S1 File Page 1

e-Delphi Questionnaires

Note: questionnaires included branching logic and skip patterns and some questions appeared (or not) depending on respondents' previous answers.

Round 1

Please complete the questionnaire below.

Thank you!

Expert Consensus on a Standardized Definition and Classification for Adverse Events
Associated with Spinal and Peripheral Joint Manipulation and Mobilization: An International
E-Delphi Study

ROUND 1

Spinal and peripheral joint manipulation and mobilization are interventions commonly used by a variety of healthcare professionals (e.g. chiropractors, naprapaths, naturopaths, osteopaths, physiotherapists, etc.) in the management of many musculoskeletal conditions, including spinal pain, and are most often administered in ambulatory care settings. These interventions are described by a vast array of terms, including high-velocity low-amplitude manipulation, low-velocity variable-amplitude mobilization, spinal manipulative therapy, musculoskeletal manipulation/mobilization, etc.

In this study:

[Technical definitions]

Manipulation refers to a passive, high velocity low amplitude thrust applied to a joint complex within its anatomical limit with the intent to restore optimal motion, function, and/or to reduce pain; and

Mobilization refers to a passive articulatory movement applied to a single joint or joints in close proximity to eachother with the intent to restore optimal motion, function, and/or to reduce pain [1].

[Lay definitions]

Manipulation (also called adjustment) refers to a treatment that involves the therapist applying one rapid force/thrust to a joint with the aim of relieving pain or stiffness; and

Mobilization refers to a treatment that involves the therapist applying a force repeatedly (at variable speeds and amplitudes) to a joint with the aim of relieving pain or stiffness.

Spinal refers to joints of the neck, mid and low back.

Peripheral joint refers to shoulder, arms, hands, fingers, hip, leg, foot and toes.

If, at any time during this questionnaire, you are unsure about any definition, please feel free to contact Martha Funabashi at mfunabashi@cmcc.ca.

1- Rushton A, Beeton K, Jordaan R, Langendoen J, Levesque L, Maffey L, Pool J (2016). IFOMPT Educational Standards Document. IFOMPT.

Part 1A - Adverse Event Definition	
How do you define an "adverse event"?	
What other terms or words do you use, that are similar to, or refer to an "adverse event"?	

If you have any questions about any definition, please contact Martha Funabashi at mfunabashi@cmcc.ca.

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Part 1A - Adverse Event Definition Cont.				
Would you use a different "adverse event"	definition	for:		
	Yes		No	
"manipulation" versus "mobilization"?	\circ		0	
"spinal" versus "peripheral" joint manipulation/mobilization	0		0	
Please provide your definition for an "adverse event" following: spinal or peripheral joint manipulation or mobilization? (please give examples where possible)				
Please provide your definition for an "adverse event" following: spinal manipulation or mobilization? (please give examples where possible)				
Please provide your definition for an "adverse event" following: peripheral joint manipulation or mobilization? (please give examples where possible)				
Please provide your definition for an "adverse event" following: spinal or peripheral joint manipulation? (please give examples where possible)				
Please provide your definition for an "adverse event" following: spinal or peripheral joint mobilization? (please give examples where possible)				
Please provide your definition for an "adverse event" following: spinal manipulation? (please give examples where possible)				
Please provide your definition for an "adverse event" following: peripheral joint manipulation? (please give examples where possible)				
Please provide your definition for an "adverse event" following: spinal mobilization? (please give examples where possible)				
Please provide your definition for an "adverse event" following: peripheral joint mobilization? (please give examples where possible)				



Please provide references, citations, or resources from which your "adverse event" definitions were derived.	
(e.g., references/citations, researcher/scientist/academic/organizations)	

If you have any questions about any definition, please contact Martha Funabashi at mfunabashi@cmcc.ca.



Part 1B - Adverse Event Classification	
How do you classify "adverse events"?	
Please provide a description for each classification stated.	

If you have any questions about any definition, please contact Martha Funabashi at mfunabashi@cmcc.ca.



Part 1C - Adverse Event Severity Classification				
For the following questions, we are focusing on the severity classification of "adverse events":				
Please select the word(s) you use to classify the severity of "adverse events" following spinal and peripheral joint manipulation and mobilization: (Select all that apply)	☐ Benign ☐ Catastrophic ☐ Fatal ☐ Major ☐ Mild ☐ Minor ☐ Moderate ☐ Serious ☐ Severe ☐ Other ☐ None			
Please specify the "other" word(s):				
How would you define a benign adverse event?				
Please provide example(s) of a benign adverse event.				
How would you define a catastrophic adverse event?				
Please provide example(s) of a catastrophic adverse event.				
How would you define a fatal adverse event?				
Please provide example(s) of a fatal adverse event.				
How would you define a major adverse event?				
Please provide example(s) of a major adverse event.				
How would you define a mild adverse event?				
Please provide example(s) of a mild adverse event.				



Please provide example(s) of a minor adverse event. How would you define a moderate adverse event?	
·	
How would you define a moderate adverse event?	
Please provide example(s) of a moderate adverse event.	
How would you define a serious adverse event?	
Please provide example(s) of a serious adverse event.	
How would you define a severe adverse event?	
Please provide example(s) of a severe adverse event.	
How would you define a [sev_class_categ_oth] adverse event?	
Please provide example(s) of a [sev_class_categ_oth] adverse event.	
Please provide references, citations, or resources that support the responses you provided, if applicable.	

If you have any questions about any definition, please contact Martha Funabashi at mfunabashi@cmcc.ca.



Part 2	-	General	Ca	mm	ents
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Please provide any further comments you feel are relevant regarding "adverse events" definition and/or their classification.



Thank you!

This is the end of the round 1 questionnaire. Thank you for your participation and contribution.

Round 1 is open until February 15th, 2022. We will analyse the results and develop a round 2 questionnaire using the statements you and other participants have provided, as well as results from a scoping review of the literature. We will provide you with a link to the round 2 questionnaire about 3 weeks after round 1 is complete.

Thank you for your time and commitment in assisting us to standardize the definition and severity classification of "adverse events" following spinal and peripheral joint manipulation and mobilization.

