

# Population Health-State Utilities for Fibromyalgia in the United Kingdom

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# Project Team

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# Fibromyalgia

- **Most common cause of widespread chronic pain**
- **Characterised by broad and variable symptoms:**
  - pain, fatigue, cognitive problems, morning stiffness, sleep disturbance, irritable bowel, headache, depression/anxiety
- **FM HRQoL similar to rheumatoid arthritis and chronic heart disease**

# Study Overview

- **Objective**

- Estimate health-state utilities for fibromyalgia (FM) for the general population in the United Kingdom (UK)

- **Approach**

- Six health states – mild, moderate, and severe FM both with and without mood symptoms
- Use time tradeoff (TTO) to elicit health-state utilities from the general population
- Compare TTO utilities with EQ-5D health-state utilities from two Phase III clinical trials

# FM Health-State Descriptions

- **Mild, moderate, and severe FM defined primarily by pain using the Brief Pain Inventory (BPI)**
  - Mild: BPI 1 – 3
  - Moderate: BPI 4 – 6
  - Severe: BPI 7 – 9
- **Health state descriptions defined by outcomes of the Fibromyalgia Impact Questionnaire (FIQ)**

# Fibromyalgia Impact Questionnaire

- **Validated FM-specific PRO Instrument**

- Pain (11-point scale similar to BPI)
- Activities of daily living
- General well being
- Ability to work
- Fatigue
- Awakening rested
- Stiffness
- Anxiety
- Depression

# Examples of Health-State Descriptions

## **Health State #1 (mild with no mood symptoms)**

On a scale of 1 to 10 (10 being the worst), you would rate your pain between 1 and 3. You can conduct daily activities such as shopping and household chores on most days, but not all, and you generally feel well. You are able to work outside the home approximately 4 – 5 days each week, but when you do work, you have some mild difficulty. You are occasionally tired during the day and you awaken feeling tired 1 – 2 days each week. You feel mildly stiff each morning, but you do not feel anxious or depressed.

## **Health State #4 (moderate with mood symptoms)**

On a scale of 1 to 10 (10 being the worst), you would rate your pain between 4 and 6. You can conduct daily activities such as shopping and household chores on most days, but not all, and you generally feel okay. You are able to work outside the home approximately 4 days each week, but when you do work, you have mild-to-moderate difficulty. You are sometimes tired during the day and you awaken feeling tired 2 – 3 days each week. You feel mildly-to-moderately stiff each morning but and feel very anxious and depressed.

# TTO Survey

- **Each subject evaluated 3 randomly assigned health states**
- **Health states and order of health states randomized**
- **Each health state evaluated 30 times**
- **20-year time horizon for time tradeoff**
- **Ordering of time in time tradeoff randomized**

