required admission and resulted in a total length of stay of 1474 hospital days and 49 ICU days. Attendance at a hematology outpatient clinic within 30 days from discharge significantly reduced the hazard of an ED visit due to a painful crisis compared with no follow-up (hazard ratio 0.70, 95% CI 0.52–0.94, p=0.02).

Conclusion Appropriate outpatient referral at discharge may be associated with decreased ED visits. These benchmark results invite further investigation into the effects of outpatient management on preventing painful crises in patients with SCD.

**Results**

ED visits:

- After (May 2017 to April 2018) implementation of the clinical pathway and 1 year chart review for 1 year before (May 2016 to April 2017) implementation of the clinical pathway and 1 year before (May 2016 to April 2017).

Methods

A clinical pathway for the management of SCD acute painful crisis has been initiated at KFAFH in Jeddah. The main objectives of this clinical pathway management were to unify practice, standardize care, and promote judicious use of opioids at KFAFH. The aims of this study were:

- To reduce the rate of ER visits per patient by more than 50% within 1 year.
- To decrease the rate of admissions per patient and readmission rates by more than 30% and 40%, respectively, within 1 year.
- To reduce the consumption of meperidine and tramadol by more than 25% and 40%, respectively, within 1 year as a secondary outcome.

Results ED visits:

- The annual rate of ED visits per patient dropped by 75.55% (45 versus 11.5).
- There was a progressive reduction in the frequency of ED visits over the year.

Admission rate:

- The rate of admissions per patient dropped by 41.87%.
- The readmission rate declined by 54.51%.

Opioid consumption:

- Consumption of opioids decreased by 33% for meperidine 100 mg and by 41.6% for meperidine 50 mg. Consumption significantly decreased by 54% for tramadol capsules and by 33% for tramadol injection.

Cost saving:

- The cost saved after implementation of the clinical pathway is more than 410,709 SR.

Conclusion Proper pain management for patients with SCD leads to a significant decrease in ED visits, and reduces hospital admissions and readmission rates. Consequently, more than 400,000 SR was saved after the implementation of the pathway. We believe that physicians, nurses, and patient education sessions played a critical role in the success of the clinical pathway.

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