

Tessa M. Ryan<sup>1</sup>, Andrew R. Scott, MD<sup>1,2</sup>

<sup>1</sup>Tufts University School of Medicine, Boston, MA, <sup>2</sup>Department of Otolaryngology-Head and Neck Surgery, Tufts Medical Center, Boston, MA

## BACKGROUND

- Patient portals provide secure, asynchronous messaging that can enhance communication between families and providers.
- In adult care, portal use has been linked to greater patient engagement, better understanding of treatment plans, and improved clinical outcomes [1-4].
- Disparities in portal use are well documented, with lower utilization among racial/ethnic minority groups, non-English speakers, and patients with public insurance or lower socioeconomic status [4].

### Objective:

- Characterize patient portal messaging patterns in pediatric otolaryngology
- Assess sociodemographic predictors of portal use
- Evaluate the impact of messaging on care delivery.

## METHODS

**Design:** Retrospective cohort study (Jan–Dec 2023)

**Setting:** Urban academic pediatric otolaryngology practice

**Patients:** ≤18 years, N = 1,864

**Portal User Definition:** ≥1 message sent by patient or proxy

### Variables:

- Age, sex, preferred language
- Race, ethnicity
- ZIP code-based median income (2023 US Census ACS)
- Insurance Type
- Primary diagnosis

**Analysis:** Chi-square & logistic regression

## REFERENCES



## RESULTS

### Portal Use

- 4% (82/1,864) were portal users
- 138 messages sent

### Predictors of lower use:

- Non-English speakers (aOR 0.11; p = .030)
- Publicly insured (Medicaid/Medicaid replacement) (aOR 0.29–0.31; p < .05)

### Predictors of higher use:

- Younger age (aOR 0.91/year, p = .003)
- English-speaking (98.8% vs 75.3%, p < .001)
- White non-Hispanic (47.6% vs 36.8%; p < .05)
- Commercial insurance (80.5% vs 44.3%, p < .001)

