

# Chronic Overlapping Pain Conditions

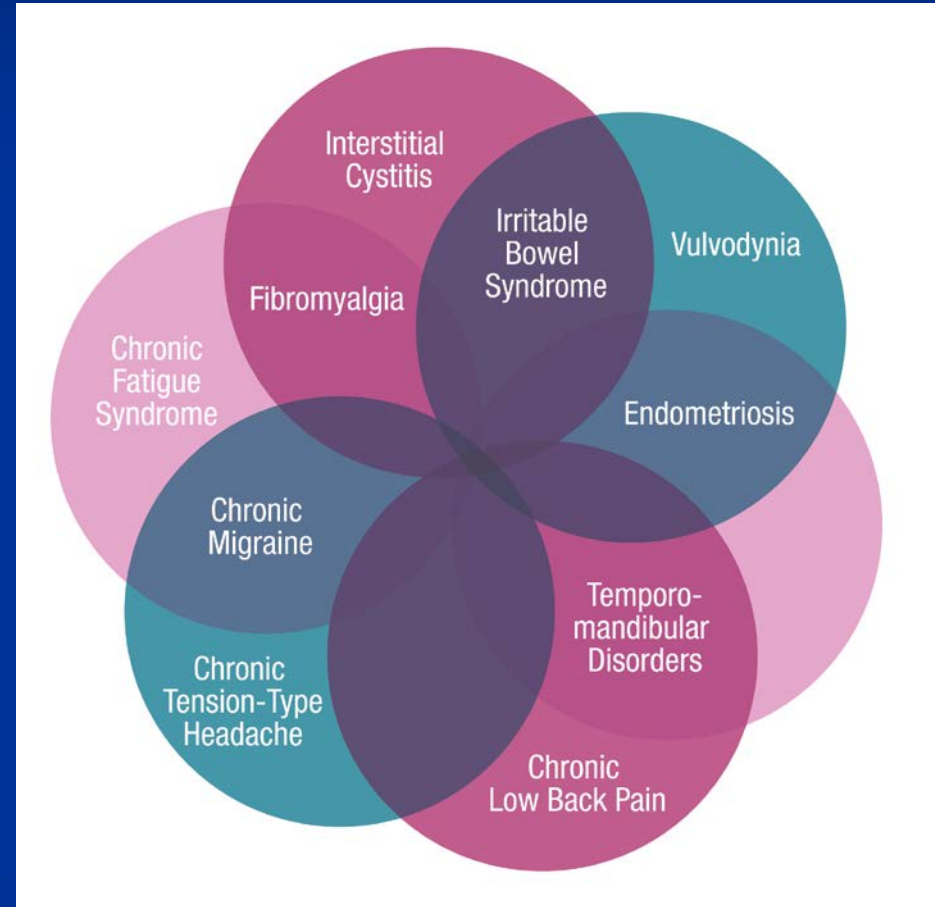
Summary of NIH Work Group Meeting to  
Develop Case Definition & Common Data Elements

*September 10, 2015*

# *Chronic Pain Research Alliance 2015 White Paper*

“The IOM report noted the increasing recognition and importance of a cluster of prevalent pain conditions that frequently co-occur and either solely or predominantly affect women.

The overlap of these disorders has recently been termed as *Chronic Overlapping Pain Conditions.*”



# Background

- 2011: NIH established first federal working group to coordinate research efforts on Chronic Overlapping Pain Conditions (COPCs) across 12 institutes, centers and offices
- 2012: NIH convened first federal scientific meeting on COPCs to develop coordinated research strategy
- 2014: NIH published first COPCs research *Funding Opportunity Announcement*
- 2015: To maximize COPCs research investment and facilitate pooling of data and analyses across studies, NIH established a working group to develop a case definition and Common Data Elements

## WHY?

NIH Task Force on Research Standards for Chronic Low Back Pain: *A review of cLBP studies demonstrated that “researchers use variable inclusion and exclusion criteria, case definitions for LBP chronicity or recurrence, baseline assessments, stratification criteria, and outcome measures,” and that “as a result, it is difficult to compare studies of similar or competing interventions, replicate findings, pool data from multiple studies, resolve conflicting conclusions, develop multidisciplinary consensus, or even achieve consensus within a discipline regarding interpretation of findings.”*

