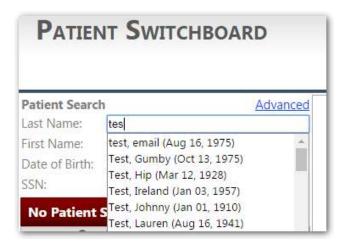
Patients that are being scheduled for a MARCQI qualifying procedure or are due for a post-operative survey should be asked to complete PROS in the office. A forecast report of the patients due for a post-operative PRO at your office will be provided. Please see the *Reports & Follow up* section for additional details. The office staff will need to explain the objective and importance of completing the questionnaire on a routine basis. The MARCQI Coordinating Center strongly suggests using the script provided on page 9 each time a PRO survey is being collected.

# Patient Registration Instructions

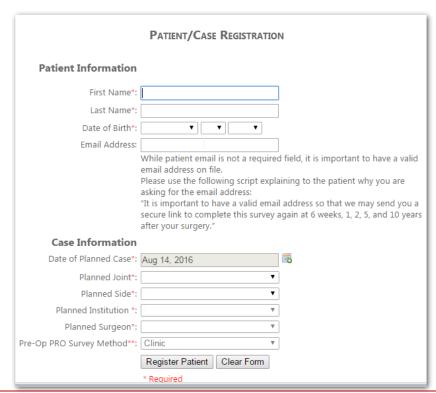
Prior to accessing the Clinic Module, the patient and case must be registered in the MARCQI Database. To register a patient or case, follow the steps below:

1. Sign into the database at <a href="https://marcqi.ortechsystems.com">https://marcqi.ortechsystems.com</a> with your Registration User ID and password.

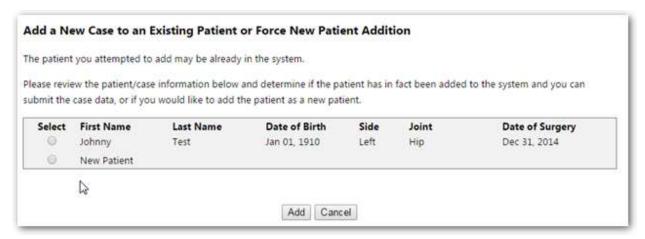
2. Perform a patient search to determine if the patient already exists in the database. This can be accomplished by typing, at a minimum, the first three letters of the patient's last name into the Patient Search box.



- 3. If you find the patient, click on their name and proceed to register the new case by selecting the "Add a New Case" icon.
- 4. If you do not find the patient, register the patient by clicking on the "Add a New Patient" icon.
- 5. You will be directed to the "Quick Registration" page. You will need to provide the patients first name, last name, date of birth, planned date of surgery, planned joint, planned side, planned hospital, and planned surgeon.



- 6. After entering all required fields, select "Register Patient".
- 7. If the patient details are similar to a patient already in the database, you will receive a warning that the patient may already exist in the database. In this case, you will need to verify if it is the same patient or request to add the new patient. To do this, select the appropriate radio box to the left of the patient selections and the click the "Add" button as pictured below:



8. Once the patient is registered into the database, log out of Quick Registration and proceed to the Clinic Module so that the patient can complete the survey.

## Clinic Module Instructions

To access the Clinic Module:

- 1. Sign into the database at <a href="https://marcqi.ortechsystems.com">https://marcqi.ortechsystems.com</a> with your PRO User ID and password on the patient designated tablet or computer. You will be directed to the "Welcome Screen" of the Clinic Module.
- 2. Hand the tablet over to the patient and explain the purpose and importance of the PRO survey. We strongly suggest using the following script:

"Orthopedic surgeons across Michigan are asking that patients like you fill out this survey to help better understand how you feel before and after your joint replacement. It will help us track your individual progress and also help us, as a group, determine those things that work best for all of our patients. Your doctor thinks that this is a very important project, and really appreciates you taking a few minutes to do this today. At specified times after your surgery, you will be asked to complete the same questionnaire. When prompted, please fill in your email address to receive the post-op questionnaire by email. This may allow us to save you an office visit for follow-up, which many patients like. The entire survey takes less than 5 minutes to complete and your answers are completely confidential."

3. Assist the patient with accessing the survey. Have the patient read the welcome screen, then select "CLICK HERE TO BEGIN" at the bottom right of the screen:



4. The patient will be directed to the Patient Identification Screen. Instruct the patient to enter their last name with the exact spelling that you registered, and click "Next" at the bottom right of the screen. *Note:* The patient must be registered in the database with the same spelling prior to accessing the Clinic Module, see page 7 for patient registration instructions.



