# Content Validation: Patient-Oriented Research Level of Engagement Tool (PORLET)

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**To access the PORLET, please scan this QR Code**

## INTRODUCTION

- The **Saskatchewan Centre for Patient-Oriented Research (SCPOR)** engages Patient Partners in grant review panels to select patient-oriented research (POR) projects[1]. Patient Partners reported challenges in assessing the degree to which the projects were patient-oriented.
- **SCPOR created the PORLET** to assist review panels in measuring how well a project aligns with the Canadian Institutes of Health Research's (CIHR) definition of POR, which is scored through the International Association for Public Participation (IAP2) Spectrum of Engagement[1].
- **Content validation** that engaged qualified subject matter experts (SMEs) in the field of POR was the next logical step.
- As 50% of patients do not receive treatment of proven effectiveness and 25% receive care that is unnecessary/potentially harmful, PORLET validation contributes one mechanism for **improving POR processes** and **bridging gaps** between the research-to-practice continuum[2].

## OBJECTIVE

To evaluate whether the PORLET is a **valid tool** for measuring the degree to which Canadian health research projects are patient-oriented.

## METHODS

**Recruitment:** Non-probability, snow-ball sampling recruitment letter via CIHR's Provincial Support Units and Affiliated Research Networks
**Target Sample:** N = 30 Experts (Researchers, Patients, Decision Makers)
**Inclusion Criteria:** Moderate - Extensive POR experience
**Exclusion Criteria:** None - Some POR experience

- A 4-point Likert-style content validation survey was administered via **Survey Monkey**, where experts assessed the instructions, scoring methods, relevance, clarity, and comprehensiveness of the tool[3,4].
- A comment box was available in each section of the survey, so experts could provide qualitative feedback for improving the content, procedural, and wording aspects of the PORLET.
- **Content Validity Indexes** (CVIs) were calculated for relevance and clarity, both for individual items (I-CVIs) and as a scale with average (AVE-CVI) and universal agreement (UA-CVI) measures[5,6,7,8].
- An I-CVI below 0.80 would require revision and an S-CVI/Ave below 0.80 would indicate the tool is not a valid measure[5,6].
- **Modified Kappa Statistics** ($K$) were calculated to account for chance inflation of agreement on the CVIs and any ($K$) value $\geq 0.75$ would indicate an excellent analysis given the removal of chance agreement[6].
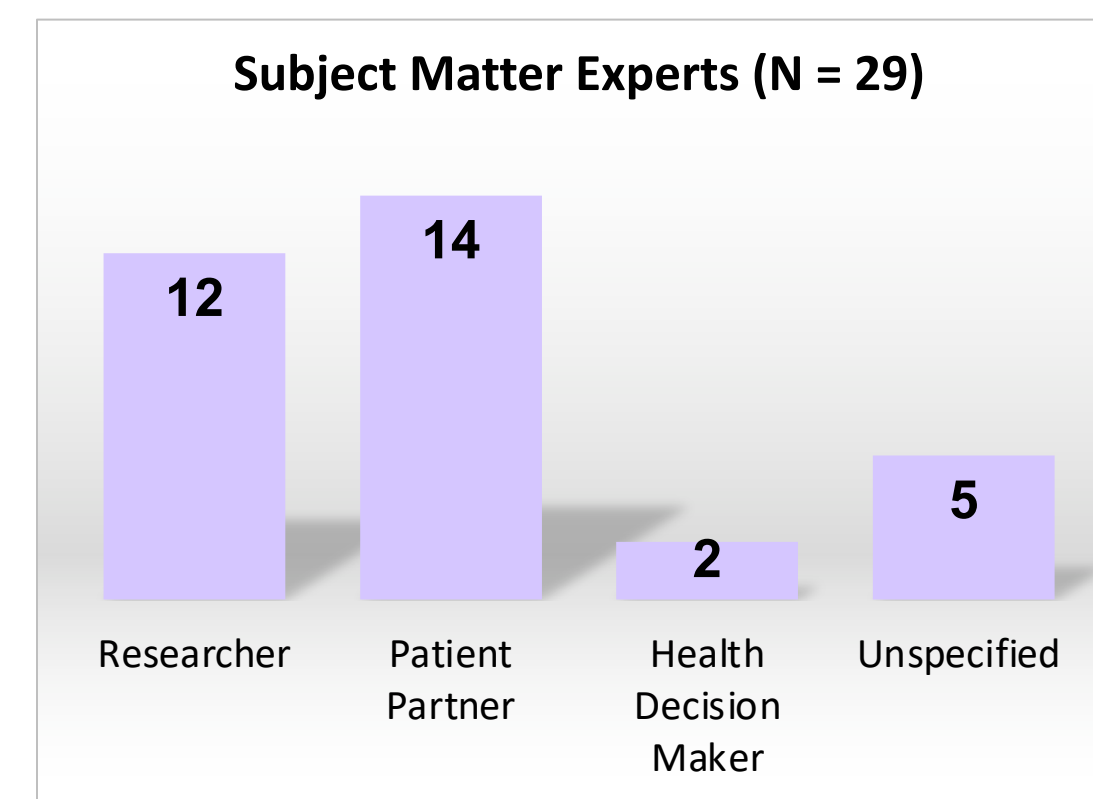
## RESULTS