# Current Needs

- Harmonize case definition and data elements across studies – ultimately to facilitate the identification of shared mechanisms for assessment and targeted treatment
- Research Resources Needed:
  - A case definition of COPC (agreement on what COPCs represent)
  - Common Data Elements (minimum data set)
  - Mechanism for harmonizing, pooling & analyzing data (data repository)

# Meeting Goal & End Product

## ■ GOAL

Reach consensus on research resources needed for harmonization of data collection and analysis across studies

## ■ END PRODUCT

- Process for discovering a case definition
- Process to develop tool that facilitates ability to compare data across studies
- Process for assembling a shared dataset of COPC
- Process for analyzing the shared dataset in service of developing a case definition for COPC

# Meeting Objectives

- OBJECTIVE #1

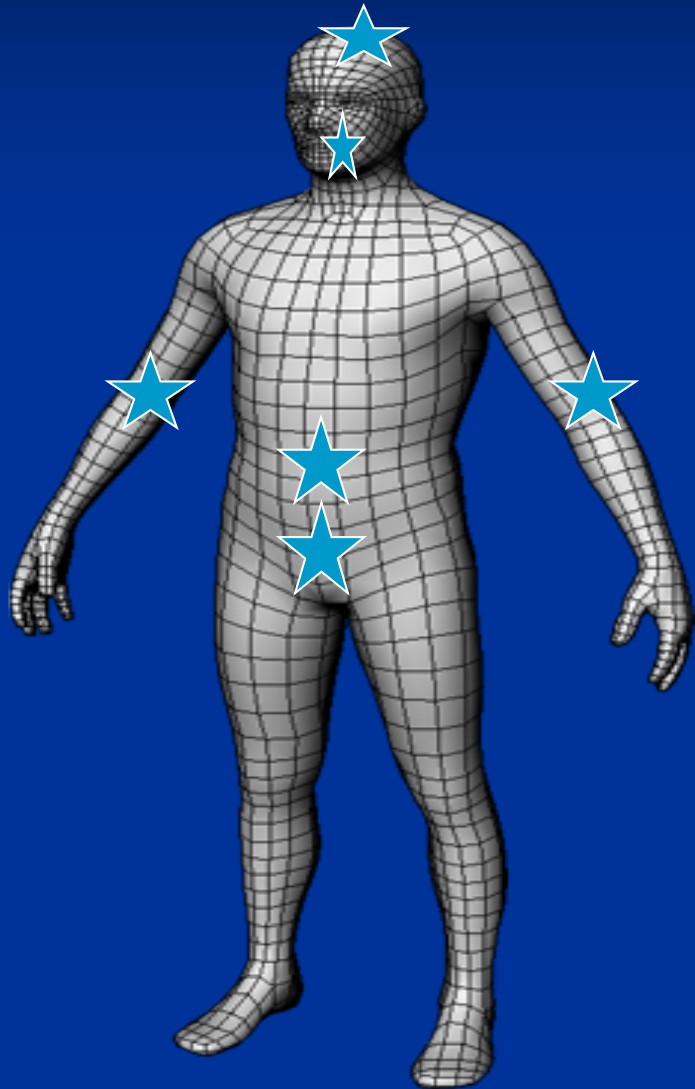
  - Establish a model for developing a case definition for COPCs

