

Neurosurgical Focus

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The Effectiveness of Personalized Electronic Patient Engagement Messaging Following Lumbar Spinal Fusion: A Pilot Study

Louis Jenis, MD¹, Tricia Gordon, NP², Thomas Cha, MD, MBA³, Joseph Schwab, MD, MS³
¹*Massachusetts General Hospital, Boston, MA*, ²*Boston, MA*, ³*MGH, Boston, MA*

Background/Introduction: While much focus has been placed on preoperative patient optimization less attention has been given to immediate postoperative period and identifying potential means of motivating patients and directing behaviors. The field of population health management has attempted to understand the health of the individual patient and proactively utilize and connect the patient to optimal medical resources. Patients are routinely segmented by age, demographics and insurance however this provides detail on “what the patient is doing” and not “why the patient is behaving in a certain manner”. Previous research has identified 5 healthcare related patient psychographic segments each unique in its own motivations and communication preferences, i.e. voice mail, text messaging, etc. The goal of this study was to apply psychographic segmentation to patients undergoing lumbar spine surgery and utilize a series of electronic, customized, automated messages designed to better prepare patients preoperatively and postoperatively and to monitor progress, proactively detect any recovery issues, and limit 30-day readmission while enhancing patient satisfaction.

Materials/Methods: We enrolled 69 consecutive patients undergoing posterior instrumented lumbar fusion surgery (60.48years - 32-84). Patients received automated communication 5 and 2 days prior to surgery with prep videos and education. Each patient was also communicated with postoperatively on day 2, 4, 6, 10, 14 and 21.

Results: Each psychographic segment received specific messaging and responses were electronically sent back to the ancillary staff. Overall response rate to text, email or voice messaging was 87.5%. When responses were positive no further call back was necessary thus freeing up staff to assist other patients. However, if any negative response including pain control, mobility or wound issues, those patients received an immediate call back. The 30-day readmission rate during this pilot study was 1.45%.

Discussion/Conclusion: This study is unique in that we utilized consumer industry techniques and applied to specific lumbar spine patients. We have found that the psychographic segmentation tool is useful for engagement of patients and classified them per attitudes and beliefs. The pilot program has provided insights for deployment of medical resources to support patients and activate positive health behavior.