Figure 1. Number of SMEs. Researcher (N = 12); Patient Partner (N = 14); Health Decision-Makers (N = 2). Unspecified Group: Respondents who self-described as a SPOR SUPPORT/Network Affiliate but did not specify capacity. Some respondents self-described as belonging to more than one group. Total N = 29.
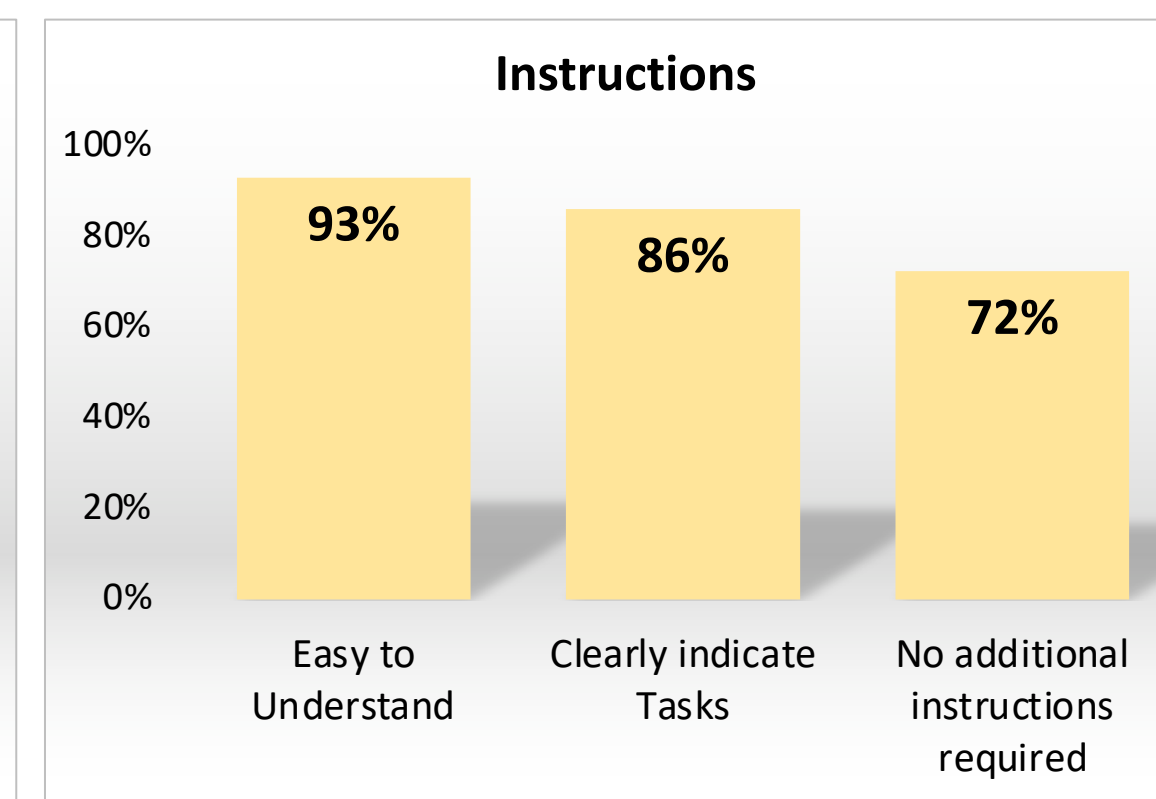
Figure 2. Agreeability on PORLET Instructions Page. Respondents were asked to what extent did they agree with each of three statements regarding the content of the tool's instructions (1 = Strongly Disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree). Percentages here and within each subsequent figure depict the total number of respondents who selected either 3 or 4.
