

Educational Needs Assessment

Addressing Gaps in Polymyalgia
Rheumatica (PMR) Research

2025

Data Summary

This document was developed for a CDC-sponsored project, Building Capacity for Polymyalgia Rheumatica Education and Awareness, (CDC-RFA-DP23-0067).



Needs Assessment Overview

We conducted a 31-question multiple-choice **educational needs assessment** to better understand public health professionals' knowledge of polymyalgia rheumatica (PMR) and its related condition, giant cell arteritis (GCA). This type of survey helps identify levels of awareness and areas where further education is needed. Our goal was to explore key topics related to PMR, including gaps in knowledge, opportunities for education, and ways to improve support for those affected by these conditions.

Survey questions were divided amongst seven key topic sections to evaluate participants' holistic knowledge of PMR:

[Section 1: Eligibility and Familiarity with PMR](#)

[Section 2: Definition and Etiology](#)

[Section 3: Epidemiology](#)

[Section 4: Diagnosis](#)

[Section 5: Treatment](#)

[Section 6: Treatment Risks and Prognosis](#)

[Section 7: Patient Satisfaction and Patient-Reported Outcomes](#)

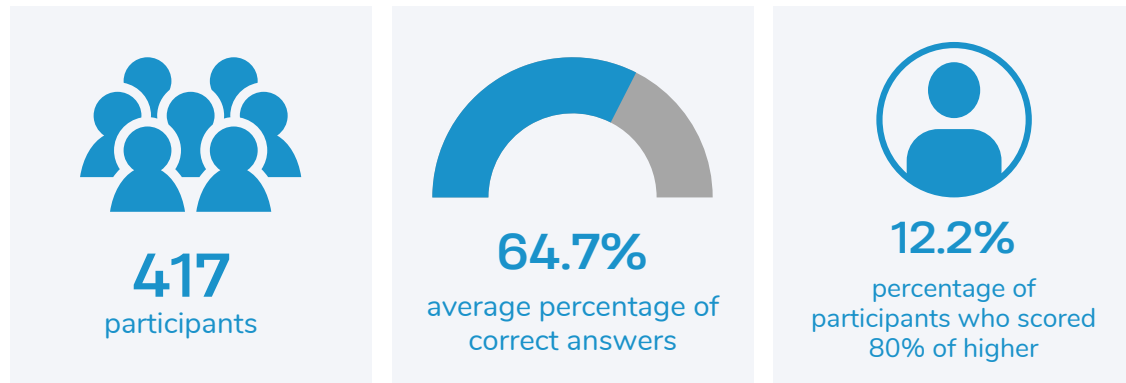
Two additional optional sections, [Section 8: Demographics](#) and [Section 9: Preferred Learning Styles](#), were asked to identify trends by type of respondent and highlight potential strategies for later education dissemination.

