# Bowel urgency in inflammatory bowel disease: The URGENT index

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## Background

Bowel urgency is commonly defined as the sudden need to rush to the bathroom to empty one's bowel. Previously, we summarized data from 321 studies evaluating bowel urgency (1). **Definition of bowel urgency was heterogeneous**. In most of these studies, non-validated questionnaires, based on subjective responses of the patients, were used. **The objective of this study were to develop the URGENT index, an IBD-specific bowel urgency index, and to evaluate correlation between the URGENT index and the Urgency Numeric Rating Scale (UNRS)**.

## Methods

URGENT-1 was a **cross-sectional, multicenter study** with prospective inclusions of IBD patients and with an optional follow-up for a subset of patients.

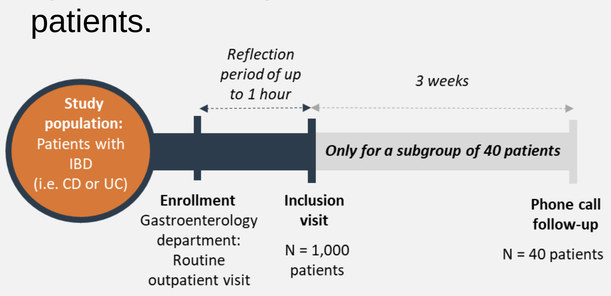



Figure 1: URGENT-1 study design

**A stratification on the type of IBD was performed**. The components of the URGENT index were based on variables describing in systematic review and expert opinion.

| Symptoms potentially associated with bowel urgency |
|---|
| 1. Urgent desire to defecate |
| 2. Extreme desire to defecate |
| 3. Immediate need to defecate |
| 4. Inability to defer defecation for more than 2 minutes |
| 5. Inability to defer defecation for more than 5 minutes |
| 6. Inability to defer defecation for more than 15 minutes |
| 7. Inability to defer defecation for more than 20 minute |
| 8. Inability to defer defecation for more than 30 minutes |
| 9. Having to rush to the toilet |
| 10. Not making it to a toilet in time |
| 11. Having to stop whatever to have a bowel movement |
| 12. Difficult to withstand urge to open bowel |
| 13. Running to the bathroom |
| 14. Inability to delay bowel movements |
| 15. Uncontrollable need to defecate |
| 16. Need to use diapers/pads |
| 17. Involuntary defecation after urgent desire to defecate |
| 18. Fear of not making it to the restroom in time |
| 19. Immediate need to defecate causing panic |
| 20. Fear/anxiety of leaving the house due to urgency |
| 21. Avoidance of work / school / social activities due to urgency |
| 22. Negative impact of bowel urgency on sex life |
| 23. Frequency of bowel urgency in the last 7 days |
| 24. Occurrence of accidental loss stool in the last 7 days |
| 25. Taking anti-diarrheal medication |

**All the symptoms potentially associated with bowel urgency were collected and assessed with a 10-point visual analog scale**.

## Funding

This study is supported by an external sponsor research agreement from Lilly.

European Crohn's and Colitis Organisation
This poster was presented at the annual ECCO Congress.

## Results

The content validity of the symptoms potentially associated with bowel urgency was tested by five experts. Face validity of the selected items was checked for clarity, comprehension, ease of response and relevance with 20 patients. Then data corresponding to the selected items were collected.

| List of candidate items |
|---|
| 1. Urgent desire to defecate |
| 2. Immediate need to defecate |
| 3. Inability to defer defecation for more than 2 minutes |
| 4. Inability to defer defecation for more than 5 minutes |
| 5. Inability to defer defecation for more than 15 minutes |
| 6. Having to rush to the toilet |
| 7. Impossible to reach the toilet in time to defecate |
| 8. Having to stop whatever to have a bowel movement |
| 9. Need to run to the bathroom to defecate |
| 10. Inability to delay bowel movements |
| 11. Uncontrollable need to defecate |
| 12. Need to use diapers/pads |
| 13. Involuntary defecation after urgent desire to defecate |
| 14. Fear of not making it to the restroom in time |
| 15. Immediate need to defecate causing panic |
| 16. Fear/anxiety of leaving the house due to urgency |
| 17. Avoidance of work / school / social activities due to urgency |
| 18. Limitation of sexual activity due to bowel urgency |
| 19. Number of bowel urgency (urgent need to defecate) in the last 7 days |
| 20. Number of accidental defecations in the last 7 days |
| 21. Taking anti-diarrheal medication |