# Survey Sample

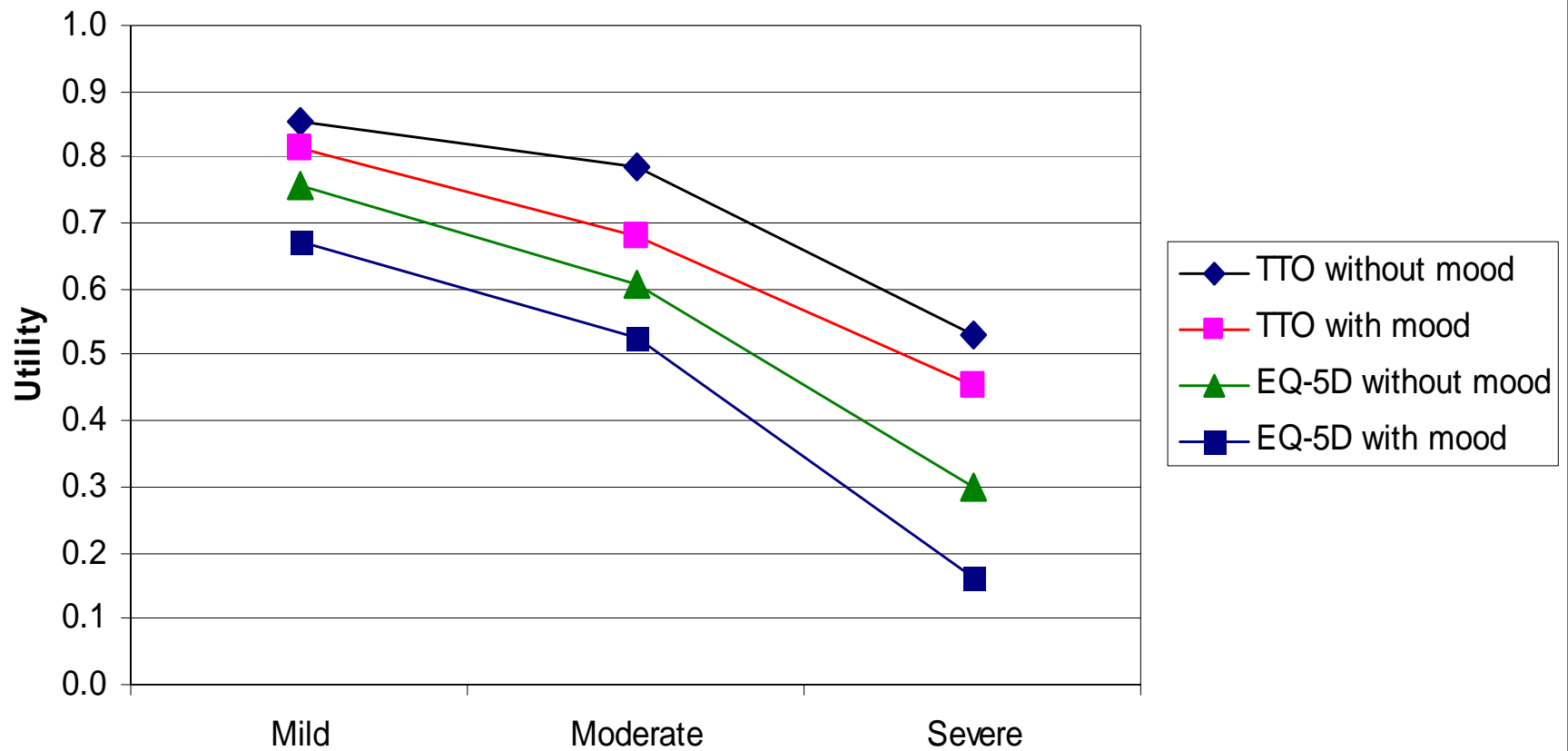
- **60 people from the general population in Manchester, UK**
  - 18 years of age and older
  - Able to read and understand English
  - Provide informed consent
- **Subject characteristics**
  - Mean (SD) age = 42 (16.17) years
  - 58% female
  - Mean (range) age of women = 41 (20 – 85) years
  - Mean (range) age of men = 44 (18 – 69) years

# Tabular Results

FM Health State		Utility Estimates	
		TTO (mean, SD)	EQ-5D (mean, SD)
Mild (BPI 1- 3)	Without mood	0.856 (0.132)	0.756 (0.134)
	With mood	0.815 (0.160)	0.672 (0.187)
Moderate (BPI 4 -6)	Without mood	0.785 (0.185)	0.608 (0.215)
	With mood	0.680 (0.239)	0.525 (0.247)
Severe (BPI 7 – 9)	Without mood	0.532 (0.258)	0.300 (0.291)
	With mood	0.452 (0.297)	0.162 (0.265)

# Graphical Results

## FMS Utility Estimates



# Conclusions

- **FM has a significant impact on utility**
- **Mood symptoms have a consistent negative effect on utility at all levels of FM severity**
- **TTO utilities are consistently lower than EQ-5D utilities**
- **Standard deviations of utility estimates increase as FM severity increases**