Best Regards,

Martha Funabashi, Lindsay Gorrell, Katie Pohlman, Andrea Bergna, Nicola Heneghan

If you have any questions, please contact: Martha Funabashi (mfunabashi@cmcc.ca)



AE Delphi - Round 2

EXPERT CONSENSUS ON A STANDARDIZED DEFINITION AND SEVERITY CLASSIFICATION FOR ADVERSE EVENTS FOLLOWING SPINAL AND PERIPHERAL JOINT MANIPULATION AND MOBILIZATION: AN INTERNATIONAL E-DELPHI STUDY

ROUND 2 Investigators:

- Martha Funabashi, BSc, MSc, PhD Canadian Memorial Chiropractic College (Canada)
- Lindsay M Gorrell, BChiroSc, MChiroprac, MRes, PhD University of Zurich (Switzerland)
- Katherine A Pohlman, DC, MS, PhD Parker University (USA)
- Andrea Bergna, Bsc, PT, DO SOMA Instituto Osteopatia Milano (Italy)
- Nicola R Heneghan, PhD, MSc, PG Cert HEd, Grad Dip Phys University of Birmingham (England)

REMINDER of study terms:

Spinal and peripheral joint manipulation and mobilization are interventions commonly used by a variety of healthcare professionals (e.g. chiropractors, naprapaths, naturopaths, osteopaths, physiotherapists, etc.) in the management of many musculoskeletal conditions, including spinal pain, and are most often administered in ambulatory care settings. These interventions are described by a vast array of terms, including high-velocity low-amplitude manipulation, low-velocity variable-amplitude mobilization, spinal manipulative therapy, musculoskeletal manipulation/mobilization, etc.

In this study: Manipulation (also called adjustment) refers to a treatment that involves the therapist applying one rapid force/thrust to a joint with the aim of relieving pain or stiffness; and

Mobilization refers to a treatment that involves the therapist applying a force repeatedly (at variable speeds and amplitudes) to a joint with the aim of relieving pain or stiffness.

Spinal refers to joints of the neck, mid and low back.

Peripheral joint refers to shoulders, arms, hands, fingers, hips, legs, feet and toes.

If, at any time during this questionnaire, you have any questions, please feel free to contact Martha Funabashi at mfunabashi@cmcc.ca.

Round 2 questions were developed based on findings from round 1 data (180 respondents) and a scoping review of the literature (69 studies) related to the definition and severity classification for adverse events following spinal and/or peripheral joint manipulation and/or mobilization. The questions include terms that were used by respondents and in the literature to define and classify the severity of adverse events following spinal and/or peripheral joint manipulation and/or mobilization. Estimated time for completion: 40 minutes.

DEFINITION

The following questions relate to the definition for adverse events following spinal and/or peripheral joint manipulation and/or mobilization.

Please rank your level of preference for each of the terms below:

	1-Most preferred	2	3	4	5-Least preferred
Deleterious	0	\circ	\circ	\circ	\circ
Detrimental	\bigcirc	\bigcirc	\circ	\bigcirc	\circ
Negative	\bigcirc	\bigcirc	\circ	\bigcirc	\circ
Unfavourable	\circ	\circ	\bigcirc	\bigcirc	\bigcirc

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Unpleasant O O O

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Please rank your level of preference for each of the terms below:					
	1-Most preferred	2	3	4-Least preferred	
Unanticipated	\circ	\circ	\circ	\circ	
Uncommon	\bigcirc	\bigcirc	\bigcirc	\circ	
Unexpected	\bigcirc	\bigcirc	\bigcirc	\circ	
Unusual	0	\circ	\circ	\circ	
Please consider the following terms:					
Which is your preferred term: Common C Expected					

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Please rank your level of preference for each of the terms below:					
	1-Most preferred	2	3	4-Least preferred	
Uncalled for	\circ	\bigcirc	\circ	\circ	
Undesired	\bigcirc	\bigcirc	\bigcirc	\circ	
Untoward	\circ	\bigcirc	\bigcirc	\circ	
Unwanted	\circ	\circ	\circ	\circ	

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Please rank your level of preference for each of the terms below:				
	1-Most preferred	2	3-Least preferred	
Unintended	\circ	\bigcirc	\bigcirc	
Unplanned	\circ	\bigcirc	\bigcirc	
Unwanted	\circ	\circ	\circ	

Please rank your level of preference for each of the terms below:					
	1-Most preferred	2	3	4-Least preferred	
Effect	\circ	\bigcirc	\bigcirc	\circ	
Outcome	\circ	\bigcirc	\bigcirc	\bigcirc	
Reaction	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
Response	\circ	\circ	\circ	\circ	

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Please rank your level of	of preference for each	ch of the te	erms below:		
	1-Most preferred	2	3	4	5-Least preferred
Aggravation	\circ	\bigcirc	\circ	\circ	\circ
Deterioration	\circ	\bigcirc	\bigcirc	\circ	\circ
Exacerbation	\circ	\bigcirc	\circ	\circ	\circ
Increased	\circ	\bigcirc	\bigcirc	\circ	\circ
Worsened	0	0	0	0	0
Please consider the following terms:					
Which is your preferred term	:	(After O Follow	wing	

Please indicate how much you agree with the statements below:					
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
An adverse event is	\circ	\circ	\circ	\bigcirc	\bigcirc
unfavourable. An adverse event is expected.	\bigcirc	\circ	\bigcirc	\bigcirc	\bigcirc
An adverse event is unexpected.	\bigcirc	\circ	\bigcirc	\circ	\bigcirc
An adverse event is unintended.	\bigcirc	\circ	\bigcirc	\circ	\bigcirc
An adverse event is undesired.	\bigcirc	\circ	\bigcirc	\circ	\bigcirc
The development of new signs, symptoms or disease is an adverse event.	0	0	0	0	0
The increase (or worsening) of signs, symptoms or disease is an adverse event.	0	0	0	0	0
The persistence of signs, symptoms or disease is an adverse event.	0	0	0	0	0
An adverse event can occur when no manipulation and/or mobilization is delivered (i.e., following assessments and/or examinations only).	0	0	0	0	0

Please read and apply the following operational definitions for the questions below:

Temporality: The state of existing within or having some relationship with time. For example, an outcome (i.e., adverse event) occurs after an exposure (i.e., spinal and/or peripheral joint manipulation and/or mobilization).

Causality: The relationship between cause and effect. For example, an exposure (i.e., spinal and/or peripheral joint manipulation and/or mobilization) caused the outcome (i.e., adverse event). Scientifically, the preferred research methodology to investigate causal relationships between an exposure and outcome is the randomized controlled trial where the exposure of interest and its relationship to the outcome is measured.[1]

Please note that for causality to be unequivocally established, the following criteria should be used: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimental evidence, and analogy.[2]

[1] Cartwright. What are randomised controlled trials good for? Philos Stud, 2010; 147:59-70. [2] Rothman & Greenland. Hill's criteria for causality. Encyclopedia of Biostatistics, 2005.

