Evaluating the Feasibility and Acceptability of a Personalized Endpoint: A Prospective Mixed Methods Study of Inventory-facilitated Goal Attainment Scaling

ARDEA OUTCOMES

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▶ Background

Standardized clinical outcome assessments often fail to capture meaningful change in heterogeneous populations due to variability in symptom expression. Personalized approaches such as Goal Attainment Scaling (GAS)[1] address this limitation by facilitating patient-centered, individualized outcome evaluation, and the use of structured tools such as goal inventories may further support their rigorous implementation.

This study examined the feasibility and acceptability of inventory-assisted GAS (GASi) compared to open-ended GAS (GASo) in the care of older adult outpatients with input from different stakeholders, including clinicians, patients, and care partners.

▶ Methods

In a prospective, non-interventional study, 26 patient-caregiver dyads were randomized 1:1 to GASi or GASo across three memory clinics in Nova Scotia. GASi used a 58-item goal inventory spanning behaviour, cognition, daily, and executive functioning, and physical symptoms. Four clinicians facilitated in-person goal setting and remote follow-up interviews at 3 months.
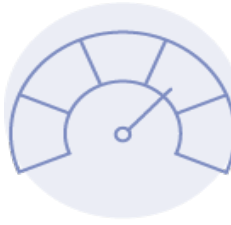
Feasibility was assessed through goal quantity, scale completion, goal quality, and attrition.

Acceptability was evaluated via post-visit surveys, and open-ended responses underwent thematic analysis.

How Goal Attainment Scaling Works

Identify Goals
Clinician to facilitate interview for subject or caregiver to identify goals

Build GAS Scales
Set the 5-point goal attainment scale for each identified goal

Goal Title	
Much more than expected	+2
Somewhat more than expected	+1
The expected level of outcome	0
Somewhat less than expected	-1
Much less than expected	-2

Measure Attainment
Rate during follow-up whether the goals have been attained

Quantify Goal Achievement
Apply a standardized formula that adjusts for the number of goals and their intercorrelations

Feasibility and Acceptability

We evaluated the impact of inventory-assisted Goal Attainment Scaling (GASi) on the number and types of goals established, the time required to set goals, and the overall quality of the resulting goal scales.

The perspectives of patients, care partners, and clinicians were explored through structured surveys and semi-structured one-on-one interviews with clinicians.

In addition, goal-scale quality was independently assessed by trained evaluators using SMART (Specific, Measurable, Attainable, Realistic, Time-bound) criteria.

▶ Results

Common Ideas and Key Points Across GAS Interviewer Surveys and Interviews

Themes

GAS Process
- GAS provides insights into patients' symptoms and challenges. It may help uncover previously undiscussed health issues and helps patients and care partners feel supported and motivated.
- GAS is more effective for motivated, engaged patients.