- OBJECTIVE #2

  - Reach consensus on a case definition

# OBJECTIVE #1: ESTABLISHING A MODEL

## Model A: Multiple conditions that share a common mechanism(s)



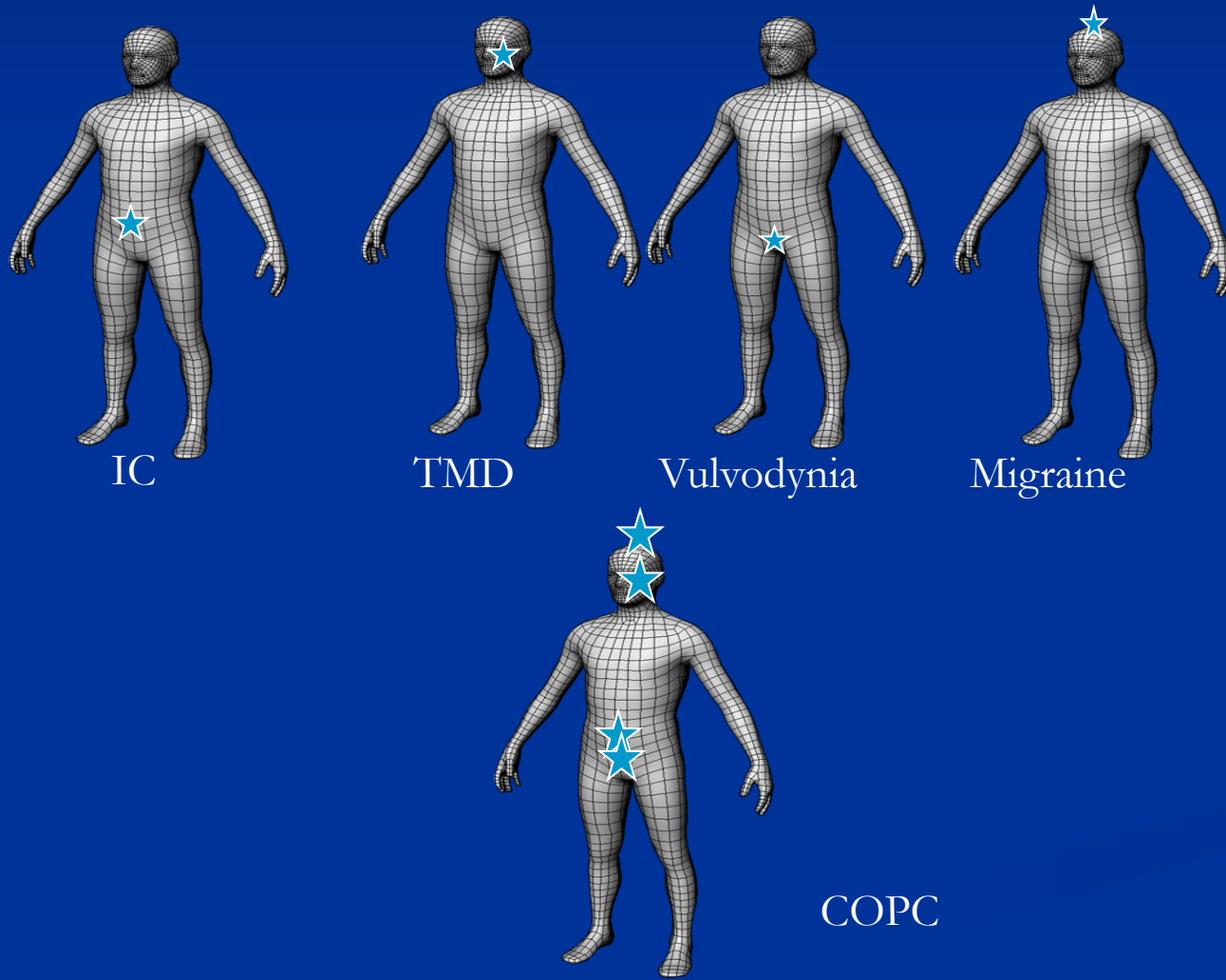
Rather than focusing on body regions,  
need to study the mechanism(s) that can  
occur in multiple body areas

Need a case definition of a mechanism(s)  
that can occur in multiple body areas

Why does it manifest in some regions and  
not others in different individuals?

