Considerable declines in treatment persistence occur within 12 months following initiation, and persistence rates to rheumatological, dermatological, and gastroenterological treatments may be as low as 59.5% [1]. HealthBeacon’s Injection Care Management System (ICMS) represents a considerable step in improving treatment persistence across numerous conditions.

METHODS
Participants
This study followed 7,689 patients (57.2% female) on injectable treatments in each of these therapeutic areas (TAs) for 12 months. Persistence rates were compared with those reported in the literature to test for relative improvements provided by HealthBeacon’s ICMS.

Evaluating Persistence
In this study, persistence was defined as the time from a patient’s first use of the HealthBeacon system until discontinuation, as a proxy for persistence to injectable therapy (Figure 3). The persistence rate of each group was calculated as the number of patients with ≥12 months of use without therapy divided by the total number of patients at risk within each area. Patients undergoing treatment discontinuation during each calendar month were included in the analysis for that month. These definitions allow for an accurate comparison of persistence across multiple areas.

Statistical Analysis
Cox proportional hazard modelling was used to assess first persistence over 12 months and second test whether differences in persistence were significantly associated with 95% confidence intervals. The hazard ratio (HR) is the ratio of the hazard rates between the groups, i.e., the exponential of the log HR is the ratio of the event hazards between the groups. The log likelihood ratio test was used to test whether differences in persistence were significantly associated with TA, sex, or age groups. All three predictor variables were forced into the model. Hazard ratios for these effects are outlined in Table 1. Persistence in dermatological and gastroenterological treatments relative to both dermatological and gastroenterological treatments did not significantly differ (p = 0.002) and gastroenterological (HR = 1.03, p = 0.001).

RESULTS
Persistence
70.6% of HealthBeacon patients remained engaged in treatment at month 12, representing an 18.7% relative increase over previously reported persistence rates during the same time frame [1]. Regarding TA, at month 12, persistence was 67.4% for those on rheumatological treatments (+21.2% relative to previous reports, 73.9% for dermatological (+28.0%), and 72.3% for gastroenterological treatments (+13.1%). In this study, the persistence rate in males was 74.4%, relative to females at 67.4%. Regarding age, persistence at month 12 steadily declined as age increased, from 18-29 (75.9%), 30-44 (72.4%), 45-59 (74.7%), 60-69 (66.7%), to 81-95 (61.5%). See Figure 4.

Predictors of Persistence
There was a significant effect of TA in predicting persistence (p = 15.68, DF = 2, p = 0.001), with higher risk of discontinuation for rheumatological treatments relative to both dermatological (HR = 0.417) and gastroenterological (HR = 1.15, p = 0.001). Hazard ratios for these effects are outlined in Table 1. Persistence in dermatological and gastroenterological treatments did not significantly differ (p = 0.002) and gastroenterological (HR = 1.03, p = 0.001).

CONCLUSION AND DISCUSSION
Our findings suggest HealthBeacon’s ICMS provided a considerable improvement in persistence when compared with previous reports. Interestingly, improvements were strongest in rheumatological treatments, suggesting other factors may impact persistence.

In conclusion, the findings suggest that HealthBeacon’s ICMS provides a considerable improvement in persistence across numerous conditions. We should also be noted, HealthBeacon’s ICMS holds a stricter definition of discontinuation over the treatment discontinuation was defined as ≥90 days without therapy. Hence, HealthBeacon’s ICMS may be higher than reported persistence rates in previous studies. Hence, HealthBeacon’s ICMS represents a considerable step in improving treatment persistence across numerous conditions.

REFERENCES