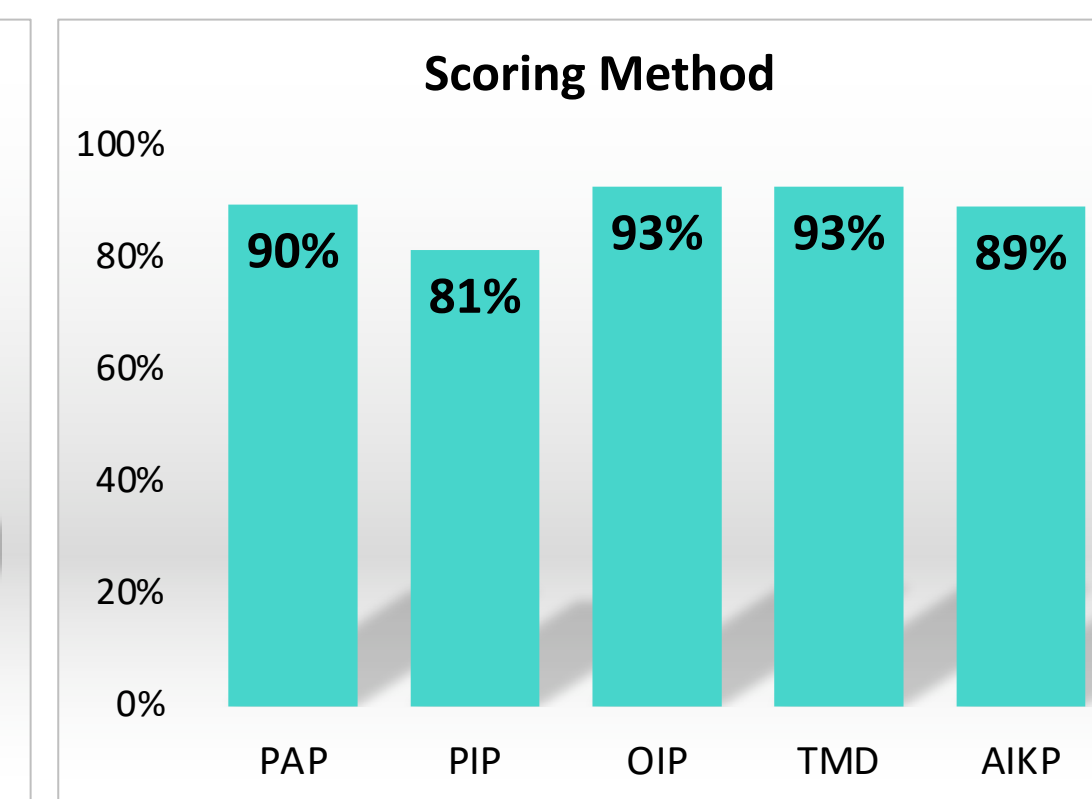
Figure 3. Agreeability on PORLET Scoring. Respondents were asked to what extent did they agree with the scale for scoring the five POR Criteria was appropriate/reasonable. (1 = Strongly Disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree). PAP: Patients are Partners; PIP: Patient Identified Priorities; OIP: Outcomes Important to Patients TMD: Team is Multidisciplinary; AIKP: Aims to Integrate Knowledge into Practice.
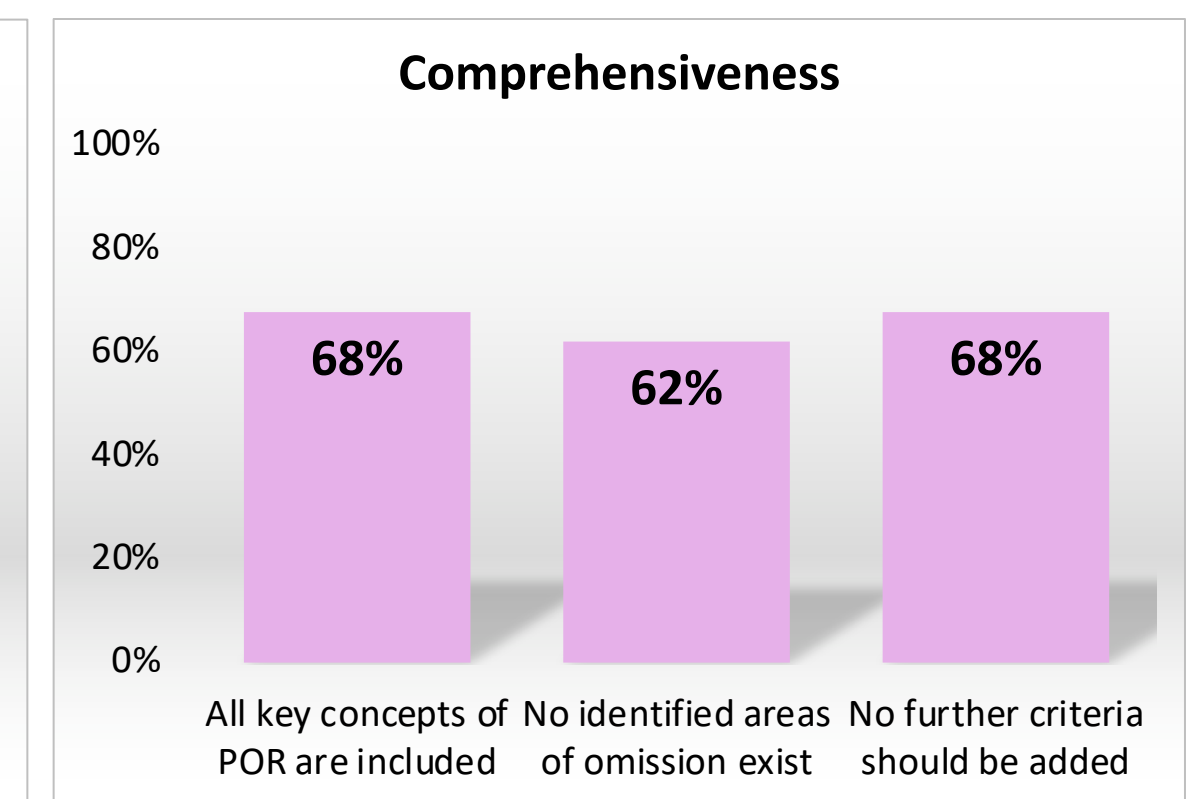
Figure 4. Agreeability on PORLET Comprehensiveness. Respondents were asked to what extent did they agree with each of three statements regarding the breadth and scope of the tool (1 = Strongly Disagree; 2 = Disagree; 3 = Agree; 4 = Strongly Agree).