# OBJECTIVE #1: ESTABLISHING A MODEL

Model B: Separate primary conditions – a secondary condition produces overlapping symptoms



Need to study the primary conditions alone

Need to study the secondary condition that creates COPC

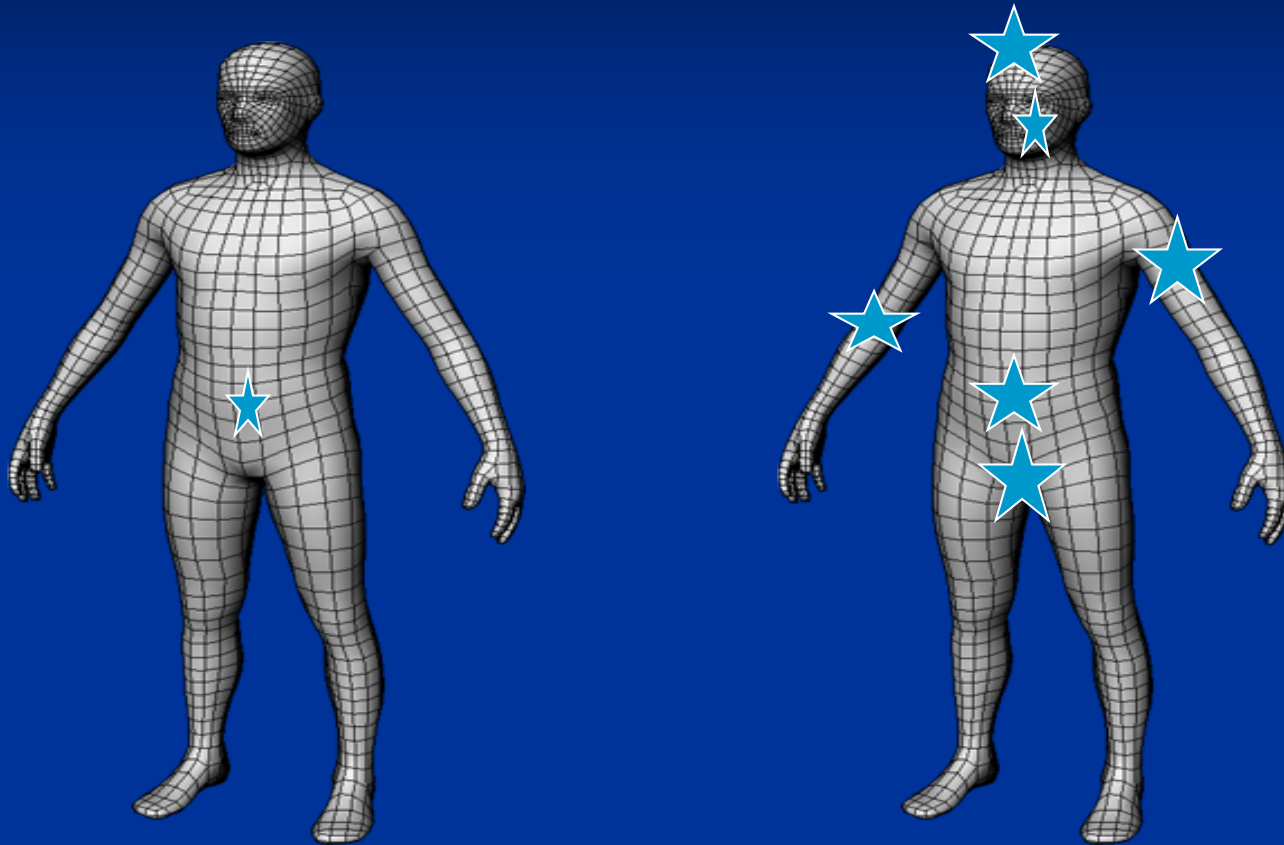
Need a case definition for this secondary condition or for individuals experiencing more than one condition

How often does the primary condition occur alone and how often does the secondary condition occur?



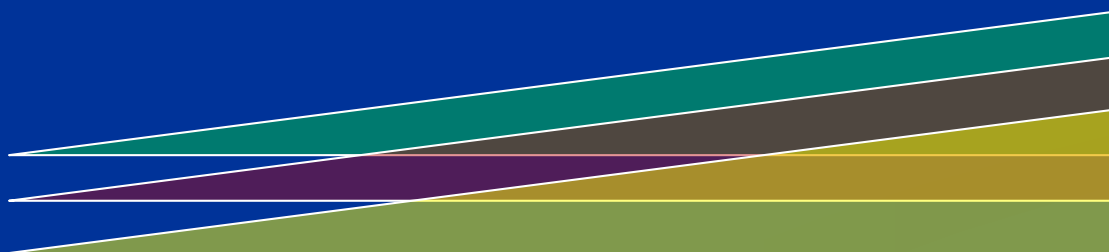
# OBJECTIVE #1: ESTABLISHING A MODEL

## Model C: Spectrum of unique and shared pathways



Need to study the mechanism(s) that produce 1 or more manifestations, i.e., variable biopsychosocial clusters