A Note About Needs Assessments

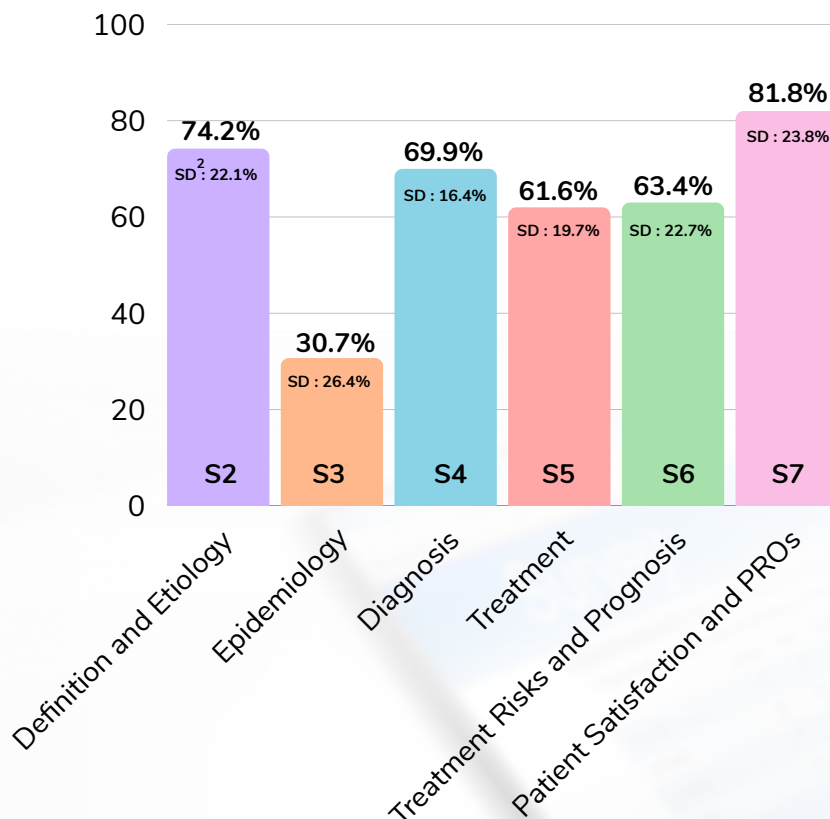
A needs assessment is not intended to define what a learner should know but rather to identify what they don't know. Some questions asked to participants may appear challenging, especially for those in less clinical public health settings. This was intentional—the goal is to highlight strengths and knowledge gaps, not to test competency.

Results

A total of 1,009 participants began the survey, of which **417** met the inclusion criteria, meaning that they both worked in public health or healthcare and had some prior knowledge of PMR. Eligible participants included people who work in healthcare at all levels including doctors, nurses, and health administrators. It also included people who work at health departments, researchers, and scientists. The average score of participants was **64.7%** (SD: 13.1%) 12.2% of participants received a score of 80% or better.



Average Score by Section¹



- **Section 3: Epidemiology** had the lowest average score at 30.7%.
- **Section 7: Patient Satisfaction and PROs** had the highest average score at 81.8%.

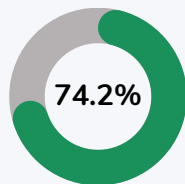
1. **Section 1: Eligibility and Familiarity with PMR**, covered survey eligibility and was not scored.
2. **Standard Deviation (SD)**: Standard deviation is a measure of how spread out the numbers in a set are. If the standard deviation is small, most numbers are close to the average. If it's large, the numbers vary a lot from the average. It helps us understand how consistent or scattered the data is.

Findings: Strengths

Participants demonstrated a strong understanding of the following topics and questions:

Section 2: Definition and Etiology

This section evaluated participants' knowledge of symptoms associated with the development of PMR, risk factors, and the role infections play in PMR onset.



Average score across all questions: **74.2%**
14.7% higher than the average score

Highest Performing Questions:

Question: Which of the following is considered a primary factor in the development of PMR?

Possible Answers	Percentage Selected
Autoimmune response	82.25%
None of the above	9.6%
High-fat diet	3.1%
Bacterial infection	2.9%
Physical trauma	2.2%

Question: What role do infections play in the potential causes of PMR?

Possible Answers	Percentage Selected
Infections may trigger an autoimmune response leading to PMR	88.7%
Infections have no role in the development of PMR	8.4%
Infections directly cause the disease by infecting muscle tissue	1.9%
Infections may prevent the disease by boosting immunity	1%

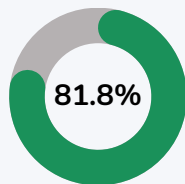
Discussion: The high scores suggest a foundational understanding of PMR's autoimmune nature and the role of infections as a contributing factor. However, **nearly 1 in 5 participants** could not identify the autoimmune response correctly, indicating a need for targeted education to strengthen comprehension among all public health professionals.

Findings: Strengths

Participants demonstrated a strong understanding of the following topics and questions:

Section 7: Patient Satisfaction and PROs

This section evaluated participants' understanding of clinical outcome and patient-reported measures to assess PMR treatment effectiveness and quality of life.