| Relevance (Criteria) Clarity (Statements) | WA• | Rating (3 or 4) | I-CVI•• | Pc••• | K•••• | Analysis |
|---|---|---|---|---|---|---|
| **PAP** | **3.90** | **29** | **1.00** | **0.000** | **1** | **Excellent** |
| PAP-1 | 3.66 | 26 | 0.897 | 0.000 | 0.897 | Excellent |
| PAP-2 | 3.79 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| PAP-3 | 3.41 | 26 | 0.897 | 0.004 | 0.897 | Excellent |
| PAP-4 | 3.62 | 26 | 0.897 | 0.000 | 0.897 | Excellent |
| PAP-5 | 3.48 | 24 | 0.828 | 3.18 | 1 | Excellent |
| **PIP** | **3.45** | **26** | **0.897** | **0.002** | **0.897** | **Excellent** |
| PIP-1 | 3.79 | 28 | 0.966 | 0.000 | 0.966 | Excellent |
| PIP-2 | 3.69 | 28 | 0.966 | 0.000 | 0.966 | Excellent |
| PIP-3 | 3.33 | 24 | 0.889 | 0.000 | 0.889 | Excellent |
| PIP-4 | 3.54 | 26 | 0.929 | 0.000 | 0.929 | Excellent |
| PIP-5 | 3.55 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| **OIP** | **3.62** | **26** | **0.897** | **0.000** | **0.897** | **Excellent** |
| OIP-1 | 3.69 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| OIP-2 | 3.66 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| OIP-3 | 3.31 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| OIP-4 | 3.55 | 26 | 0.897 | 0.000 | 0.897 | Excellent |
| OIP-5 | 3.55 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| **TMD** | **3.03** | **21** | **0.724** | **12,997,072** | **1.00** | **\*Revise\*** |
| TMD-1 | 3.59 | 26 | 0.897 | 0.000 | 0.897 | Excellent |
| TMD-2 | 3.57 | 25 | 0.892 | 0.000 | 0.893 | Excellent |
| TMD-3 | 3.52 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| TMD-4 | 3.48 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| TMD-5 | 3.62 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| **AIKP** | **3.44** | **23** | **0.852** | **0.075** | **0.839** | **Excellent** |
| AIKP-1 | 3.72 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| AIKP-2 | 3.59 | 26 | 0.896 | 0.000 | 0.897 | Excellent |
| AIKP-3 | 3.34 | 25 | 0.862 | 0.025 | 0.858 | Excellent |
| AIKP-4 | 3.69 | 27 | 0.931 | 0.000 | 0.931 | Excellent |
| AIKP-5 | 3.55 | 26 | 0.897 | 0.000 | 0.897 | Excellent |
| **Relevance S-CVIs** | **S-CVI/Ave•••••** | | **0.874** | **S-CVI/UA••••••** | | **0.200** |
| Clarity S-CVIs | S-CVI/Ave | | 0.900 | S-CVI/UA | | 0.000 |