5. Instruct the patient to enter their date of birth, and click "Next" at the bottom right of the screen. *Note:* The patient must be registered in the database with the same date of birth prior to accessing the Clinic Module, see page 7 for patient registration instructions.



- 6. The patient will be asked to answer the HOOS JR or KOOS JR questions followed by the PROMIS 10 questions, and then the 3 CJR questions. Once the questions have been answered, the patient will be prompted for an email address. Encourage the patient to provide an email address in order to receive a link to complete the post-op questionnaires remotely.
- 3. Once complete, the patient will be directed to the Thank You screen. This screen will display the survey scores and instruct the patient to return the tablet to the office staff. Office staff may choose to record the score in the patient's chart at this time.

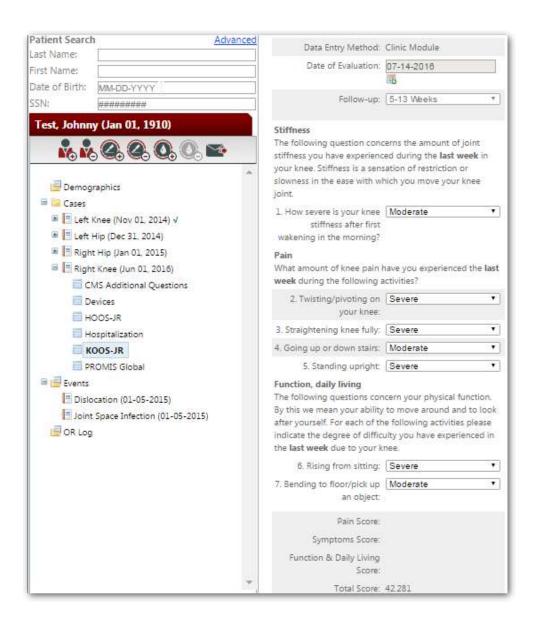


4. To exit the survey, select "Exit" at the bottom right of the screen. <u>Note</u>: Exit of a survey is passcode protected, and can only be accomplished by office staff with a passcode. Staff must enter the code "1234" to officially exit the survey. The module will then return to the Welcome Screen for the next patient to use.



## Results Retrieval

Scores and results can be reviewed for the individual patient or in a queried list of results. To review a specific patient's PROS results, locate the patient by performing a patient search and select the appropriate case. Once the case is selected, the PROS forms will display under the associated case. Select the survey you wish to review. You will be able to view the answer to each question and the score as pictured below.



To review a list of patient scores at your office, run one of the associated queries described in the *Reports & Follow up* section or contact the Coordinating Center for assistance.

# Reports & Follow up

The Data Mart section of the database contains several queries that will assist office staff in determining the status of their PRO collection efforts. These queries are available for select user IDs and include:

### Pre-op PROs Status (Previous Month)

> <u>Overview</u>: This query will return a list of patients who had a planned or actual date of surgery in the previous month and the status of their Pre-op PRO.

Uses: This query is intended to identify if a Pre-op PRO was captured on non-urgent/emergent cases in the previous month. It can be used to understand your PRO capture rate and identify potential opportunities for improvement in your Pre-op PRO collection process.

### Post-op PROs Forecast

- > <u>Overview</u>: This query will return a list of patients who are currently due for a Post-op PRO survey (i.e. Patients who are in the 5-13 week, 9-12 month, 2, 5, or 10 year post-operative timeframes) and who have not completed the survey set that is currently due.
- <u>Uses</u>: This query is intended to identify patients that are due for a PRO and have not yet completed the survey. It will also assist you in determining if a previous survey was completed.

