

OptiNose Populations Comparison

Nikko Joe Ramal

4/1/2019

Introduction

UnitedHealth Group Research and Development (UHG R&D) is exploring mechanisms for tailoring therapy and benefit coverage for patients who meet a specifically optimized criterion. In a small proof-of-concept, we tested members' response to an invitation to use Xhance, an Optinose-manufactured medication / dispenser which is indicated for use by persons suffering sinus-related problems such as chronic rhinosinusitis (CRS).

More specifically, we invited approximately 6,850 members from the Health plan of Nevada (HPN) who are also cared for by providers at Southwest Medical Associates (SMA), and diagnosed with sinus-related problems, to talk to their provider about the Xhance.

Populations

These members were recruited by mail. The mail included an invitation to talk to their physician about Xhance. A separate mailing was sent to all invited members requesting that they complete a survey (SNOT22) to assess the severity of sinus-related conditions. We attempted to contact, by phone, each person who returned a SNOT22 to extend a second invitation. Lastly, we attempted to contact all members to ask about their satisfaction with UnitedHealth Care using the Net Promoter Score (NPS) question.

We intend to conduct a second round of NPS inquiry and SNOT22 surveys. Before these efforts happen, we want to know the characteristics of the members who have been part of the recruitment process. Specifically, we want to know the differences that exist between the population of those **invited** and

- Those who **responded to the first SNOT22 survey**
- Those who **responded to the survey** and for whom we had **telephone numbers**
- Those who, when contacted by phone, **expressed interest** in Xhance
- Those who had a **prescription written** for the Xhance product

Data

The data consist of different groups. **Invited** are those people who received a mailed invitation. Members who answered the survey are called **responded to the first SNOT22**.¹ Those members who answered the survey and provided a contact number are called **responded to the first SNOT22 with numbers**. Among those who answered the survey and who were reached by phone, some expressed

interest in meeting with their physician to learn about the therapy; they are the **expressed interest** group. Finally, some members sought for and obtained a prescription from their provider and mailed it for processing. These are referred to as **prescription written**.

The data contains information on the demographics and healthcare utilization of the members who were recruited in 2017. The demographic information includes gender, age, line of business (Commercial, Medicare, or Medicaid), subscriber status, and conditions related to sinus problems. The healthcare utilization data includes inpatient visits, days spent in inpatient facilities, allowed amounts associated with inpatient visits, outpatient visits, visits attributed to CRS, ambulatory surgical center visits, urgent care visits, and emergency room visits. Since this data came from SMA members and SMA operates on a capitated basis, costs for services are not provided except for IP visits.

Results

Demographics

Gender Proportions

The proportion of females is similar for the four groups except for the group who received a prescription (Figure 1).