Need a case definition for the mechanism(s) that can affect 1 or more body areas



social  
psychological  
biological  
environmental  
genetics

# Meeting Objectives

## ■ Objective #1

Establish a model for developing a case definition for COPCs

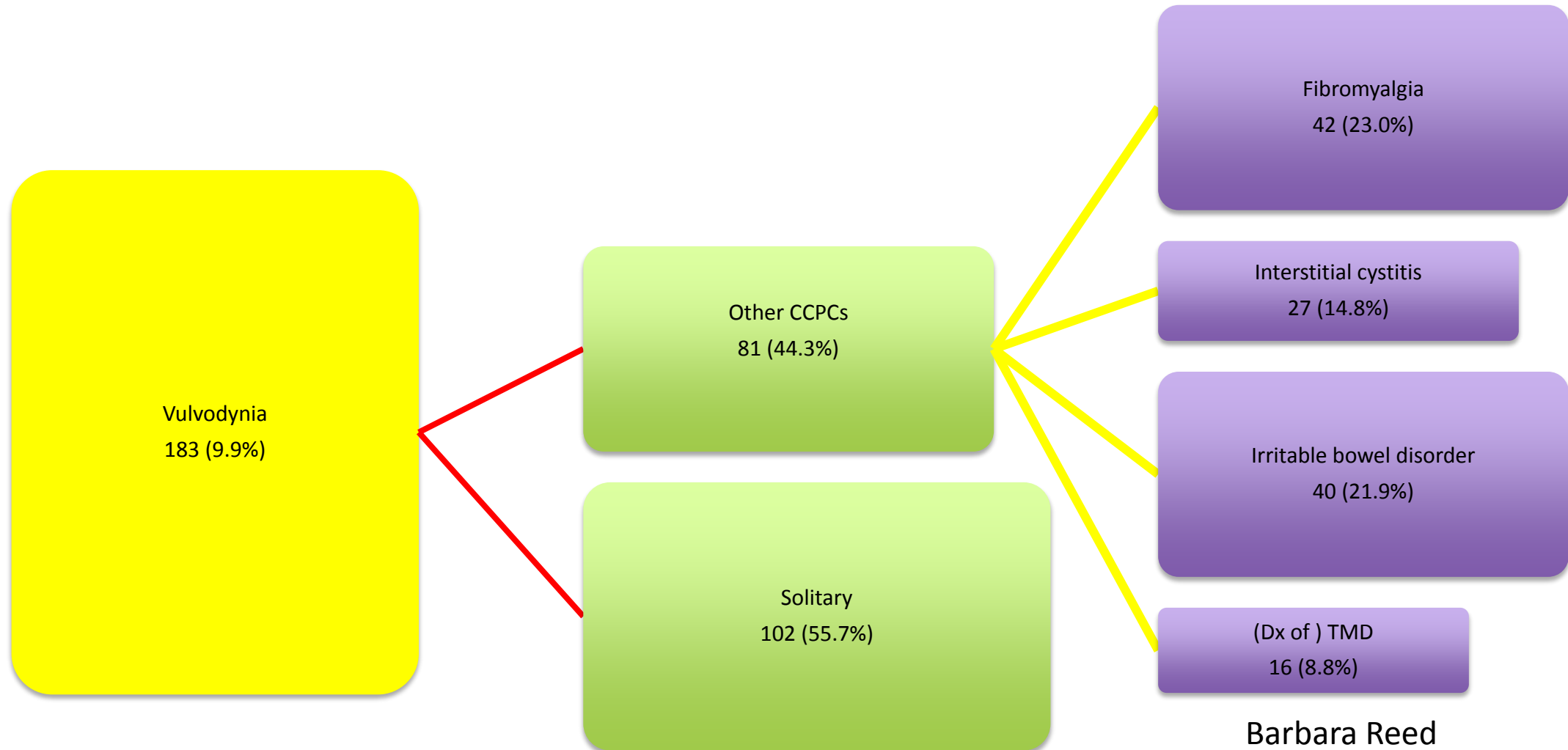
## ■ Objective #2

Reach consensus on a case definition

- 1) Develop case definition based on current data and observation
- 2) Gather evidence (determine needed data to inform development of final case definition)
- 3) Refine the case definition as needed based on gathered data