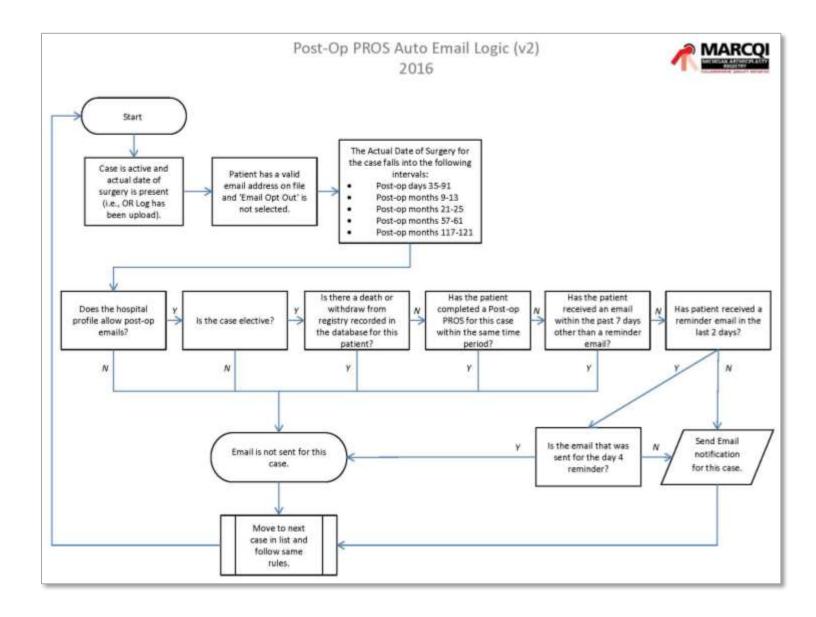
### **PROs Status Patient List**

- > <u>Overview</u>: This query will return a list of all patients and the status of each PRO. Physical addresses and email addresses are also provided.
- ► <u>Uses</u>: This query is intended to assist you with PRO capture beyond the clinic module and auto-generated emails. It alerts you to the status of PRO collection for each patient at the specified time frame. You can further pursue PRO capture by resending an email, or contacting the patient by mail. This survey can also help identify if a Preop PRO was captured on non-urgent/emergent cases in the previous month. This query can be used to understand your PRO capture rate and identify potential opportunities for improvement in your PRO collection process.

# Support

For support or training, please contact the MARCQI Coordinating Center by email at info@marcqi.org or by phone at 734-998-0495.

# Auto Emailer Logic



# Sample Patient Email

Dear Dr. Smith's Patient,

You are receiving this email because your surgeon would like you to complete a survey about how your pain or stiffness has affected your health and lifestyle. The survey should take about 3-5 minutes to complete and the link below will expire in 7 days.

Your surgeon is a member of Michigan Arthroplasty Registry Collaborative Quality Initiative (MARCQI), a statewide collaborative of doctors and hospitals all working together to improve the quality of care and outcomes for you and other patients undergoing joint replacement surgery in Michigan.

Your surgeon is asking you to fill out the same questions before surgery and at certain times after surgery in order to measure the progress you have made. Your privacy is important to us so your personal information will be kept confidential.

## To access the secure survey, please **CLICK HERE**

If the "click here" link above does not work, you can access the survey by following these instructions:

- Type the following into the location/address bar of your internet browser exactly as shown: MarcqiSurvey.ortechsystems.com (Note: a "www" is NOT required. The location bar can usually be found at the top of your internet browser.)
- 2. Enter your temporary MARCQI ID Number, which is: XX
- 3. Click Submit and follow the instructions on the screen.

If you have any questions please contact our office at XX and we would be happy to assist you. Thank you for assisting us in our mission of improving patient care.

Kind Regards,

Dr. Smith and the Michigan Arthroplasty Registry Collaborative Quality Initiative

## **HOOS JR Paper Survey**

Hip dysfunction and Osteoarthritis Outcome Score for Joint Replacement (HOOS, JR.), English version 1.0

# HOOS, JR. HIP SURVEY

**INSTRUCTIONS:** This survey asks for your view about your hip. This information will help us keep track of how you feel about your hip and how well you are able to do your usual activities.

Answer every question by ticking the appropriate box, <u>only</u> one box for each question. If you are unsure about how to answer a question, please give the best answer you can.

Pain					
What amount of	hip pain have you	u experienced the	last week duri	ng the	
following activitie		•			
1. Going up or dov		M 1 /	a	Г	
None	Mild	Moderate	Severe	Extreme	
2. Walking on an u	uneven surface				
None	Mild	Moderate	Severe	Extreme	
Function, daily I	iving				
The following qu	uestions concern	your physical fur	nction. By this	we mean your ability	to move
around and to lo	ook after yourself	. For each of the	following activi	ties please indicate t	he degree of
difficulty you have	ve experienced ir	n the <b>last week</b> d	ue to your hip.		
3. Rising from sitt	~		~	-	
None	Mild	Moderate	Severe	Extreme	
4 Rending to floo	r/pick up an object				
None	Mild	Moderate	Severe	Extreme	
	rning over, maintai		~	_	
None	Mild	Moderate	Severe	Extreme	
6. Sitting					
o. Diung					

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Extreme

None

Mild

Severe

Moderate

## KOOS JR Paper Survey

Knee Injury and Osteoarthritis Outcome Score for Joint Replacement (KOOS, JR.), English version 1.0

# KOOS, JR. KNEE SURVEY

**INSTRUCTIONS:** This survey asks for your view about your knee. This information will help us keep track of how you feel about your knee and how well you are able to do your usual activities. Answer every question by ticking the appropriate box, <u>only</u> one box for each question. If you are unsure about how to answer a question, please give the best answer you can.

