



Case Study

MASH
STUDY GROUP

How PatientIQ supported the MASH study group in advancing long-term research on hip arthroscopy outcomes

About the MASH Research Group

The Multicenter Arthroscopy Study of the Hip (MASH) Study Group is a collective of board-certified, fellowship-trained orthopedic surgeons specializing in hip injuries and preservation among athletic and pre-arthritic individuals. These professionals are affiliated with leading medical institutions and are dedicated to advancing hip arthroscopy through collaborative research. By pooling patient data and outcomes, the group aims to enhance understanding and treatment of hip conditions.

The Challenge

The MASH Research Group aimed to investigate long-term outcomes in patients undergoing hip arthroscopy for femoroacetabular impingement syndrome (FAI). To capture patient-reported outcomes (PROs), the group utilized the International Hip Outcome Tool–12 (iHOT-12), a validated measure specifically designed to assess hip-related quality of life in young, active patients. Research indicated that significant changes in PROs could occur between 1 and 2 years post-surgery, yet traditional data collection methods often left gaps in understanding patient-specific factors contributing to these changes.

Without consistent, high-quality PRO data such as the iHOT-12, assessing whether patients improved, declined, or remained stable over time was challenging. Additionally, incomplete or poorly organized data could lead to misinformed clinical decisions, including premature determinations of surgical success or failure, and an overestimation of revision surgery needs.

iHOT-12

The iHOT12 is a shortened version of the International Hip Outcome Tool, designed to assess the health-related quality of life in young, active patients with hip disorders. It consists of 12 questions covering symptoms, function, sports, and social aspects.

The Solution

Leading surgeons within MASH leveraged the PatientIQ platform to revolutionize the way patient-reported outcomes were collected and analyzed. PatientIQ offers:

- **Automated data collection:** PatientIQ provides automated follow-up surveys to patients, ensuring consistent data collection at key postoperative milestones, including 1-year and 2-year intervals.
- **High patient compliance rates:** PatientIQ's proprietary patient engagement system streamlines PRO distribution & collection. This system reduces friction for both patients and clinical staff, resulting in high patient-compliance rates.
- **Effortless data aggregation:** PatientIQ's centralized platform consolidates PRO data from multiple sources, streamlining the aggregation process. This seamless system reduces administrative burden while enabling efficient analysis of large, multi-center datasets.

These features ensured that the necessary data was available for retrospective patient analysis, focusing on functional status changes over two years.

The Results

The implementation of PatientIQ transformed the research workflow, enabling a detailed understanding of patient-specific factors influencing long-term outcomes after hip arthroscopy.

Key findings from the study included:

- **Insights into patient outcomes:** At the 2-year follow-up, 21.5% of patients demonstrated improvement from their 1-year follow-up. Notably, patients with abnormal function at 1-year follow-up were more likely to improve significantly by year two.
- **Reduction in premature interventions:** The research suggested that evaluating surgical success at 1-year follow-up may underestimate long-term outcomes, reducing unnecessary revision surgeries.
- **Data-driven decision-making:** With PatientIQ data, MASH members could confidently assess the impact of variables such as age, BMI, & hip morphology on outcomes, ensuring personalized patient care.

By leveraging PatientIQ, the MASH Research Group advanced its understanding of hip arthroscopy outcomes, setting a new standard for data-driven clinical research. PatientIQ not only streamlined research workflows but also provided actionable insights to optimize patient care and surgical planning.

Excerpt from study:

In the current study, the group that improved had an average **1-year iHOT-12 score of 48.9**, which would indicate that the patient would likely have an “abnormal” functional status. This group, however, demonstrated a meaningful increase in the iHOT12 score beyond the MCID over the 2-year follow-up period to achieve a **final iHOT-12 score of 79.2**. This 2-year score would indicate that a patient would likely have a “nearly normal” level of function and be at least 75% satisfied.

21.5%

of patients included in study improved functional status between years 1 and 2

59.9%

of patients included in study maintained functional status at year 2

TABLE 2
Results of 1-Way Analysis of Variance Comparing Patient-Specific Factors Between Those Who Improved, Remained the Same, or Declined in Status Between 1- and 2-Year Follow-up Points^a

Factor	Improved	Remained the Same	Declined
Age, y	35.4 ± 12	34.3 ± 12	35.7 ± 12
Body mass index	24.8 ± 4.4	24.7 ± 4.5	25.0 ± 4.4
Alpha angle, deg	64.6 ± 14	64.3 ± 14	65.9 ± 14
Center-edge angle, deg	33.5 ± 7.5	33.9 ± 7.2	32.3 ± 7.5
iHOT-12 score			
Preoperative	32.2 ± 17	37.1 ± 19	31.6 ± 17 ^b
1 year	48.9 ± 24 ^b	77.8 ± 23	74.7 ± 18
2 year	79.2 ± 15	81.0 ± 20	49.3 ± 19 ^b

^aValues are expressed as mean ± SD. iHOT-12, 12-item International Hip Outcome Tool.

^bIndicates significant difference ($P < .05$).

Results table from published study

“Using PatientIQ to track and analyze long-term patient-reported outcomes has been a game-changer for our clinical research. The platform's automation and analytics capabilities have enhanced the quality of our data, leading to meaningful insights that directly inform our practice and improve patient care.”

— Dr. Shane Nho, Midwest Orthopaedics at Rush, MASH Research Group member

The PatientIQ advantage

EHR-Integrated workflows

Leverage our existing EHR integrations to streamline enrollment, reduce manual data entry, and improve data integrity

Multi-center collaboration

Effortlessly collaborate with sites and remotely monitor their activity with de-identified data sharing

Automated patient engagement

Fully automate patient-reported data collection, including reminders, to reduce the burden of patient follow-up and increase compliance

Maximize patient compliance

Take advantage of PatientIQ's proprietary patient outreach strategy to maximize survey response, even years post-intervention.

References:

McGovern RP, Martin RL, Christoforetti JJ, Disantis AE, Kivlan BR, Wolff AB, Nho SJ, Salvo JP, Van Thiel GS, Matsuda DK, Carreira DS. Relationship of Average Outcomes Scores and Change in Status Requires Further Interpretation Between 1 and 2 Years Following Hip Arthroscopy. Am J Sports Med. 2022;50(12):3184-3189. doi:10.1177/03635465221122769. [Link](#).

MASH Study. Accessed December 9, 2024. <https://mashstudy.com/>