Please indicate how much you agree with the statements below:

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
An adverse event has a temporal relationship with spinal and/or peripheral joint manipulation and/or mobilization.	0	0	0	0	0
An adverse event is unequivocally caused by spinal and/or peripheral joint manipulation and/or mobilization.	0	0	0	0	0
"Adverse events related to manipulation and/or mobilization" has a similar meaning to "Adverse events caused by manipulation and/or mobilization".	0	0	0	0	0
"Adverse events associated with manipulation and/or mobilization" has similar meaning to "Adverse events caused by manipulation and/or mobilization".	0	0	0	0	0
How is it possible to unequivocally adverse event was caused by spin joint manipulation and/or mobiliza	al and/or peripher	al			

Please indicate if you agree with the statements below:			
	Yes	No	
"Unfavourable" and "deleterious" are similar.	O	0	
"Unfavourable" and "detrimental" are similar.	\circ	\circ	
"Unfavourable" and "negative" are similar.	0	0	
"Unfavourable" and "unpleasant" are similar.	0	0	

Please indicate if you agree with the statements below:			
	Yes	No	
"Unexpected" and "unanticipated" are similar.	0	0	
"Unexpected" and "uncommon" are similar.	0		
"Unexpected" and "unusual" are similar.	0	0	

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Please indicate if you agree with the following statement:	
	Т

"Expected" and "common" are similar.

○ Yes ○ No



Please indicate if you agree with the statements below:			
	Yes	No	
"Undesired" and "uncalled for" are similar.	0	\circ	
"Undesired" and "untoward" are similar.	0	0	
"Undesired" and "unwanted are similar.	0	0	

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Please indicate if you agree with the statements below:			
	Yes	No	
"Unintended" and "unplanned" are similar.	0	0	
"Unintended" and "unwanted" are similar.	0	\circ	

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Please indicate if you agree with the statements below:			
	Yes	No	
"Outcome" and "effect" are similar.	0	0	
"Outcome" and "reaction" are similar.	0	0	
"Outcome" and "response" are similar.	0	0	

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Please indicate if you agree with the statements below:			
"Increased (sign, symptom or disease)" and "aggravation of (sign, symptom or disease)" are similar.	Yes	No	
"Increased (sign, symptom or disease)" and "deterioration of (sign, symptom or disease)" are similar.	0		
"Increased (sign, symptom or disease)" and "exacerbation of (sign, symptom or disease)" are similar.	0		
"Increased (sign, symptom or disease)" and "worsened (sign, symptom or disease)" are similar.	0		

	Please indicat	e if vou	agree with the	following	statement
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"Following spinal and/or peripheral joint manipulation and/or mobilization" and "after spinal and/or peripheral joint manipulation and/or mobilization" are similar.

 \bigcirc Yes \bigcirc No

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Thank you for your responses so far. The next section includes example definitions based on our earlier findings.

Please keep the following operational definitions in mind for the next section:

Temporality: The state of existing within or having some relationship with time. For example, an outcome (i.e., adverse event) occurs after an exposure (i.e., spinal and/or peripheral joint manipulation and/or mobilization).

Causality: The relationship between cause and effect. For example, an exposure (i.e., spinal and/or peripheral joint manipulation and/or mobilization) caused the outcome (i.e., adverse event).[1]

Please note that for causality to be unequivocally established, the following criteria should be used: strength of association, consistency, specificity, temporality, biologic gradient, plausibility, coherence, experimental evidence, and analogy.[2]

- [1] Cartwright. What are randomised controlled trials good for? Philos Stud, 2010; 147:59-70.
- [2] Rothman & Greenland. Hill's criteria for causality. Encyclopedia of Biostatistics, 2005

	Agree as stated	Needs modification
"An adverse event is defined as any expected or unexpected, unfavourable, undesired and unintended outcome that occurs during or after spinal and/or peripheral joint manipulation and/or mobilization, whether or not caused by that manipulation and/or mobilization."		
"An adverse event is defined as any new or increased sign, symptom or disease that occurs during or after spinal and/or peripheral joint manipulation and/or mobilization, whether or		0



Please rate the following definitions:

not caused by that manipulation

and/or mobilization."

How would you change the proposed definition?	
"An adverse event is defined as any expected or unexpected, unfavourable, undesired and unintended outcome that occurs during or after spinal and/or peripheral joint manipulation and/or mobilization, whether or not caused by that manipulation and/or mobilization."	
How would you change the proposed definition?	
"An adverse event is defined as any new or increased sign, symptom or disease that occurs during or after spinal and/or peripheral joint manipulation and/or mobilization, whether or not caused by that manipulation and/or mobilization."	



Comment section	
Please provide any additional thoughts or comments regarding the definition for adverse events following spinal and/or peripheral joint manipulation and/or mobilization.	



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SEVERITY CLASSICATION										
	The following questions relate to the severity classification for adverse events following spinal and/or peripheral joint manipulation and/or mobilization.									
Please indicate if you agree with the sta										
"Benign" and "mild" are similar. "Benign" and "minor" are similar.	Yes O	No O								
"Mild" and "minor" are similar.	0	O								
Which is your preferred term?		○ Benign○ Mild								
Which one is your preferred term?		○ Benign○ Minor								
Which is your preferred term?		MildMinor								
Which is your "least preferred" term?		○ Benign○ Mild○ Minor								
Which is your "most preferred" term?		○ Benign○ Mild○ Minor								
Which would you rate as the "least severe"?		○ Benign / Mild○ Minor								
Which would you rate as the "least severe"?		○ Benign / Minor○ Mild								
Which would you rate as the "least severe"?		○ Benign○ Mild / Minor								
Which would you rate as the "least severe"?		○ Benign○ Mild○ Minor								
Which would you rate as the "most severe"?		○ Benign○ Mild○ Minor								



Please indicate if you agree with	tne statements be	eiow:	
	Yes		No
"Catastrophic" and "major" are similar.	0		0
"Catastrophic" and "severe" are similar.	0		0
"Catastrophic" and "serious" are similar.	0		0
"Major" and "severe" are similar.	\circ		\bigcirc
"Major" and "serious" are similar.	\circ		\circ
"Severe" and "serious" are similar.	0		0
Which is your preferred term?		○ Catastrophic○ Major	
Which is your preferred term?		○ Catastrophic○ Severe	
Which is your preferred term?		○ Catastrophic○ Serious	
Which is your preferred term?		 Major Severe	
Which is your preferred term?		 Major Serious	
Which is your preferred term?		○ Severe○ Serious	
Which is your "least preferred" term?		○ Catastrophic○ Major○ Severe	
Which is your "most preferred" term?		○ Catastrophic○ Major○ Severe	
Which is your "least preferred" term?		○ Catastrophic○ Major○ Serious	
Which is your "most preferred" term?		○ Catastrophic○ Major○ Serious	
Which is your "least preferred" term?		○ Catastrophic○ Severe○ Serious	