# OBJECTIVE 2: CASE DEFINITION CONSENSUS

Data reviewed to inform development



# OBJECTIVE 2: CASE DEFINITION CONSENSUS

## Data reviewed to inform development

Overlap with Index Condition

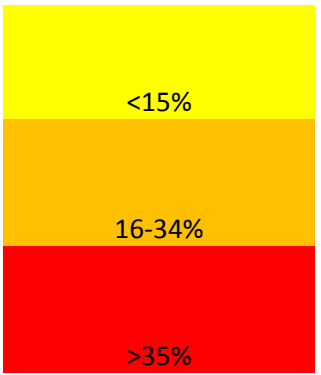
	CFS	cLBP	Endo/CPP	FM	IBS	IC	Migraine	TMD	VVS
CFS	index	49%	8%	60%	26%	12%		22%	13%
cLBP	6%	index		25%	10%	36%	20%	9%	14%
Endo/CPP	10%	51%	index	14%	20%	14%	29%	11%	16%
FM	13%	66%	18%	index	40%	12%	41%	34%	19%
IBS	5%	35%	35%	20%	index	7%	21%	20%	11%
IC	6%	60%		29%	35%	index	20%	13%	26%
Migraine	7%	45%		30%	20%	11%	index	31%	10%
TMD	8%	30%	8%	22%	24%	13%	30%	index	17%
VVS	4%	43%		14%	21%	17%	28%	22%	index

<15%

16-34%

>35%

	Number of Comorbidities				
	0	1	2	3	4
CFS	18%	26%	26%	13%	9%
cLBP	44%	31%	13%	7%	3%
Endo	26%	22%	22%	10%	14%
FM (2)	18%	24%	28%	22%	6%
IBS (2)	41%	28%	19%	6%	4%
IC	20%	25%	27%	17%	5%
Migraine (2)	36%	34%	18%	8%	1%
TMD	25%	23%	23%	16%	8%
VVS (2)	40%	32%	15%	8%	4%



**Cohort size**  
 CFS: Chronic Fatigue Syndrome - 55  
 cLBP: Chronic Low Back Pain – 653  
 Endometriosis - 51  
 Migraine/Episodic Migraine (2) - 491  
 Fibromyalgia (2) - 387  
 Irritable Bowel Syndrome (2) - 297  
 Interstitial Cystitis - 147  
 Temporomandibular Disorder - 113  
 Vulvodynia (2) - 336

# Major Discussion Points & Recommendation

## ■ Major Discussion Points

- Diagnoses vs. symptoms vs. body sites (body map)
- Need severity criteria
- Need standardized validated research diagnostic criteria

## ■ Major Recommendation

- Use Complex Medical Symptoms Inventory (CMSI) at starting point
  - Easy to operationalize
  - Could be digitized to use on broad platform
  - Provides information on symptoms, chronicity, severity & diagnoses (currently has FM, CFS, IBS, TMD, MIG & VVD – would need to add TTH, IC, Endo & cLBP)
  - Body map could be added as companion piece
  - Eliminates need for index condition

# Complex Medical Symptoms Inventory (CMSI)

## COMPLEX MEDICAL SYMPTOMS INVENTORY

Participant completes via online survey at the Screening Week 0 contact.

**Instructions:** Please read the following list of symptoms. If you have had any of these symptoms for at least three (3) months in the past year, please mark the appropriate box. If you had a symptom for three (3) months at any other time in your life, then mark the appropriate box.