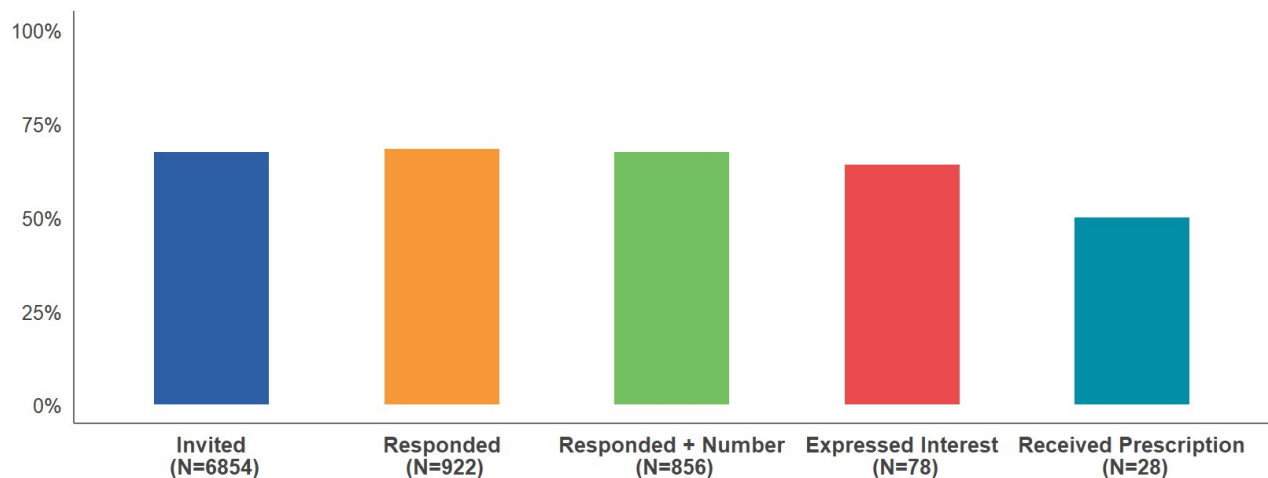


Figure 1. Proportion of Females

Age Distribution

The Invited group is composed of younger members compared to the other groups. The average age for the Invited group is 49 which is 10-12 years younger than the other groups (Figure 2).

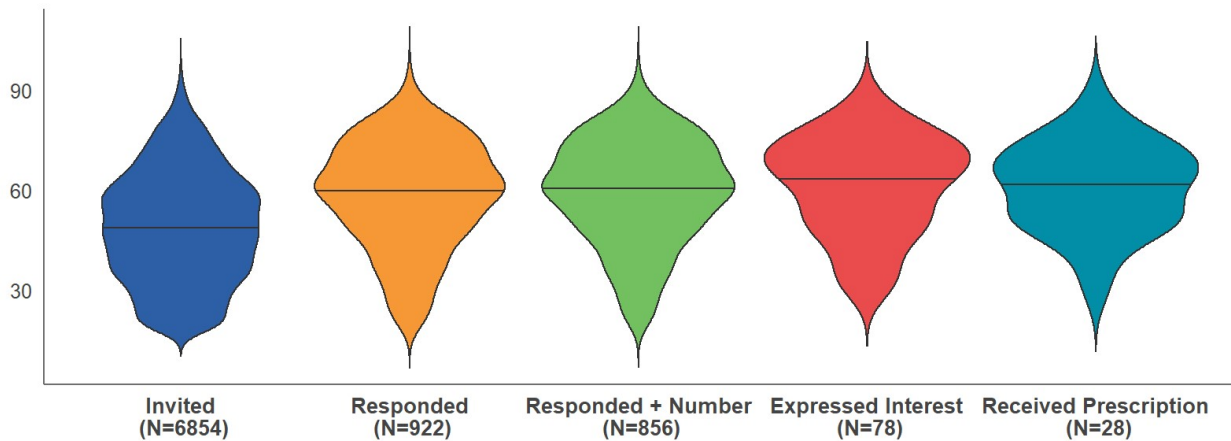


Figure 2. Age Distribution

Line of Business

In keeping with the difference in age among those who responded to the survey, the proportion of members with Medicare insurance in the Invited group is lower than in the other groups (Figure 3).

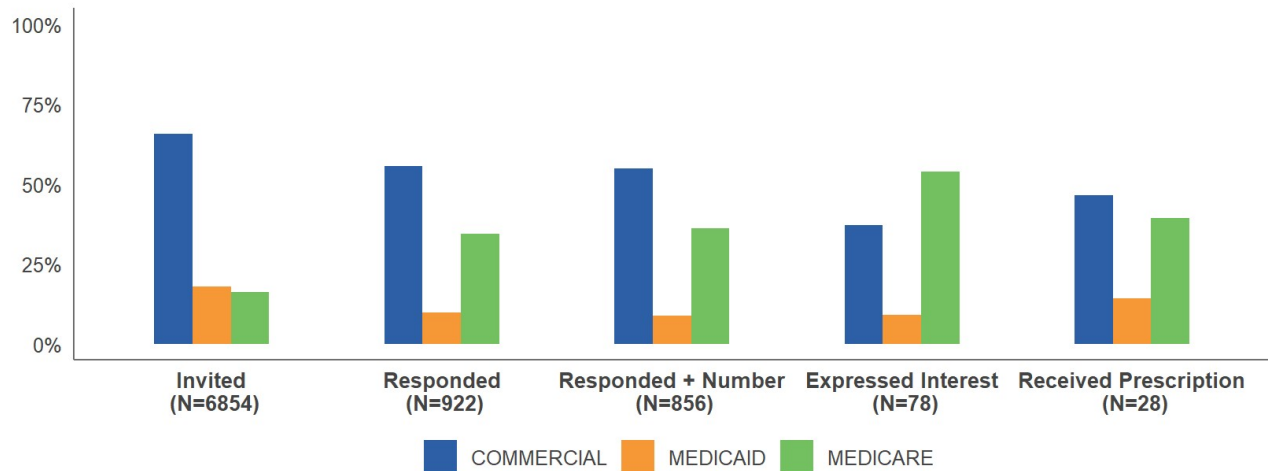


Figure 3. Line of Business

Subscriber Type

As shown in Figure 4, most of the members in all of the groups are subscribers, not dependents.