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Which is your "most preferred" term?	CatastrophicSevereSerious	
Which is your "least preferred" term?	○ Major○ Severe○ Serious	
Which is your "most preferred" term?	 Major Severe Serious	
Which is your "least preferred" term?	○ Catastrophic○ Major○ Severe○ Serious	
Which is your "most preferred" term?	○ Catastrophic○ Major○ Severe○ Serious	
Which would you rate as the "least severe"?	Catastrophic / Severe / SeriousMajor	
Which would you rate as the "least severe"?	Catastrophic / Major / SeriousSevere	
Which would you rate as the "least severe"?	Catastrophic / Major / SevereSerious	
Which would you rate as the "least severe"?	Major / Severe / SeriousCatastrophic	
Which would you rate as the "least severe"?	Catastrophic / MajorSevere / Serious	
Which would you rate as the "least severe"?	Catastrophic / SevereMajor / Serious	
Which would you rate as the "least severe"?	Catastrophic / SeriousMajor / Severe	
Which would you rate as the "least severe"?	Catastrophic / MajorSevereSerious	
Which would you rate as the "most severe"?	Catastrophic / MajorSevereSerious	
Which would you rate as the "least severe"?	○ Catastrophic / Severe○ Major○ Serious	

Which would you rate as the "most severe"?	Catastrophic / SevereMajorSerious				
Which would you rate as the "least severe"?	Catastrophic / SeriousMajorSevere				
Which would you rate as the "most severe"?	Catastrophic / SeriousMajorSevere				
Which would you rate as the "least severe"?	Major / SevereCatastrophicSerious				
Which would you rate as the "most severe"?	○ Major / Severe○ Catastrophic○ Serious				
Which would you rate as the "least severe"?	Major / SeriousCatastrophicSevere				
Which would you rate as the "most severe"?	Major / SeriousCatastrophicSevere				
Which would you rate as the "least severe"?	Severe / SeriousCatastrophicMajor				
Which would you rate as the "most severe"?	Severe / SeriousCatastrophicMajor				
Which would you rate as the "least severe"?	○ Catastrophic○ Major○ Severe○ Serious				
Which would you rate as the "most severe"?	○ Catastrophic○ Major○ Severe○ Serious				

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The next section includes several domains derived from earlier findings.

Please rate your level of preference for each domain that you think should be used to differentiate severity categories:

	1- Most preferred	2	3	4	5	6- Least preferred	Should not be used
Intensity (e.g., sign/symptom level on a numeric rating scale)	0	0	0	0	0	0	0
Duration (e.g., hours, days, etc.)	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\circ	\circ	\bigcirc
Reversibility (e.g., reversible, irreversible)	0	0	0	0	0	0	0
Impact on a patient (e.g., quality of life, activities of daily living, etc.)	0	0	0	0	0	0	0
Additional care required (e.g., self care, additional healthcare, etc.)	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0
Please, specify:							

ise, specify:		

Intensity										
Below are words used by participants in round 1 to describe the intensity of each category.										
Which word do you think best describes each severity category?										
	Minimal	Low	Medium	High	Important	Significant				
Benign	\circ	\bigcirc	\bigcirc	\bigcirc	\circ	\bigcirc				
Mild	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Minor	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Moderate	\circ	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Catastrophic	\circ	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Major	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Severe	\circ	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Serious	\bigcirc	\circ	\bigcirc	\bigcirc	\bigcirc	\bigcirc				



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On a generic 11-point numeric scale	e (0-11	points)	where
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'0' = no sign/symptom

'10' = the worst sign/symptom

What are the minimum and maximum absolute values you think best describe each severity category:

Example- If I think the term 'Not bad' would have a minimum and maximum from 1-3 on this scale, I would answer:

Not bad - Minimum: 1

Not bad - Maximum, must be greater than 1: 3

	U	1	2	3	4	Э	О	/	Ö	9	10
Benign - Minimum	\bigcirc	\circ	\circ	\bigcirc	\circ	\bigcirc	\bigcirc	\circ	\circ	\bigcirc	\bigcirc
Benign - Maximum, must be greater than [ben_abs_nrs_min].	\circ	0	0	0	0	0	0	0	0	0	\circ
Mild - Minimum	\bigcirc										
Mild - Maximum, must be greater than [mil_abs_nrs_min].	0	\circ	0	0	\circ	0	0	0	\circ	0	0
Minor - Minimum	\bigcirc										
Minor - Maximum, must be greater than [min_abs_nrs_min].	\circ	\circ	0	0	\circ	0	0	0	\circ	0	0
Moderate - Minimum	\bigcirc	\circ									
Moderate - Maximum, must be greater than [mod_abs_nrs_min].	0	\circ	0	0	\circ	0	0	0	\circ	0	0
Catastrophic - Minimum	\bigcirc										
Catastrophic - Maximum, must be greater than [cat_abs_nrs_min].	0	0	0	0	0	0	0	0	0	0	0
Major - Minimum	\bigcirc										
Major - Maximum, must be greater than [maj_abs_nrs_min].	\circ	0	0	0	0	0	0	0	0	\circ	0
Severe - Minimum	\bigcirc										
Severe - Maximum, must be greater than [sev_abs_nrs_min].	\circ	\circ	\circ	0	\circ	0	0	0	\circ	0	0
Serious - Minimum	\bigcirc	\bigcirc	\circ	\bigcirc							
Serious - Maximum, must be greater than [ser_abs_nrs_min].	\circ	0	0	0	0	0	0	0	0	0	\circ



In terms of relative increase from a patient's pre-intervention score on a generic 11-point numeric scale (0-11 points) where:

'0' = no increase in sign/symptom

'10' = the greatest possible increase in sign/symptom

What are the minimum and maximum values you think best describe the increase for each severity category:

Example- If I think the term 'Not bad' would have a minimum and maximum increase of 1-3 points on this scale (i.e., from a score of 5 to 6-8), I would answer:

Not bad - Minimum: 1

Not	had	- Mavimum	must ha	greater than	1.	3
NUL	vau	- Maxilliulli.	IIIust be	ureater tilali		- 2

