

Major Health System Spotlight

How a nationally recognized academic health system used PatientIQ for short-term socioeconomic research to enhance patient care

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About the Client

PatientIQ's client is one of the nation's most prestigious academic health systems. Operating multiple multispecialty centers and outpatient facilities, our client is internationally recognized for providing high-quality patient care, pioneering medical research, and educating future leaders in medicine.

The Challenge

The Associate Professor of Orthopaedic Surgery sought to investigate the impact of socioeconomic factors on patient-reported outcomes (PROs) in orthopedic care. Specifically, he aimed to analyze demographic variables race, ethnicity, age, and sex and their correlation with patients' compliance in completing initial PRO surveys, as well as reported pain levels and symptoms. Additionally, they were interested in examining how patients' residential settings urban, suburban, or rural might influence these outcomes. However, efficiently collecting and analyzing this comprehensive data presented a significant challenge for him and his team.

The Solution

Utilizing the PatientIQ platform, he seamlessly integrated PRO data collection into the electronic health record (EHR) system. This integration enabled the efficient gathering of essential demographic information and PROs from patients prior to their initial evaluations. The platform facilitated the analysis of compliance rates across different demographics and practice locations. Notably, the data revealed that while task completion rates were higher in suburban office locations, there was no significant difference in completion rates based on patients zip codes. Furthermore, the analysis showed that patients in urban areas reported higher pain levels and more severe symptoms compared to their suburban counterparts. These insights were instrumental in identifying potential biases in data interpretation and underscored the importance of considering demographic and socioeconomic factors in clinical research and patient care.

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The Results

During a six-month pilot phase, the integration of the PatientIQ platform enabled the collection of more than 3K patient-reported outcome measures (PROMs), achieving an impressive 81.5% completion rate for assigned tasks. The analysis uncovered several critical findings:

- **Completion Trends:** Suburban office locations demonstrated higher PROM task completion rates compared to urban locations. However, when analyzed by patient zip code, no significant differences were observed in completion rates.
- **Demographic Insights:** Completion rates varied significantly across demographic categories. Male patients, white patients, married individuals, and those aged 65-85 years exhibited the highest compliance in completing PROMs.
- **Symptom Disparities:** Patients from urban areas reported more severe pain and higher symptom levels than their suburban counterparts, emphasizing the importance of contextual socioeconomic data in patient care.
- **Impact on Workflow and Bias Mitigation:** The pilot demonstrated the need for enhanced workflows, particularly in urban office settings, to address lower task completion rates. The findings also highlighted potential biases in pooled data, prompting further research into the root causes of baseline differences in PROM scores, such as socioeconomic or medical comorbidities.

These results underscore the transformative role of PatientIQ in refining clinical workflows, improving data collection practices, & providing actionable insights to enhance patient care across diverse settings.

"PatientIQ transformed our research process by integrating patient-reported outcomes into our workflow. Its powerful tools helped us uncover critical insights into socioeconomic factors, shaping patient care and future studies."

— Associate Professor of Orthopaedic Surgery

	Tasks Complete	Tasks Expired	Total Tasks	% Completed	% Expired
ALL PATIENTS	**18,008**	**4,075**	**22,083**	**81.5**	**18.5**
Patient Age	Tasks Complete	Tasks Expired	Total Tasks	% Completed	% Expired
< 19	244	114	358	68.2	31.8
19 - 44	3,170	756	3,926	80.7	19.3
45 - 64	7,359	1,768	9,127	80.6	19.4
65 - 85	7,033	1,344	8,377	84.0	16.0
> 85	202	93	295	68.5	31.5
Patient Gender	Tasks Complete	Tasks Expired	Total Tasks	% Completed	% Expired
Female	8,212	2,159	10,371	79.2	20.8
Male	9,796	1,916	11,712	83.6	16.4
Patient Ethnicity	Tasks Complete	Tasks Expired	Total Tasks	% Completed	% Expired
American Indian or Alaska Native	26	6	32	81.3	18.8
Asian	443	220	663	66.8	33.2
Black or African American	3,360	1,424	4,784	70.2	29.8
Other Race	585	185	770	76.	24.
White	12,379	1,874	14,253	86.9	13.1
Unknown	1,215	366	1,581	76.9	23.1
Patient Marital Status	Tasks Complete	Tasks Expired	Total Tasks	% Completed	% Expired
Single	5,009	1,671	6,680	75.0	25.0
Married / Domestic Partner	10,323	1,720	12,043	85.7	14.3
Separated / Divorced	1,318	392	1,710	77.1	22.9
Widowed	989	225	1,214	81.5	18.5
Other / Unknown	369	67	436	84.6	15.4

PROM questionnaire ("task") completion rates based on patient demographics. Significant differences were observed between groups for each of the demographic categories evaluated.