#### **Stiffness**

The following question concerns the amount of joint stiffness you have experienced during the **last week** in your knee. Stiffness is a sensation of restriction or slowness in the ease with which you move your knee joint.

1. How severe is your None □	knee stiffness at Mild	iter first wakening Moderate	in the morning? Severe	Extreme	
<b>Pain</b> What amount of kne	ee pain have yo	ou experienced th	ne <b>last week</b> du	uring the following act	ivities?
2. Twisting/pivoting of None □	on your knee Mild	Moderate □	Severe	Extreme	
3. Straightening knee None □	fully Mild □	Moderate □	Severe	Extreme	
4. Going up or down s  None  □	stairs Mild □	Moderate	Severe	Extreme	
5. Standing upright None □	Mild □	Moderate	Severe	Extreme	
• •	tions concern after yourself.	For each of the	following activi	we mean your ability ties please indicate t e.	
6. Rising from sitting None □	Mild □	Moderate  □	Severe	Extreme	
7. Bending to floor/pio None □	ck up an object Mild □	Moderate	Severe	Extreme	

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# PROMIS-10 Paper Survey

PROMIS v.1.0/1.1 - Global					
15000000		le			
Please respond to each item by marking one bo	x per row.				
	Excellent	Very good	Good	Fair	Poor
In general, would you say your health is:	,				
In general, would you say your quality of life is:	\$	4	3	2	1
In general, how would you rate your physical health?	<u> </u>	<u> </u>	٦	2	-
In general, how would you rate your mental health, including your mood and your ability to think?	ņ	<u> </u>	3	1	
In general, how would you rate your satisfaction with your social activities and relationships?	5	<u> </u>	3	1	1
In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)		<b>-</b>	3		-
	Completely	Mostly	Moderately	A little	Not at all
To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a chair?		D.			
	In general, would you say your health is:  In general, would you say your quality of life is:  In general, how would you rate your physical health?  In general, how would you rate your mental health, including your mood and your ability to think?  In general, how would you rate your satisfaction with your social activities and relationships?  In general, please rate how well you carry out your usual social activities and roles. (This includes activities at home, at work and in your community, and responsibilities as a parent, child, spouse, employee, friend, etc.)  To what extent are you able to carry out your everyday physical activities such as walking, climbing stairs, carrying groceries, or moving a	Please respond to each item by marking one box per row.    Excellent	Please respond to each item by marking one box per row.    Very good   Excellent   good	Please respond to each item by marking one box per row.    Excellent   Scale	Please respond to each item by marking one box per row.    Excellent   Very good   Good   Fair

	PROMIS v.1.0/1.1 - Global					
	In the past 7 days	Never	Rarely	Sometimes	Often	Always
Charles 10	How often have you been bothered by emotional problems such as feeling anxious, depressed or initable?	P	2	3	<u>.</u>	5
		None	Mild	Moderate	Severe	Very severe
OkabelOff	How would you rate your fatigue on average?	1	2	3	<u> </u>	5
Chance	How would you rate your pain on average? 0 1 2	3 4	,		8 9	10 Worst imaginable pain
3 <del></del>						
	© 2008-2012 PROMIS Health Organization and PROMIS	Cooperative G	roup	1	age 2 of 2	

# Supplemental CJR Questions Paper Survey

# Additional Patient Reported Outcomes Questions

ne BACK PAIN at ne ]	Mild  the moment i  Very Mild	Moderate s: Moderate  cout medical for	he last week in yo Severe  Fairly Severe  ms by yourself?  A little bit	Very Severe	Nip? Worst Imaginable □
ne ] comfortable mely	Very Mild □ e are you filling Quite a bit	Moderate   Gout medical for Somewhat	□ ms by yourself?	П	
] comfortable	□ e are you filling Quite a bit	out medical for	□ ms by yourself?	П	
mely	Quite a bit	Somewhat		Normali	
				Notatali	
	ters for Medic	ters for Medicare & Medicaid	ters for Medicare & Medicaid Services, 11/24/20	ters for Medicare & Medicaid Services, 11/24/2015	ters for Medicare & Medicaid Services, 11/24/2015