	U		_		_	,	U	,	U	,	10
Benign - Minimum	\bigcirc										
Benign - Maximum, must be greater than [ben_abs_nrs_min].	\circ	\circ	0	0	\circ	\circ	0	0	\circ	0	0
Mild - Minimum	\bigcirc										
Mild - Maximum, must be greater than [mil_abs_nrs_min].	\circ	\circ	\circ	\circ	\circ	\circ	0	0	\circ	0	0
Minor - Minimum	\bigcirc										
Minor - Maximum, must be greater than [min_abs_nrs_min].	\circ	\circ	\circ	\circ	\circ	\circ	0	0	\circ	0	0
Moderate - Minimum	\bigcirc										
Moderate - Maximum, must be greater than [mod_abs_nrs_min].	0	\circ	\circ	\circ	\circ	\circ	0	0	\circ	0	0
Catastrophic - Minimum	\bigcirc										
Catastrophic - Maximum, must be greater than [cat_abs_nrs_min].	0	0	0	0	0	0	0	0	0	0	0
Major - Minimum	\bigcirc										
Major - Maximum, must be greater than [maj_abs_nrs_min].	\circ	0	0	0	0	0	0	0	0	0	\circ
Severe - Minimum	\bigcirc										
Severe - Maximum, must be greater than [sev_abs_nrs_min].	0	0	0	\circ	0	0	0	0	0	0	0
Serious - Minimum	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\circ	\bigcirc	\bigcirc	\circ	\bigcirc
Serious - Maximum, must be greater than [ser_abs_nrs_min].	\circ	\circ	\circ	\circ	\circ	\circ	0	0	\circ	\circ	\circ



Intensity preferences	
What is your preferred option to best describe severity intensity?	Wording (i.e., minimal, low, medium, high, important, significant)Number (i.e., minimum and maximum intensity)
What is your preferred number option to best describe severity intensity?	○ Absolute values○ Relative increase

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Duration			
Below are words used by participants in round 1 to describe the duration of each category.			
Which option do you think best describes each severity category?			
	Short term	Medium term	Long term
Benign	\circ	\bigcirc	\bigcirc
Mild	\circ	\bigcirc	\bigcirc
Minor	\circ	\bigcirc	\bigcirc
Moderate	\circ	\bigcirc	\bigcirc
Catastrophic	\circ	\bigcirc	\bigcirc
Major	\circ	\bigcirc	\bigcirc
Severe	\circ	\bigcirc	\bigcirc
Serious	\bigcirc	\bigcirc	\bigcirc



What is the minimum and maximum duration that	What is the minimum and maximum duration that would best describe benign?		
For benign, what is your preferred time allocation for the minimum duration:	 hour(s) day(s) week(s) month(s) year(s)		
Benign - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours		
Benign - minimum duration:	 ○ 1 day ○ 2 days ○ 3 days ○ 4 days ○ 5 days ○ 6 days ○ 7 days 		
Benign - minimum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks		
Benign - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months		
Benign - minimum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 		
For benign, what is your preferred time allocation for the maximum duration:	 hour(s) day(s) week(s) month(s) year(s) 		
Benign - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours		

Page 32

Benign - maximum duration:	☐ 1 day☐ 2 days☐ 3 days☐ 4 days☐ 5 days☐ 6 days☐ 7 days	
Benign - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Benign - maximum duration:	<pre>1 month 2 months 3 months 4 months 5 months 6 months 7 months 8 months 9 months 10 months 11 months 12 months</pre>	
Benign - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

what is the minimum and maximum duration that	would pest describe mild?
For mild, what is your preferred time allocation for the minimum duration:	 │ hour(s) │ day(s) │ week(s) │ month(s) │ year(s)
Mild - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours
Mild - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days
Mild - minimum duration:	1 week2 weeks3 weeks4 weeks
Mild - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months
Mild - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years
For mild, what is your preferred time allocation for the maximum duration:	 │ hour(s) │ day(s) │ week(s) │ month(s) │ year(s)
Mild - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours

Page 34

Mild - maximum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days 	
Mild - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Mild - maximum duration:	 ☐ 1 month ☐ 2 months ☐ 3 months ☐ 4 months ☐ 5 months ☐ 6 months ☐ 7 months ☐ 8 months ☐ 9 months ☐ 10 months ☐ 11 months ☐ 12 months 	
Mild - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

What is the minimum and maximum duration that would best describe minor?		
For minor, what is your preferred time allocation for the minimum duration:	 ○ hour(s) ○ day(s) ○ week(s) ○ month(s) ○ year(s) 	
Minor - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours	
Minor - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days 	
Minor - minimum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Minor - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Minor - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years 	
For minor, what is your preferred time allocation for the maximum duration:	 hour(s) day(s) week(s) month(s) year(s) 	
Minor - maximum duration:	 1 hour 2 hours 3 hours 6 hours 12 hours 24 hours 	

Page 36

Minor - maximum duration:	1 day2 days3 days4 days5 days6 days7 days	
Minor - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Minor - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Minor - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

What is the minimum and maximum duration that would best describe moderate?		
For moderate, what is your preferred time allocation for the minimum duration:	 ○ hour(s) ○ day(s) ○ week(s) ○ month(s) ○ year(s) 	
Moderate - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours	
Moderate - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days 	
Moderate - minimum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Moderate - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months 12 months	
Moderate - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years 	
For moderate, what is your preferred time allocation for the maximum duration:	 hour(s) day(s) week(s) month(s) year(s) 	
Moderate - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours	

Moderate - maximum duration:	1 day2 days3 days4 days5 days6 days7 days	
Moderate - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Moderate - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Moderate - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

what is the minimum and maximum duration that	would best describe catastrophic?
For catastrophic, what is your preferred time allocation for the minimum duration:	 ○ hour(s) ○ day(s) ○ week(s) ○ month(s) ○ year(s)
Catastrophic - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours
Catastrophic - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days
Catastrophic - minimum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks
Catastrophic - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months
Catastrophic - minimum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years
For catastrophic, what is your preferred time allocation for the maximum duration:	 │ hour(s) │ day(s) │ week(s) │ month(s) │ year(s)
Catastrophic - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours

Page 40

Catastrophic - maximum duration:	○ 1 day○ 2 days○ 3 days○ 4 days○ 5 days○ 6 days○ 7 days	
Catastrophic - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Catastrophic - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Catastrophic - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

what is the minimum and maximum duration the	at would best describe major?
For major, what is your preferred time allocation for the minimum duration:	 hour(s) day(s) week(s) month(s) year(s)
Major - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours
Major - minimum duration:	○ 1 day○ 2 days○ 3 days○ 4 days○ 5 days○ 6 days○ 7 days
Major - minimum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks
Major - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months
Major - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years
For major, what is your preferred time allocation for the maximum duration:	 ○ hour(s) ○ day(s) ○ week(s) ○ month(s) ○ year(s)
Major - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours

Major - maximum duration:	1 day2 days3 days4 days5 days6 days7 days	
Major - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Major - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Major - maximum duration:	 ○ 1 year ○ 2 years ○ 3 years ○ 4 years ○ 5 years ○ 10 years ○ > 10 years 	

What is the minimum and maximum duration that	at would best describe severe?
For severe, what is your preferred time allocation for the minimum duration:	 hour(s) day(s) week(s) month(s) year(s)
Severe - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours
Severe - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days
Severe - minimum duration:	1 week2 weeks3 weeks4 weeks
Severe - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months
Severe - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years
For severe, what is your preferred time allocation for the maximum duration:	 hour(s) day(s) week(s) month(s) year(s)
Severe - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours

Page 44

Severe - maximum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days 	
Severe - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Severe - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Severe - maximum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years 	

What is the minimum and maximum duration that	at would best describe serious?
For serious, what is your preferred time allocation for the minimum duration:	 hour(s) day(s) week(s) month(s) year(s)
Serious - minimum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours
Serious - minimum duration:	 1 day 2 days 3 days 4 days 5 days 6 days 7 days
Serious - minimum duration:	1 week2 weeks3 weeks4 weeks
Serious - minimum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months
Serious - minimum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years
For serious, what is your preferred time allocation for the maximum duration:	 │ hour(s) │ day(s) │ week(s) │ month(s) │ year(s)
Serious - maximum duration:	○ 1 hour○ 2 hours○ 3 hours○ 6 hours○ 12 hours○ 24 hours

Page 46

Serious - maximum duration:	1 day2 days3 days4 days5 days6 days7 days	
Serious - maximum duration:	○ 1 week○ 2 weeks○ 3 weeks○ 4 weeks	
Serious - maximum duration:	1 month 2 months 3 months 4 months 5 months 6 months 7 months 9 months 10 months 11 months	
Serious - maximum duration:	 1 year 2 years 3 years 4 years 5 years 10 years > 10 years 	

Duration	preference
Daiacion	pi ci ci ciicc

What is your preferred option to best describe duration?

○ Wording (i.e., short, medium, long term)○ Number (i.e., minimum and maximum time)

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Indicate if you think adverse events within each severity category are "reversible" or			
Reversible	Irreversible		
\circ	\circ		
	·		



Below are words us	ed by participants in round	1 to describe	the reversibility	of each category.
Please rank your pr	eferred terms: 1-Most preferred	2	2	4-Least preferred
Reversible	1-Most preferred	\bigcap	<u> </u>	4-Least preferred
Short lasting	O	O	O	O
Temporary	\circ	\circ	\circ	\bigcirc
Transient	\bigcirc	\circ	\circ	\circ

Page 50

Please rank your preferred terms:				
	1-Most preferred	2	3	4-Least preferred
Irreversible	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Long lasting	\circ	\bigcirc	\bigcirc	\circ
Permanent	\bigcirc	\bigcirc	\bigcirc	\circ
Persistent	\bigcirc	\bigcirc	\bigcirc	\bigcirc

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Impact on a patient					
Please read and apply the following operational definitions for the questions below:[1]					
and and apply and					
Participation: Involvement in a life situation Participation restrictions: Problems an individual may experience in involvement in life situations Activity: The execution of a task or action by an individual Activity limitations: Difficulties an individual may have in executing activities [1]- The ICF: An Overview. Available at:					
https://www.wcpt.org/sites on 09 Mar 2022]	, ireperorg, me	5, me 5, em let _	••••• <u>•</u> •••	.AL_101_111101pu	. [accessed
Below are words used by p category. Which areas do you think b	·	the impact of e	each severity	category?	t of each
	No impact	Quality of life / participation	Activities / disability	Life threatening	Death
Benign					
Mild					
Minor					
Moderate					
Catastrophic					
Major					
Severe					
Serious					
Use the following modified scale to rate the extent of identified impairment, activity limitation or participation restriction:[1] 1 Tolerable 2 Some interference in day-to-day life 3 Considerable disruption of day-to-day life 4 Total disruption of day-to-day life [1]- The ICF: An Overview. Available at: https://www.wcpt.org/sites/wcpt.org/files/files/GH-ICF_overview_FINAL_for_WHO.pdf [accessed on 09 Mar 2022]					
Indicate the impact on quality of for benign:	life/participation	Ō	life/participatio Considerable di life/participatio	sruption of day-to-on n of day-to-day qual	day quality of



Indicate the impact on quality of life/participation for mild:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for minor:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for moderate:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for catastrophic:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for major:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for severe:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on quality of life/participation for serious:	 Tolerable Some interference in day-to-day quality of life/participation Considerable disruption of day-to-day quality of life/participation Total disruption of day-to-day quality of life/participation
Indicate the impact on activity/disability for benign:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity

Indicate the impact on activity/disability for mild:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for minor:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for moderate:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for catastrophic:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for major:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for severe:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity
Indicate the impact on activity/disability for serious:	 Tolerable Some interference in day-to-day life activity Considerable disruption of day-to-day life activity Total disruption of day-to-day life activity

Additional care required

Below are types of care used by participants in round 1 to describe the additional care required within each category.

Self care: e.g., ice/heat, non-prescription medication

Additional care from same provider: e.g., monitoring/observation, advice, early follow-up, treatment alteration

Additional care from another healthcare provider: e.g., medical or non-medical health care evaluation/intervention

Which type of care do you think best describes the additional care required within each category?

