ISPOR Europe 2021: number of goals vs number of attainment levels

# Important dates

* Deadline: Tuesday, June 29 2021
* Acceptance notification: Tuesday, August 17 2021
* Conference: December 1-3 2021

# Guidelines

* Title in title case
* Study approach:
  + Decision Modeling & Simulation
* Choose a topics and subtopics, some relevant ones to this abstract:
  + Clinical Outcomes
    - Clinician Report Outcomes
  + Methodological & Statistical Research
    - **Modeling & Simulation**
  + Patient-Centered Research
    - Stated Preference & Patient Satisfaction
    - Patient-reported Outcomes & Quality of Life Outcomes
* Specific disease/specialized treatment area
  + Can select up to 4 that best describes your research
  + You can choose “multiple” if one choice does not apply
* 300 words or fewer
* No tables or graphs
* Research presented at a previous ISPOR meeting is not allowed

# Abstract

Descriptive title: Number of Goals per Subject and Number of Attainment Level in Goal Attainment Scaling: A Simulation Study

Better title: ??

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## Background

Goal attainment scaling (GAS) is a patient-centric outcome measure that captures meaningful change through personally identified goals of treatment. Traditionally, it is recommended to set a minimum of three goals per subject, each with a 5-point scale of possible outcomes called attainment levels. Using data simulation techniques, we investigated the relationship between the number of goals per subject, number of attainment levels per goal, and the statistical power of detecting a treatment effect in a cross-sectional trial.

## Methods

We employed a probabilistic model introduced by Urach et al. (2019) for generating GAS data. We varied the number of subjects (40, 60, 80; randomly allocated to control or treatment group with equal probability), the treatment effect size (0.3, 0.4, 0.5), and the parameters of interest: number of goals per subject (from 1 to 7), and the number of attainment levels (3, 5, 7). For each set of parameters, 1000 trials were simulated and a two-sided -test was performed on summary T-scores. Power was computed as the percentage of simulating detecting a significant treatment effect at = 0.05.

## Results

The gains in statistical power were minimal or non-zero when varying number of attainment levels .

## Conclusions

When planning a study that employs GAS, there is a minor trade-off in statistical power between number of goals and number of attainment levels. In scenarios where it is feasible to set a high number of goals per subject, it may be appropriate to construct 3-point scales in order to save time during goal-setting interviews.