Inventory-facilitation
- Goal inventories streamline goal-setting by offering examples and orienting participants to the process, saving time.
- An eCOA platform guides interviewers through the GAS process and allows use and customization of inventory goals. Simplifying intake forms to streamline data entry and integration to existing clinic systems to avoid duplicate data entry would be beneficial.
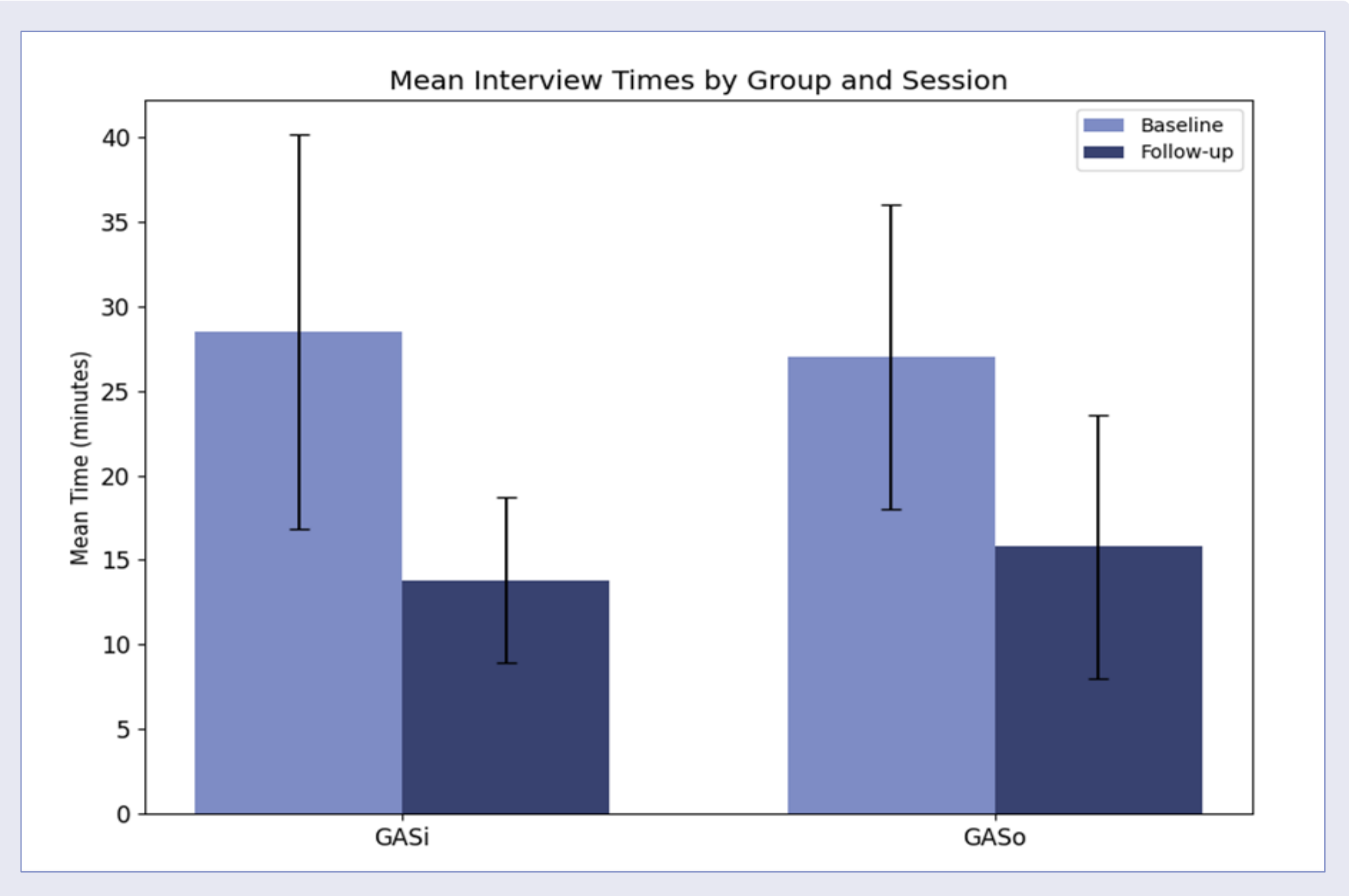
Challenges & Opportunities
- GAS can be time-consuming.
- GAS is easy to learn but hands-on training may be beneficial before full clinic use.
- Resources for GAS implementation that may also be beneficial include:
  - Additional hands-on training
  - Practice time
  - Extra staff for GAS appointments
  - Having a designated staff member for GAS

Common Ideas and Key Points Across Patient/Caregiver Surveys

Themes

Ease of Goal Identification & Role of Self-Awareness
- Goal identification was easy for most, driven by existing self-awareness and motivation. The goal inventory was valued for providing ideas and improving participant understanding of the process.

Enhanced Provider Interactions
- GAS facilitated focused, in-depth, and unrushed discussions with providers. This fostered openness to new treatment options and lifestyle changes.

Impact of the GAS Interviewer
- Most participants found setting meaningful goals with the interviewer easy, citing their clarity and a comforting demeanor as key factors.

Fostering Insightful and Open Conversations
- The process improved caregiver's understanding of the patient's condition, their challenges and priorities. It facilitated discussion of difficult or unaddressed topics.

Satisfying, Informative, and Motivating Experience
- The overall GAS process was reported as positive, satisfying, and enjoyable. It was informative and motivating toward goal achievement.

Informative and Reassuring Follow-Up Process
- Follow-ups were seen as informative and reassuring, prompting reflection on symptoms, progress and increasing awareness.

Sense of Care, Support, and Prioritization
- Participants reported feeling a strong sense of care, support, and appreciation. Interviewers were seen as strongly engaged.

Key Findings:

- All dyads set 1-4 goals (71, median=3), with 28% of goal scales completed across all five GAS levels. Follow-up interviews were completed by 25 participants (attrition rate 4%).
- Goal quality (11 vs 9 with all five levels) and quantity (38 vs 33) were comparable between GASi and GASo.
- Mean interview times, for GASi and GASo respectively, were 28.5±11.7 and 27±9 at baseline and 13.8±4.9, 15.8±7.8 at follow-up.