	None required	Self care	Additional care from same provider	Additional care from another healthcare provider		
Benign	\circ	\circ	\circ	\circ		
Mild	\bigcirc	\circ	\bigcirc	\bigcirc		
Minor	\bigcirc	\circ	\bigcirc	\bigcirc		
Moderate	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
Catastrophic	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
Major	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
Severe	\bigcirc	\bigcirc	\bigcirc	\circ		
Serious	0	\circ	0	0		
Indicate the additional care from another healthcare provider for benign:		 Non-medical healthcare evaluation/intervention (e.g., nurse, pharmacist, manual therapist, etc.) Medical care 				
Indicate the additional care from provider for mild:	another healthcare	•	nedical healthcare evalu nurse, pharmacist, man cal care			
Indicate the additional care from provider for minor:	another healthcare	Non-medical healthcare evaluation/intervent (e.g., nurse, pharmacist, manual therapist, eMedical care				
Indicate the additional care from another healthcare provider for moderate:		 Non-medical healthcare evaluation/intervention (e.g., nurse, pharmacist, manual therapist, etc.) Medical care 				
Indicate the additional care from provider for catastrophic:	another healthcare	 Non-medical healthcare evaluation/interventi (e.g., nurse, pharmacist, manual therapist, et Medical care 				
Indicate the additional care from provider for major:	another healthcare	 Non-medical healthcare evaluation/intervention (e.g., nurse, pharmacist, manual therapist, etc.) Medical care 				



Indicate the additional care from another healthcare provider for severe:	 Non-medical healthcare evaluation/intervention (e.g., nurse, pharmacist, manual therapist, etc.) Medical care 			
Indicate the additional care from another healthcare provider for serious:	 Non-medical healthcare evaluation/intervention (e.g., nurse, pharmacist, manual therapist, etc.) Medical care 			
Please specify urgency/emergency for benign:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for mild:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for minor:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for moderate:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for catastrophic:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for major:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for severe:	Urgent/emergencyNon-urgent/non-emergency			
Please specify urgency/emergency for serious:	Urgent/emergencyNon-urgent/non-emergency			
Please specify care for benign:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			
Please specify care for mild:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			
Please specify care for minor:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			
Please specify care for moderate:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			
Please specify care for catastrophic:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			
Please specify care for major:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery			

Please specify care for severe:	 ☐ Medical evaluation/intervention ☐ Hospitalization ☐ Surgery 		
Please specify care for serious:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for benign:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for mild:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for minor:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for moderate:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for catastrophic:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for major:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for severe:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		
Please specify care for serious:	☐ Medical evaluation/intervention☐ Hospitalization☐ Surgery		

_									
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Please provide any additional thoughts or comments regarding the severity classification for adverse events following spinal and/or peripheral joint manipulation and/or mobilization.



Thank you!

This is the end of the round 2 questionnaire. Thank you for your participation and continued contribution to this important project.

Round 2 is open until April 27th, 2022. We will analyse the results and develop a round 3 questionnaire using the responses you and other participants have provided. We will provide you with a link to the round 3 questionnaire about 3 weeks after round 2 is complete.

Best regards,

Martha Funabashi, Lindsay Gorrell, Katie Pohlman, Andrea Bergna, Nicola Heneghan

If you have any questions, please contact: Martha Funabashi (mfunabashi@cmcc.ca)



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AE Delphi - Round 3

EXPERT CONSENSUS ON A STANDARDIZED DEFINITION AND SEVERITY CLASSIFICATION FOR ADVERSE EVENTS FOLLOWING SPINAL AND PERIPHERAL JOINT MANIPULATION AND MOBILIZATION: AN INTERNATIONAL E-DELPHI STUDY **ROUND 3 Investigators:**

- Martha Funabashi, BSc, MSc, PhD Canadian Memorial Chiropractic College (Canada)
- Lindsay M Gorrell, BChiroSc, MChiroprac, MRes, PhD University of Zurich (Switzerland)
- Katherine A Pohlman, DC, MS, PhD Parker University (USA)
- Andrea Bergna, BSc, PT, DO SOMA Instituto Osteopatia Milano (Italy)
- Nicola R Heneghan, PhD, MSc, PG Cert HEd, Grad Dip Phys University of Birmingham (England)

REMINDER of study terms:

Spinal and peripheral joint manipulation and mobilization are interventions commonly used by a variety of healthcare professionals (e.g. chiropractors, naprapaths, naturopaths, osteopaths, physiotherapists, etc.) in the management of many musculoskeletal conditions, including spinal pain, and are most often administered in ambulatory care settings. These interventions are described by a vast array of terms, including high-velocity low-amplitude manipulation, low-velocity variable-amplitude mobilization, spinal manipulative therapy, musculoskeletal manipulation/mobilization, etc.

In this study:

Manipulation (also called adjustment) refers to a treatment that involves the therapist applying one rapid force/thrust to a joint with the aim of relieving pain or stiffness; and

Mobilization refers to a treatment that involves the therapist applying a force repeatedly (at variable speeds and amplitudes) to a joint with the aim of relieving pain or stiffness.

Spinal refers to joints of the neck, mid and low back.

Peripheral joint refers to shoulders, arms, hands, fingers, hips, legs, feet and toes.

If, at any time during this questionnaire, you have any questions, please feel free to contact Martha Funabashi at mfunabashi@cmcc.ca.

Round 3 questions were developed based on data from round 1 (180 respondents), round 2 (163 respondents), and a scoping review of the literature (69 studies) related to the definition and severity classification for adverse events following spinal and/or peripheral joint manipulation and/or mobilization. The questions include terms that were used to define and classify the severity of adverse events following spinal and/or peripheral joint manipulation and/or mobilization. Estimated time for completion: 10-15 minutes.

Feedback from Round 2 - Adverse Event Definition

Consensus regarding the definition for an adverse event:

- 89.5% agreed that an adverse event is undesired.
- 85.8% agreed that an adverse event is unfavourable.
- 84.0% agreed that an adverse event is unintended.
- 61.7% agreed that an adverse event is unexpected.
- 78.4% agreed that an adverse event can occur when no manipulation and/or mobilization is delivered.
- 72.2% disagreed that an adverse event is expected.
- 68.5% disagreed that the persistence of signs, symptoms or disease is an adverse event.
- 67.9% disagreed that an adverse event is unequivocally caused by spinal and/or peripheral joint manipulation and/or mobilization.

From open text comments, participant comments centred on the following:

- It is important to keep the definition as short as possible so it is easily communicated to and understood by
- There are too many adjectives at the beginning of the definition and "unintended" should be removed as an adverse event is an adverse event regardless of intent.
- While the definition should specify the potential relationship between manipulation and/or mobilization and the adverse event, determining causality is not possible.
- The wording "whether or not caused by that manipulation and/or mobilization" should be removed from the proposed definition ("An adverse event is defined as any expected or unexpected, unfavourable, undesired and unintended outcome that occurs during or after spinal and/or peripheral joint manipulation and/or mobilization, whether or not caused by that manipulation and/or mobilization."). 18/05/2022 6:06am

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The following questions relate to the definition for an adverse event following spinal and/or					
peripheral joint manipulation	and/or mobilization.				
Please rank the following stat	tements indicating you	ur preferred definiti	on for an adverse		
event:					
	Most Preferred		Least Preferred		
An adverse event is any unfavourable outcome that occurs during or following spinal and/or peripheral manipulation and/or mobilization.	0	0	0		
An adverse event is any unfavourable and unexpected outcome that occurs during or following spinal and/or peripheral manipulation and/or mobilization.	0	0	0		
An adverse event is any unfavourable, unexpected and undesired outcome that occurs during or following spinal and/or peripheral manipulation and/or mobilization.	0	0	0		
If you have any comments related to definition , please provide them here					



Feedback from Round 2 - Severity Classification

Consensus regarding the severity classification for an adverse event:

86.1% agreed that "mild" and "minor" are similar severity categories.

