

Signature™ Personalized Patient Care*: Potential Hospital Cost Savings and Revenue Generation

Case Study: Sauk Prairie Memorial Hospital & Clinics

Data provided by**:

- Matthew Hebert, M.D.
- Diana Kruse, M.D.
- Michael Lamson, M.D.
- William Niedermeier, M.D.
- Arnold Rosenthal, M.D.
- Sauk Prairie Memorial Hospital & Clinics, Prairie du Sac, WI

** The Sauk Prairie Memorial Hospital & Clinics and the doctors listed, collected this data for their own purposes. Neither the hospital nor the doctors were compensated for their collection of data.

Introduction

The surgeons listed above and Sauk Prairie Memorial Hospital & Clinics were early adopters of Signature™ Personalized Patient Care. The following is a summary of the data collected from these parties from January 2008–December 2008. Cost savings were realized and additional revenue was generated when the combination of the Signature™ and Vanguard® systems were utilized for total knee arthroplasty (TKA).

Patient Volume

Prior to the Introduction of the Signature™ System in the Hospital

January–June 2008:

- TKA cases performed — 105

Following the Implementation of the Signature™ System in the Hospital

July–December 2008:

- TKA cases performed — 141
 - 90 percent of cases were performed utilizing the combination of the Signature™ and Vanguard® systems

January–June 2009:

- TKA Signature™ system only cases performed — 181

Medicare and Commercial Payment Mix

Prior to the Introduction of the Signature™ System in the Hospital

January–June 2008:

- Medicare — 65 percent
- Commercial — 35 percent

Following the Implementation of the Signature™ System in the Hospital

July 2008–April 2009:

- Medicare — 50 percent
- Commercial — 50 percent
 - Mix change was identified after the Signature™ system was introduced into the hospital. The contributing surgeons believe that the technology appeals to the younger population.

Length of Hospital Stay

Prior to the Introduction of the Signature™ System in the Hospital

- Three and a half days

Following the Implementation of the Signature™ System in the Hospital

- Three days***

*** Coincidentally, the Sauk Prairie Memorial Hospital's Joint Replacement Center opened the same time as Signature™ system cases were introduced into the facility. The Sauk Prairie Memorial Hospital's Joint Replacement Center made changes in preoperative education, physical therapy and follow-up care, all of which contributed to the decrease in length of stay.

O.R. Time Savings

Following the Implementation of the Signature™ System in the Hospital

- Ten minutes



Blood Transfusions

Prior to the Introduction of the Signature™ System in the Hospital

January–June 2008:

- Blood transfusions required: 13 out of 105 TKA cases or 12.4 percent

Following the Implementation of the Signature™ System in the Hospital

July–December 2008:

- Two Signature™ system cases required blood transfusions: 1.4 percent (bi-lateral)****

**** Each unit of blood at Sauk Prairie Memorial Hospital & Clinics costs \$250. This reflects a savings of \$500 per case, when a blood transfusion is required.

Surgical Trays

Surgical trays utilized in each TKA case have remained unchanged with the introduction of the Signature™ system into the hospital, not due to the inability to reduce trays with the Signature™ system, but due specifically to surgeon preference.

MRI Reimbursement

- Sauk Prairie Memorial Hospital & Clinics — \$941 per case

Surgical Drains

Reinfusion surgical drains continue to be used with Signature™ system cases due specifically to surgeon preference.

Patient Discharge Range of Motion

Following the Implementation of the Signature™ System in the Hospital

- Patients gained an average of four degrees of extension
- Patients gained an average of 10 degrees of flexion

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