Table 1. Relevance and Clarity Measures. N = 29 SMEs (Exception: PIP-3 = 27; PIP-4; 28; TMD-2 = 28; AIKP = 28); *Weighted Average; **Item-Content Validity Index (I-CVI) = # Experts rating item 3 or 4/Total # Experts; Interpretation of CVIs[3,5,7,8]: I-CVI ≥ 0.8: Acceptable; 0.7 ≤ I-CVI ≤ 0.79: Revision; I-CVI ≤ 0.69: Removal; *TMD relevance* falls within the revision range (I-CVI = 0.724); ***Probability of a chance occurrence (Pc) = [N!/A! (N-A)!]*0.5[N] where N = # of experts and A = # of panelists who agree the item is relevant; ****Modified Kappa Statistic (K) = (I-CVI-Pc)/(1-Pc); Interpretation of Kappa values[6]: Fair: 0.4 ≤ K ≤ 0.59; Good: 0.60 ≤ K ≤ 0.74; Excellent: K ≥ 0.75. *****Scale Average-Content Validity Index (S-CVI/Ave) = I-CVI Average. ******Scale Universal Agreement-Content Validity Index (S-CVI/UA) = # items considered relevant by all Experts/Total # of items rated.

## RECOMMENDATIONS

**Instructions**
- Clarify PORLET target audiences
- Increase white space
- Format definitions from IAP2 in a table
- Combine IAP2-scored POR criteria

**Scoring & Clarity**
- Apply keywords from IAP2 Spectrum
- Increase context to better differentiate between scores, i.e.:
- "As team members," "Equally," & "Primary"

**Comprehensiveness**
- Include established resources for equity, diversity, inclusion, compensation, and additional training modules on SCPOR's Webpage

**TMD Relevance**
- Explicitly define Patient Partners as relevant stakeholders
- Diversify scope of research disciplines outside of healthcare professions

## CONCLUSIONS

- POR is an evolving approach to include patients on the research team, but also represents a culture shift in the health research community[10].
- While subsequent criterion and construct validity evaluations may be beneficial, this project indicates the **PORLET** has significant potential in becoming a **national standard** for determining the degree to which Canadian health research projects are patient-oriented.
- As a valid tool, the PORLET ensures the **right patient** receives the **right intervention** at the **right time**, ultimately improving POR processes and bridging gaps between the research-to-practice continuum.

## ACKNOWLEDGEMENTS

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