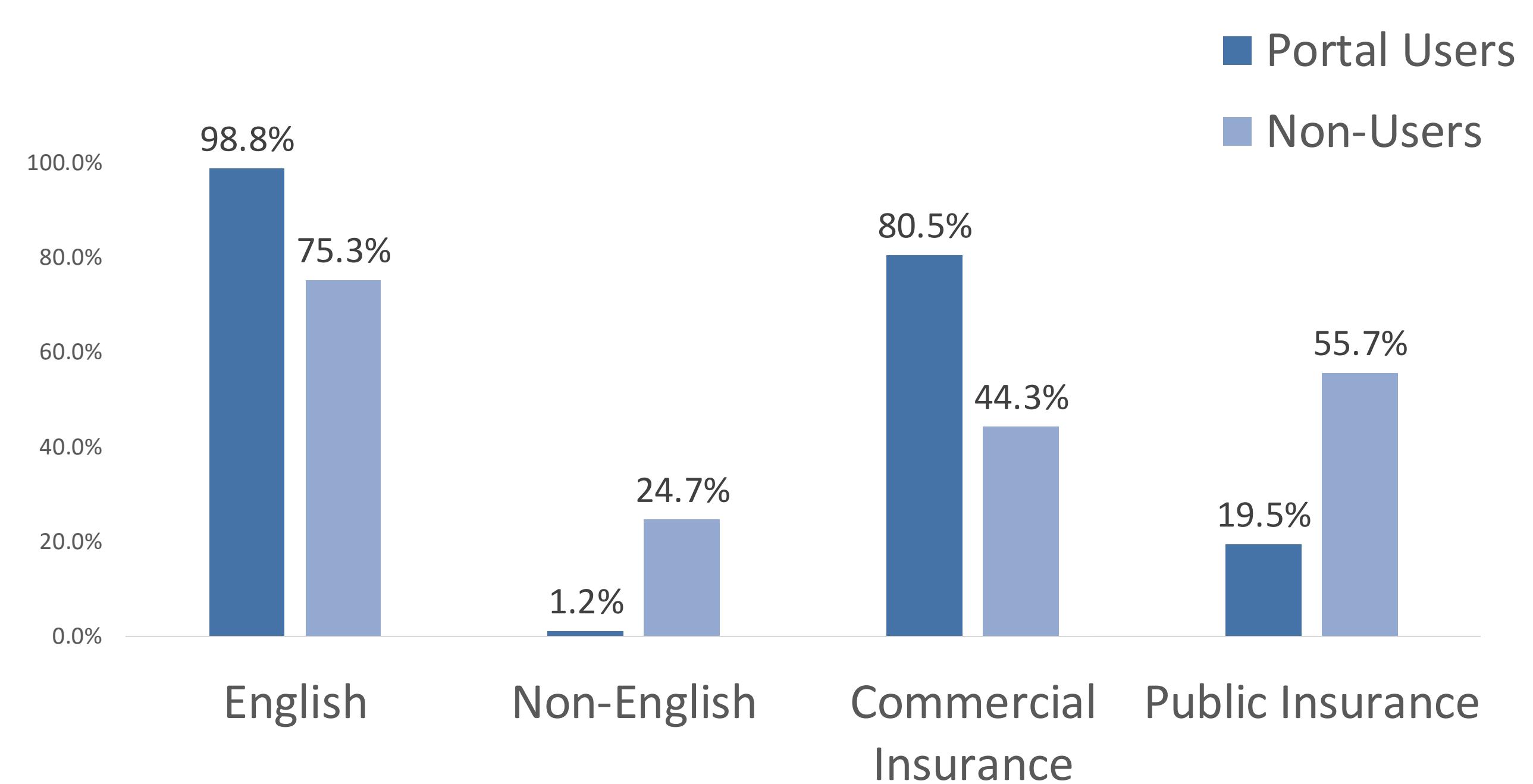


Figure 2. Portal users and non-users by language and insurance.

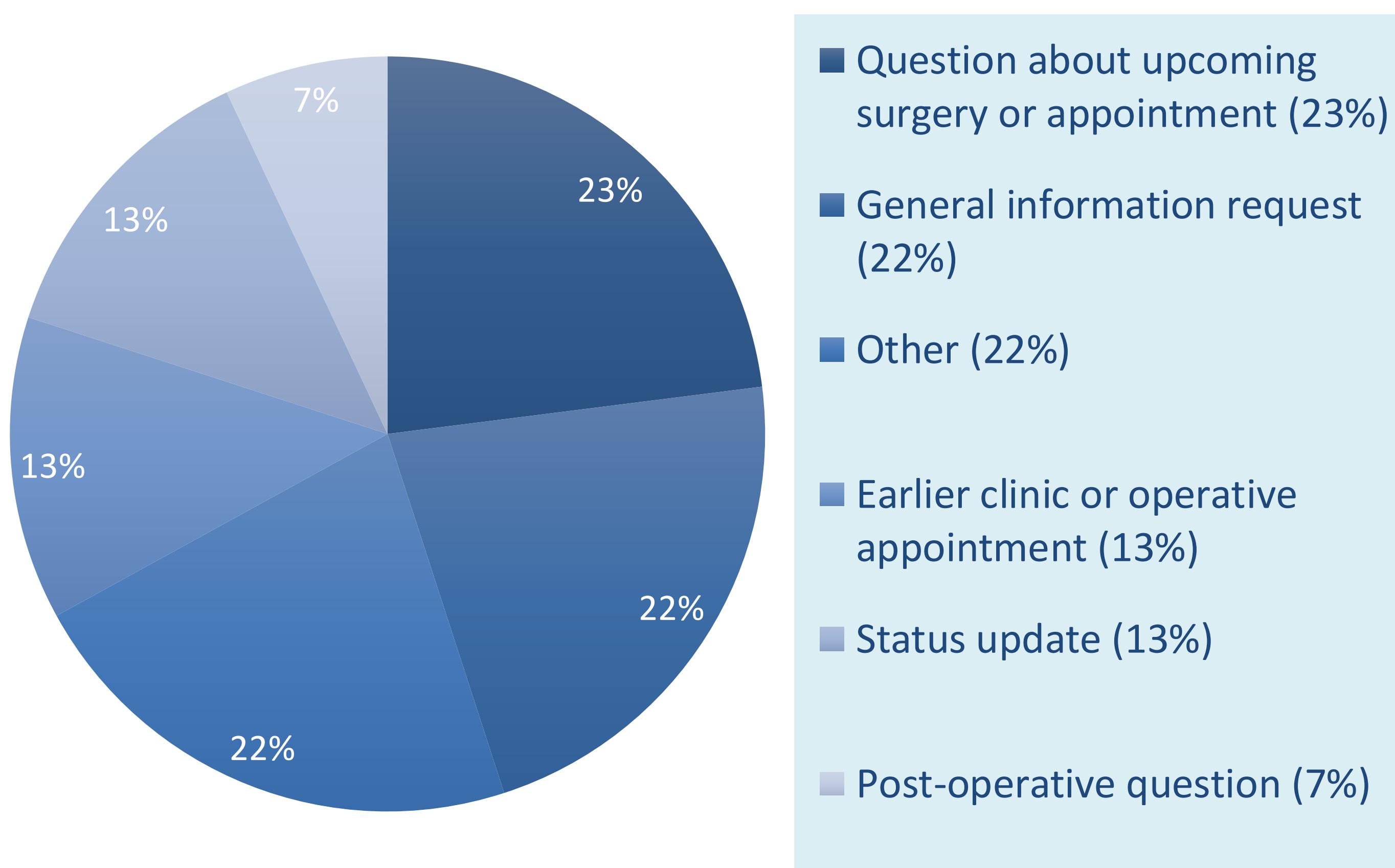


Figure 3. Message categories.

