

## Background

As investment in performance measurement and reporting continues to increase, organizations are aiming to enhance the usefulness and actionability of performance information. One approach is to compare health system performance by “segments” of the population with similar characteristics and expected health services needs. Objective: (1) explore the variability within and across segments and SES strata; (2) assess the potential utility of population segments for primary care performance reporting.

## Methods

**Study design:** We used a two-part Generalized Linear Model stratified by segment to assess the relationship between patient’s age, sex, chronic conditions, quality of care and SES and costs.

**Data sources:** Patient characteristics, physician and hospital billings, emergency department visits, filled prescriptions.

**Population:** Adults  $\geq 18$  years old living in British Columbia, enrolled in medical services plan for >75% of days in 2013-14 to 2015-16 (n=approx. about 4M people).

**Outcome measures:** Quality of care: access to out of hours, continuity and coordination of family physician care; Use and costs of care by segment.

Figure 1. Health care use and costs by segment and SES 2015/16

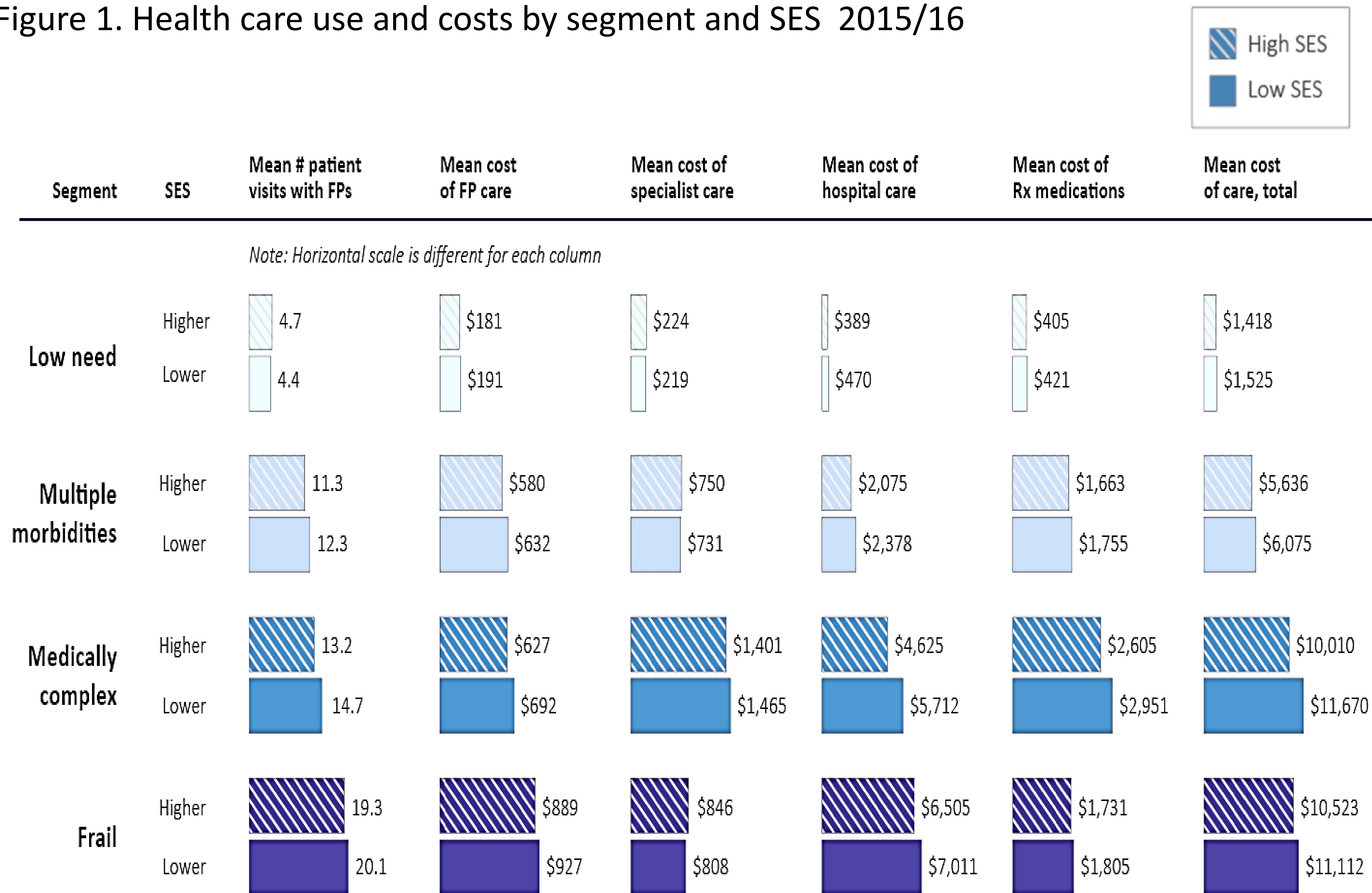
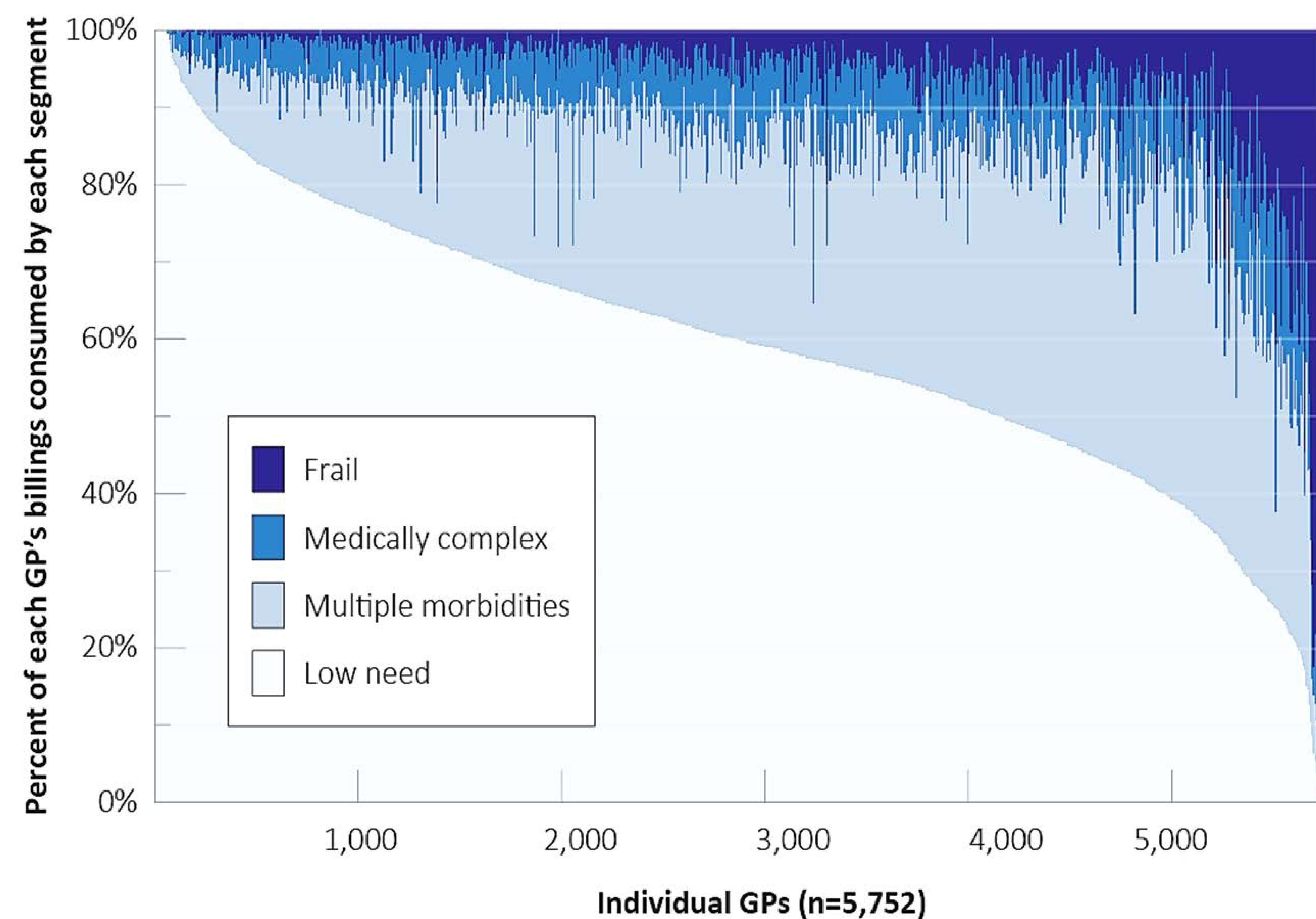


Figure 2. Distribution of individual GPs’ costs across segments



## Results

Four segments based on expected health services needs were created: low need, multiple morbidities, medically complex, and frail. Each segment was further classified using socioeconomic status (SES) as a proxy for patient vulnerability. Average costs/patient increased from the low need (\$1,386) to frail segment (\$10,637). Differences in primary care quality by segment appear minimal when presented on their own but when quality measures were included in regression models important differences emerged. Accessing primary care outside business hours and discontinuous primary care (5 or more different GP’s in a given year) were associated with higher health care costs across all segments; higher continuity of care was associated with lower costs in the frail segment only (RR=0.61).

## Conclusions

Segments created distinct patient groups with different health care use and cost profiles suggesting they may have some utility for primary care performance measurement and reporting. Variables such as SES and use of regression analyses may be important enhancements to population segments.

## Acknowledgements