79.0% stated a preference for the term "mild" compared to "minor".

67.7% agreed that "major" and "severe" are similar severity categories.

81.8% stated a preference for the term "severe" compared to "major".

87.3% agreed that the impact on a patient should be used to differentiate between severity categories.

75.9% agreed that intensity should be used to differentiate between severity categories.

From open text comments, participant comments centred mainly on the following:

- "Benign" should not be a severity category.- It is difficult to differentiate between "major" and "severe" categories.
- "Serious adverse event" has an established definition within the wider health care field, and this existing definition should be used for manipulation and/or mobilization.
- "Duration" should not be used to differentiate between severity categories.



18/05/2022 6:06am

The following question relate to the severity classification for adverse events following spinal				
and/or peripheral joint manipulation and/or mobilization.				
Please indicate your level of agreement with the statement:				
"Benign" should not be used as an adverse event severity category as it relates to an outcome that is ''not adverse''.				

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"Benign" should no	ot be used a	s an adverse	event severity	category as it relates to an outcome that is "not adverse".
O Strongly Agree	○ Agree	○ Neutral	○ Disagree	○ Strongly Disagree
If you have any cor event, please provi			ın" adverse	



18/05/2022 6:06am

For the next questions, please indicate your level of agreement with the following statements,								
regardless of your level of agreement with the "benign" statement.								
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
A "benign" adverse event has minimal intensity, ranging between 0-1 on an 11-point numeric scale.	0	0	0	0	0			
A "mild" adverse event has a low intensity, ranging between 1-3 on an 11-point numeric scale.	\circ	0	0	0	0			
A "moderate" adverse event has a moderate intensity, ranging between 3-6 on an 11-point numeric scale.	0	0	0	0	0			
A "severe" adverse event has a high intensity, ranging between 6-8 on an 11-point numeric scale.	0	0	0	0	0			
A "catastrophic" adverse event has a significant intensity, ranging between 8-10 on an 11-point numeric scale.	0	0	0	0	0			
If you have any comments related severity classification and intensit them here.		ent _						



For the next statements, please consider the same operational definitions provided in Round 2:[1]

Activity: The execution of a task or action by an individual.

Activity Limitations: Difficulties an individual may have in executing activities.

Participation: Involvement in a life situation.

Participation Restrictions: Problems an individual may experience in involvement in life

situations.[1]- The ICF: An Overview. Available at:

https://www.wcpt.org/sites/wcpt.org/files/files/GH-ICF_overview_FINAL_for_WHO.pdf [accessed on 09 Mar 2022]

ADDITIONALLY - Quality of Life is defined as 'an individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns'.[2][2]- World Health Organization (WHO) - WHOQOL: Measuring Quality of Life. Available at: https://www.who.int/toolkits/whoqol [accessed on 17 May 2022]

For the next questions, please indicate your level of agreement with the following statements, regardless of your level of agreement with the "benign" statement.

regulatess of your level of t	greement with	i the beinging	statement.		
	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
A "benign" adverse event has no impact on a patient's activities or quality of life.	0	0	0	0	0
A "mild" adverse event has no impact on a patient's activities, but it has a tolerable interference on participation, and quality of life.	0	0	0	0	0
A "moderate" adverse event has some interference with a patient's activities, participation, and quality of life.	0	0	0	0	0
A "severe" adverse event is not life-threatening, but has considerable interference with a patient's activities, participation, and quality of life.	0	0	0	0	0
A "catastrophic" adverse event is life-threatening and could result in death; it totally disrupts a patient's activities, participation, and quality of life.	0	0	0	0	0
If you have any comments related to the adverse event severity classification and impact on a patient, please provide them here.					

Serious and Catastrophic Adverse Events

A "serious adverse event" (SAE) has an established definition within the wider healthcare field, that is: "Any untoward medical occurrence that results in death, is life-threatening requires inpatient hospitalization or causes prolongation of existing hospitalization results in persistent or significant disability/incapacity, may have caused a congenital anomaly/birth defect, or requires intervention to prevent permanent impairment or damage."[3-7]

At this time, data from this study suggest that a "catastrophic" adverse event "has significant intensity, ranging between 8-10 on an 11-point numeric scale; is life-threatening and could result in death; it totally disrupts a patient's activities, participation, and quality of life."

activities, participation, and quality of life."						
Please indicate your level of agreement that these two definitions should be considered similar.						
○ Strongly Agree ○ Agree ○ Neutral ○ Disagree ○ Strongly Disagree						
[3]- FDA (2009) Guidance for Clinical Investigators, Sponsors, and IRBs Adverse Event Reporting to IRBs - Improving Human Subject Protection; [4]- ICH E2A: International Conference on Harmonisation - Tripartite Guideline: Clinical Safety Data Management: Definitions and Standards for Expedited Reporting (1994); [5]- ICH E6 (R2): International Council for Harmonisation - Harmonised Guideline: Guideline for Good Clinical Practice (2016; reflects ICH name change); [6]- Office for Human Subjects Protection, Division of Department of Health and Human Services Policy; "Unanticipated Problems Involving Risks and Adverse Events Guidance" (2007); [7]- Code of Federal Regulations Title 21, Part 312.32 (2016)						
If you have any comments related to serious and catastrophic adverse events, please provide them here.						



Focus Group Participation Interest		
Would you be interested in participating in a focus group to further explore findings from this study?	○ Yes ○ No	
Please provide your contact information:		

18/05/2022 6:06am

Thank you!

This is the end of the round 3 questionnaire. Thank you for your participation and continued contribution to this important project.

Round 3 is open until June 30th, 2022. We will analyse the results and develop the final products with recommended next steps using the responses you and other participants have provided.

Best regards,

Martha Funabashi, Lindsay Gorrell, Katie Pohlman, Andrea Bergna, Nicola Heneghan

If you have any questions, please contact: Martha Funabashi (mfunabashi@cmcc.ca).



18/05/2022 6:06am