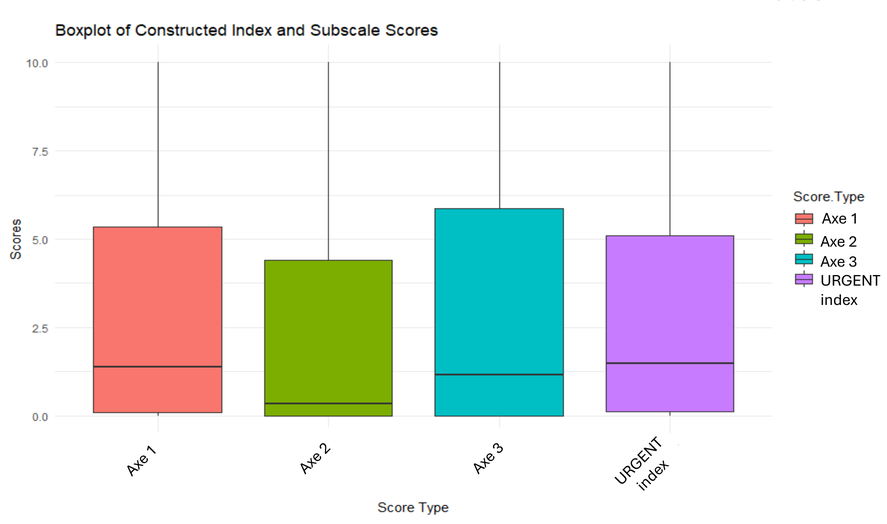
### The index construction approach Method 1: Cronbach

**Axes**

- **1) Urgency and Inability to Delay Defecation**
- **2) Anxiety and Avoidance Behaviors**
- **3) Delayed Defecation and Time-Related Issues**

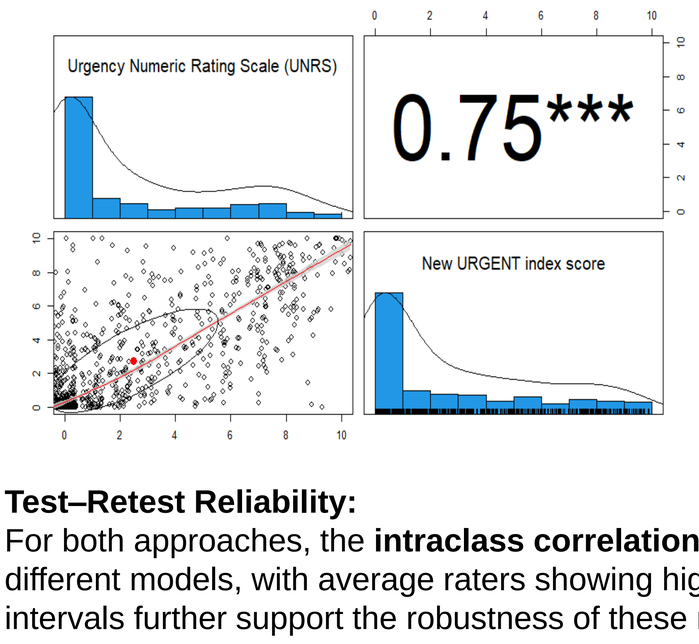
**Items**

- Immediate need to defecate
- Having to rush to the toilet
- Having to stop whatever to have a bowel movement
- Inability to delay bowel movements
- Fear/anxiety of leaving the house due to urgency
- Avoidance of work / school / social activities due to urgency
- Immediate need to defecate causing panic
- Inability to defer defecation for more than 5 minutes
- Inability to defer defecation for more than 15 minutes




The **overall Cronbach's alpha coefficient is 0.965**.