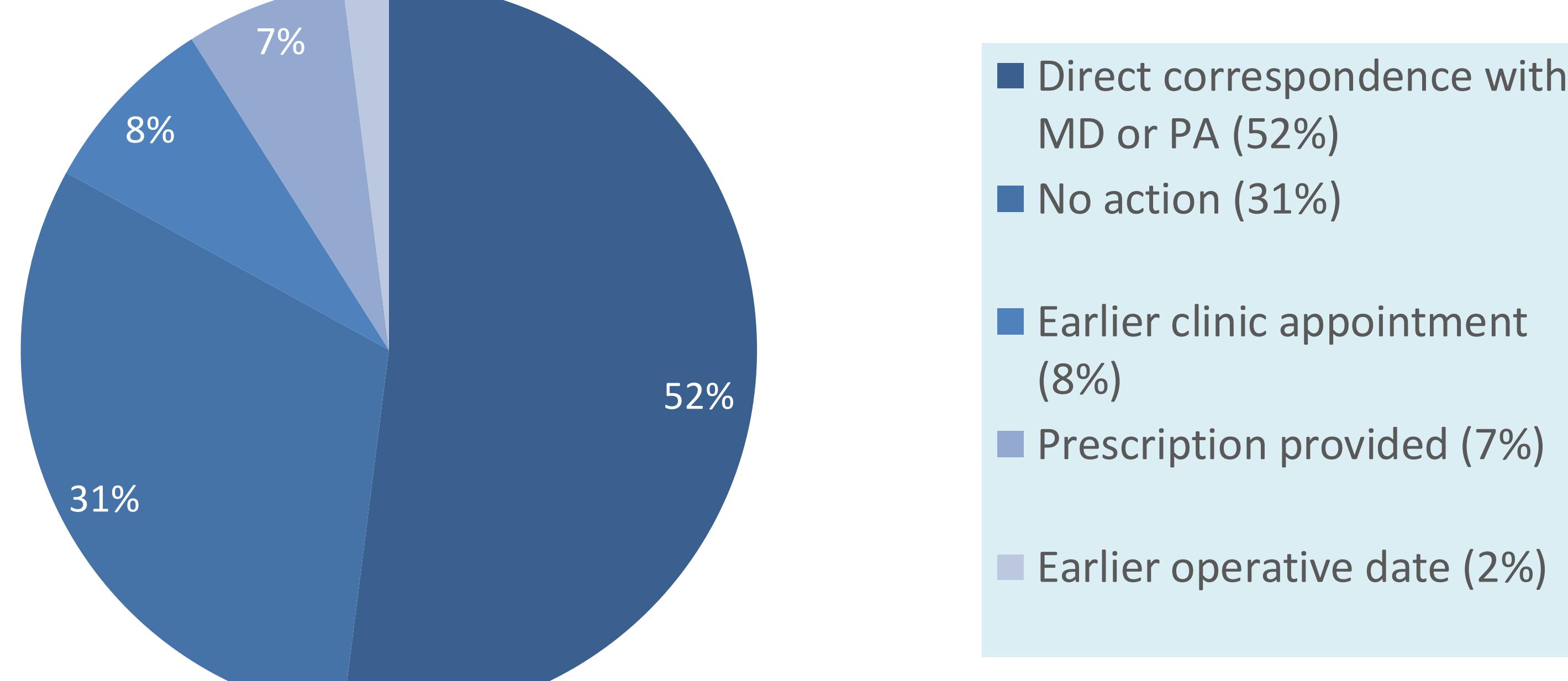


Figure 4. Outcomes of portal messages.

## DISCUSSION

- Consistent with prior studies in both adult and pediatric populations, our results demonstrate significant disparities in portal-based communication based on patient age, language, and insurance type [5].
- Patient portal messaging in pediatric otolaryngology shows inequitable utilization, with lower engagement among non-English-speaking and publicly insured families.
- Portal messaging can facilitate timely interventions, such as expedited surgeries, earlier appointments, and prescription management. Disparities in portal engagement may therefore negatively impact clinical outcomes and reinforce health inequities [5].
- Expanding language support and addressing structural barriers are essential to promote equity in digital communication.

## CONCLUSION

- In our study, non-English speaking families and those with Medicaid were far less likely to use the patient portal.**
- Portal messaging can facilitate timely interventions, such as **expedited surgeries, earlier appointments, and prescription management**.
- Disparities in portal engagement may therefore negatively impact clinical outcomes and reinforce health inequities.

## CONTACT

**Andrew R. Scott, M.D.**  
Department of Otolaryngology – Head & Neck Surgery  
Tufts Medical Center  
800 Washington St. Box 850, Boston, MA 02111  
617-636-5496  
ascott@tuftsmedicalcenter.org