Average score across all questions: 81.8%
26.4% higher than the average score

Highest Performing Questions

Question: In addition to blood tests, what can healthcare providers do to measure the effectiveness of PMR treatment?

Possible Answers	Percentage Selected
Use patient-reported outcome measures (PROMs) to evaluate how the patient is doing	93%
Only evaluate observations of family members regarding the patient's condition	3.4%
Monitor prescriptions and medication refill logs	3.1%
No additional measures are necessary beyond blood tests	0.5%

Question: Which of the following domains would you use to measure patient satisfaction?

Possible Answers	Percentage Selected
Effectiveness of treatment and patient-reported quality of life	86.3%
Patient-reported quality of life alone (e.g., SF-36)	11.5%
Effectiveness of treatment alone	1.7%
No additional measures are necessary beyond blood tests	0.5%

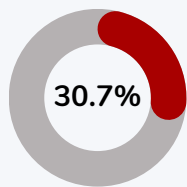
Discussion: The responses highlight strong participant knowledge about evaluating treatment outcomes and patient satisfaction. This strength underscores an opportunity to leverage the established value of patient voices and feedback in future educational efforts.

Findings: Gaps in Knowledge

The following describes topics and questions where participants had **lower than average (64.7%)** scores. These may be areas where more educational support is needed.

Section 3: Epidemiology

This section evaluated participants' knowledge of PMR prevalence and incidence in the United States.



Average score across all questions: **30.7%**
52.6% lower than the average score

Lowest Performing Questions

Question: Approximately how many people are estimated to have PMR in the U.S. currently?

Possible Answers	Percentage Selected
300,000 to 600,000 people	43.4%
50,000 to 100,000 people	30.2%
700,000 people to 1 million people	18.2%
Over 1 million people	8.2%

Question: Approximately how many people are newly diagnosed with PMR in the U.S. each year?

Possible Answers	Percentage Selected
5,000 to 10,000 new cases per year	52.3%
20,000 to 30,000 new cases per year	29.3%
50,000 to 70,000 new cases per year	12.7%
Over 100,000 new cases per year	5.8%

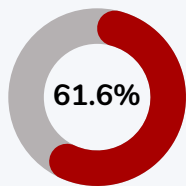
Discussion: Significant limitations in knowledge exist around PMR prevalence estimates. Participants **underestimate** the actual prevalence and incidence. There is a need for further educational efforts in PMR epidemiology, specifically related to awareness of disease population impact.

Findings: Gaps in Knowledge

The following describes topics and questions where participants had **lower than average (64.66%)** scores. These areas may be where more educational support is needed.

Section 5: Treatment

This section evaluated participants' knowledge of PMR treatments, methods to monitor treatment effectiveness, and steps to take if treatment is ineffective or condition is refractory.



Average score across all questions: **61.6%**
4.8% lower than the average score

Lowest Performing Questions

Question: What is the approximate proportion of PMR patients who continue to experience symptoms despite receiving standard treatment?

Possible Answers	Percentage Selected
About 20-40% of patients	42.5%
About 10-20% of patients	38.4%
More 50% of patients	13.7%
About 5% of patients	5.5%

Question: What is the first-line treatment for PMR?

Possible Answers	Percentage Selected
Corticosteroids, such as prednisone, typically for several months to a year	44.4%
Nonsteroidal anti-inflammatory drugs (NSAIDs) alone for several months	27.1%
Disease-modifying antirheumatic drugs (DMARDs) like methotrexate for several months to a year	25.9%
Antibiotics for 4 to 6 weeks	2.6%

Discussion: Given that **under half** of the participants responded correctly to these questions, the results illustrate the importance of knowledge dissemination in PMR treatment. Education focusing on prevalence of recurring PMR symptoms and treatment options for its initial onset could help further inform care delivery efforts.