**External Structure Validity - Spearman Correlation between URGENT index and UNRS**



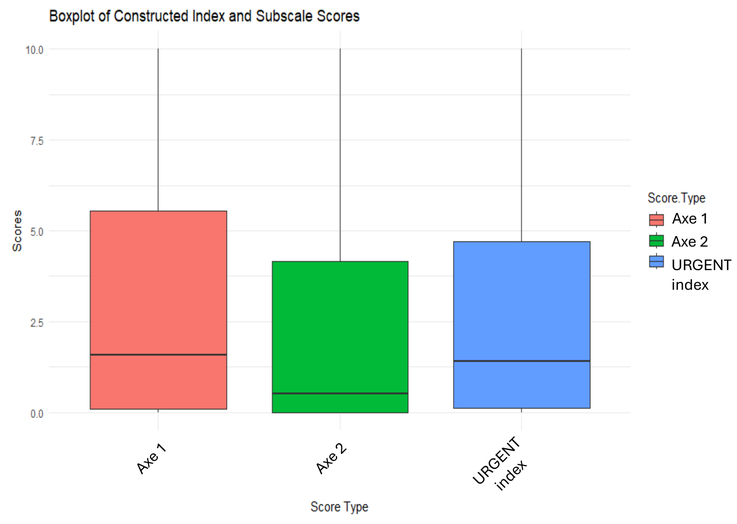

### The index construction approach Method 2: Variance Inflation Factor

**Axes**

- **1) Immediate Urgency and Inability to Delay**
- **2) Social Avoidance and Anxiety**

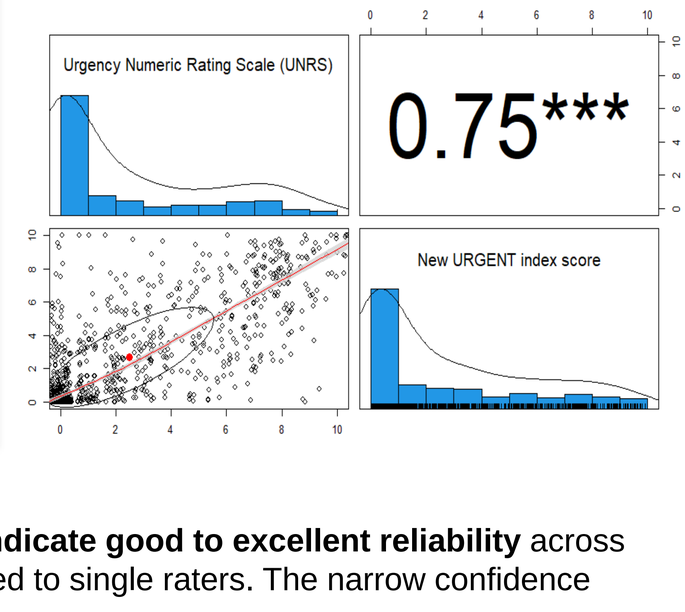
**Items**

- Immediate need to defecate
- Inability to defer defecation for more than 15 minutes
- Inability to delay bowel movements
- Avoidance of work / school / social activities due to urgency
- Immediate need to defecate causing panic




The **overall Cronbach's alpha coefficient is 0.923**.

**External Structure Validity - Spearman Correlation between URGENT index and UNRS**




**Test–Retest Reliability:**
For both approaches, the **intraclass correlation coefficient values indicate good to excellent reliability** across different models, with average raters showing higher reliability compared to single raters. The narrow confidence intervals further support the robustness of these reliability estimates.

## Conclusion

**This study developed IBD-specific bowel urgency indexes which will be tested in a longitudinal cohort study**. This will allow to have a homogeneous and standardized definition of bowel urgency, measure the effectiveness of treatments, and systematically assess this symptom in clinical practice for IBD patients.

## References

(1) Caron B, Ghosh S, Danese S, Peyrin-Biroulet L. Identifying, Understanding, and Managing Fecal Urgency in Inflammatory Bowel Diseases. Clin Gastroenterol Hepatol. 2023 Jun;21(6):1403-1413.e27. doi: 10.1016/j.cgh.2023.02.029. Epub 2023 Mar 9. PMID: 36906079.