Q#	SYMPTOM	3 months during the last year (12 months) (A)	3 months during your lifetime (B)	For staff use only
1	Muscle or joint pain	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:FM <input type="checkbox"/> <sub>1</sub> M:CFS
2	Morning stiffness	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
3	Muscle spasms	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
4	Persistent fatigue not relieved with rest	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:CFS
5	Extreme fatigue following exercise or mild exertion	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
6	Recurrent fevers	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
7	Dry eyes	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
8	Dry mouth	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
9	Fingers turn blue and/or white in the cold	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
10	Numbness or tingling in arms or legs	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
11	Shortness of breath during normal activity	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
12	Impaired memory, concentration or attention	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
13	Chest pain	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
14	Palpitations	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
15	Rapid heart rate	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
16	Heartburn	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
17	Vomiting	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
18	Nausea	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
19	Abdominal pain or discomfort	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:IBS
20	Problems with balance	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
21	Dizziness	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
22	ringing in ears	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
23	Ear pain	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:TMJ

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**CMSI2\_Screening**

## COMPLEX MEDICAL SYMPTOMS INVENTORY

Participant completes via online survey at the Screening Week 0 contact.

Q#	SYMPTOM	3 months during the last year (12 months) (A)	3 months during your lifetime (B)	For staff use only
24	Sensation of ear blockage or fullness	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
25	Sinus pressure	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
26	Pelvic/bladder discomfort (pain or pressure)	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
27	Urinary urgency	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
28	Urinary frequency, >8/day during waking hours	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
29	Frequent nocturia (nighttime urination), 3/night	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
30	Sensation of bladder fullness after urination	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
31	Jaw and/or face pain	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:TMJ
32	Temple pain	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
33	Pulsating and/or one-sided headache pain or migraines	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:MI
34	Pressing/tightening headache pain or tension headaches	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
35	Sensitivity to certain chemicals, such as perfumes, laundry detergents, gasoline and others	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
36	Sensitivity to sound	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
37	Sensitivity to odors	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
38	Body feeling tender	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
39	Frequent sensitivity to bright lights	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	
<b>FEMALES ONLY:</b>				
40	Constant burning or raw feeling at the opening of vagina	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub> M:VDYN
41	Itching at opening of vagina	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>1</sub>	

## COMPLEX MEDICAL SYMPTOMS INVENTORY Fibromyalgia Symptoms Modified (ACR 2010 Fibromyalgia Diagnostic Criteria) Participant completes via online survey at Screening Week 0.

2. Using the following scale, indicate for each item your severity over the past week by checking the appropriate box.

*No problem*

*Slight or mild problems:* generally mild or intermittent

*Moderate:* considerable problems; often present and/or at a moderate level

*Severe:* continuous, life-disturbing problems

	No Problem	Slight or Mild	Moderate	Severe
a. Fatigue	<input type="checkbox"/> <sub>0</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>
b. Trouble thinking or remembering	<input type="checkbox"/> <sub>0</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>
c. Waking up tired (unrefreshed)	<input type="checkbox"/> <sub>0</sub>	<input type="checkbox"/> <sub>1</sub>	<input type="checkbox"/> <sub>2</sub>	<input type="checkbox"/> <sub>3</sub>

3. During the past 6 months have you had any of the following symptoms?

a. Pain or cramps in lower abdomen	<input type="checkbox"/> <sub>1</sub> Yes	<input type="checkbox"/> <sub>0</sub> No
b. Depression	<input type="checkbox"/> <sub>1</sub> Yes	<input type="checkbox"/> <sub>0</sub> No
c. Headache	<input type="checkbox"/> <sub>1</sub> Yes	<input type="checkbox"/> <sub>0</sub> No

4. Have the symptoms in questions 2-3 and pain been present at a similar level for at least 3 months?

	<input type="checkbox"/> <sub>1</sub> Yes	<input type="checkbox"/> <sub>0</sub> No
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5. Do you have a disorder that would otherwise explain the pain?

	<input type="checkbox"/> <sub>1</sub> Yes	<input type="checkbox"/> <sub>0</sub> No
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# Next Steps

- Developing a Case Definition:
  - Modify CMSI into tool that includes all 10 conditions
  - Include COPCs researchers in development
  - Conduct validation studies (through joint initiative sponsored by NIH)
- Second Phase (once case definition is developed):
  - Develop Common Data Elements for COPCs (minimum dataset to be collected across studies)
  - Data-Sharing Repository & Analyses Plan