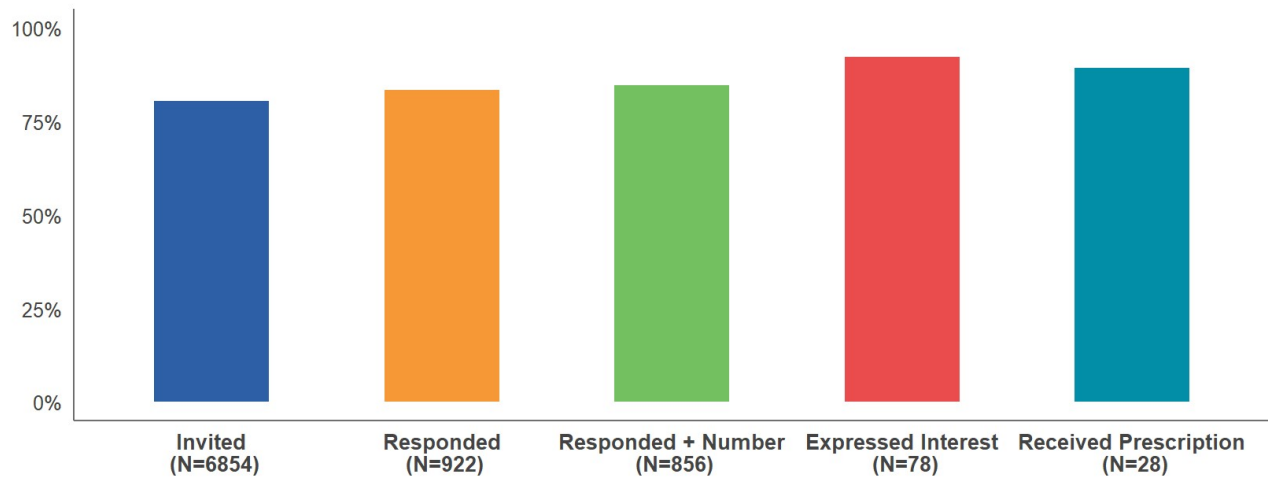


Figure 4. Proportion of Subscribers

Sinus-Related Conditions

The most prevalent sinus-related conditions in all groups are CRS and acute sinusitis (Table 1). Nasal polyps is rare or absent in all of the groups.

Table 1. Percentage Prevalence

	Invited (N=6854)	Responded (N=922)	Responded + Number (N=856)	Expressed Interest (N=78)	Received Prescription (N=28)
Acute Sinusitis	59.6%	52.9%	51.9%	51.3%	42.9%
Chronic Rhinosinusitis	40.9%	46.4%	46.8%	44.9%	50%
Nasal Polyps	0.7%	0.9%	0.8%	0%	0%
Rhinitis	6.7%	8.7%	9.2%	14.1%	14.3%
Sinus Surgery	1.9%	2.4%	2.3%	2.6%	3.6%

Health Care Utilization

Inpatient Stays

As shown in Figure 5 and Table 2, members who responded to the SNOT22 (with or without phone number) or expressed interest in Xhance had the highest utilization based on stays per 1,000 members and IP days per 1,000 members. However, looking at just the members who had inpatients stays, the Invited and Responded groups had the highest utilization (Table 3).