Subjects	GASi		GASo	
Visit	Baseline (n=13)	Follow-up (n=13)	Baseline (n=13)	Follow-up (n=12)
Mean Patient/Care Partner T-score (SD; range)	50	56.9±10.3; [40.9–77.4]	50	57.7±6.6; [50.0-68.3]
P-value	p= 0.033		p=0.002	
Mean GAS interviewer T-score (SD; [range])	50	57.9±11.1; [40.9–77.4]	50	58.5 (±7.3; [50-68.3]
P-value	p= 0.050		p= 0.003	

Mean Interview Times by Group and Session

- Goal distribution across domains differed between groups. GASo set more "other" goals.

Goal Domain Distribution
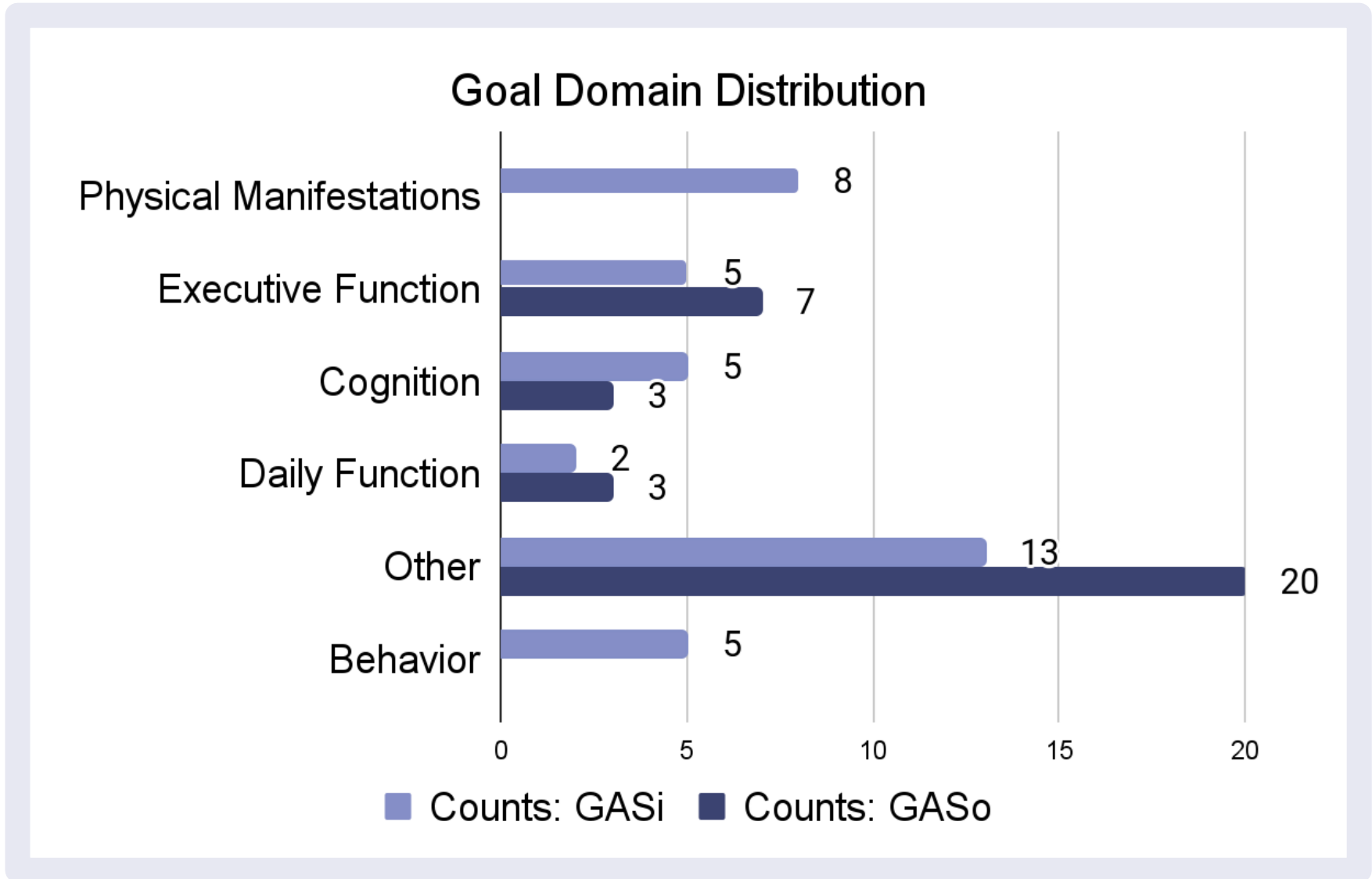
▶ Discussion & Conclusion

Both GAS approaches were feasible and acceptable. Overall, GAS supported goal clarity, motivation, and patient-provider engagement, offering a personalized approach to outcome assessment. Inventory-assisted GAS added structure and efficiency while maintaining patient relevance, supporting its use in real-world settings and clinical development.

▶ Acknowledgements & References