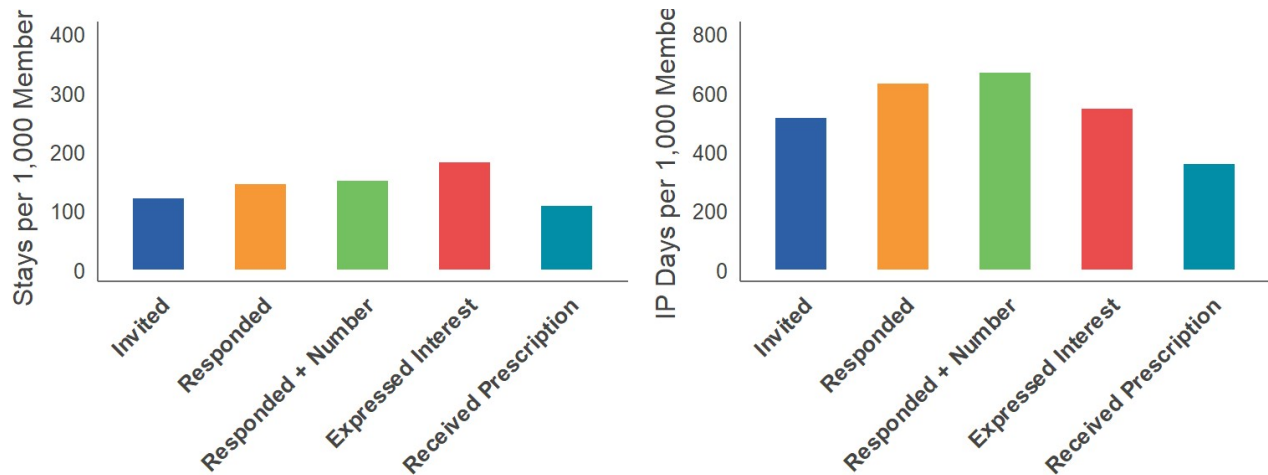


Figure 5. Inpatient stays in 2017

Table 2. Inpatient stays in 2017

Group	Members	% with IP Stays	Stays per 1,000 Members	IP Days per 1,000 Members
Invited	6,818	7.9	120	513
Responded	913	9.5	145	630
Responded + Number	849	9.9	150	667
Expressed Interest	77	15.6	182	545
Received Prescription	28	10.7	107	357

Table 3. IP stays and days for members who had any IP stay

Group	Members	Average IP Stays	Average IP Days
Invited	539	1.5	6.5
Responded	87	1.5	6.6
Responded + Number	84	1.5	6.7
Expressed Interest	12	1.2	3.5
Received Prescription	3	1.0	3.3

Cost of Inpatients Stays

On average, inpatient stays of members who received a prescription have the highest cost both per stay and per day (Table 4).

Table 4. Inpatient stay cost for members who had any IP stay

Group	Members	Cost per Stay	Cost per Day
Invited	539	\$ 10,393	\$ 2,437
Responded	87	\$ 12,199	\$ 2,800
Responded + Number	84	\$ 12,209	\$ 2,739
Expressed Interest	12	\$ 10,558	\$ 3,519
Received Prescription	3	\$ 14,003	\$ 4,201

Other Utilization Measures

Table 5 shows the other utilization rates (per 1,000 members) for chronic rhinosinusitis visits (CRS), outpatient visits (OP), outpatient visits - ambulatory surgical center (OP-ASC), outpatient visits - urgent care (OP-UC), outpatient visits - emergency room (OP-ERM), and doctor visits (DR). In general, the Expressed Interest and Received Prescription groups had the highest utilization rates, except for ER visits.

Table 5. Visits per 1,000 members

Group	CRS	OP	OP-ASC	OP-UC	OP-ERM	DR
Invited	91	15	19	5	42	475
Responded	90	19	27	5	26	607
Responded + Number	90	20	26	5	26	602
Expressed Interest	96	28	42	8	36	771
Received Prescription	110	36	30	6	27	893

Discussion

Results show that the members who responded to the SNOT22 (with or without phone number), expressed interest, and received prescription are older. This difference in age among those groups is reflected by the higher proportion of members enrolled in Medicare. Also, these groups tend to have higher proportions of sinus-related conditions, e.g., chronic rhinosinusitis, rhinitis, and sinus surgery.

With regards to healthcare utilization, members who responded to the SNOT22 (with or without phone number) or expressed interest in Xhance had the highest utilization based on stays per 1,000 members and IP days per 1,000 members. In terms of cost, members who received a prescription have the highest cost both per stay and per day.

In general, the Optinose Xhance drug was more appealing to members who are older and enrolled in Medicare insurance, have more sinus-related conditions, and with higher healthcare utilization.

-
1. We received 1,175 survey responses, but many respondents declined to provide their names when they mailed the surveys back. The results shown here are only for the 922 individuals we were able to identify. 