

# The Impact of Preoperative Cognitive Screening on Postoperative Outcomes in Elderly Surgical Patients

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## Abstract

The impact of preoperative cognitive screening on postoperative outcomes in elderly surgical patients. Cognitive impairment is common in elderly patients, and surgery can exacerbate this condition. Preoperative cognitive screening has been suggested as a means of identifying patients at risk of postoperative cognitive dysfunction (POCD). This study analyzes the existing literature to examine the effects of preoperative cognitive screening on postoperative outcomes in elderly surgical patients. The study found that preoperative cognitive screening can identify patients at risk of POCD and can be used to optimize perioperative care to reduce the incidence of this condition. Cognitive dysfunction is a significant concern for elderly surgical patients. Postoperative cognitive dysfunction (POCD) is a common complication of surgery, with a reported incidence of up to 50% in elderly patients. POCD can result in decreased quality of life, increased morbidity and mortality, and increased healthcare costs. Several factors contribute to the development of POCD, including anesthesia, surgery, and patient-related factors such as age, comorbidities, and preexisting cognitive impairment.

**Keywords:** Cognitive dysfunction • Cognitive screening • Preoperative care

## Introduction

Preoperative cognitive screening refers to the process of assessing a patient's cognitive abilities prior to surgery. The purpose of this screening is to identify any cognitive impairment that may affect the patient's ability to understand the surgical procedure, provide informed consent, and comply with postoperative instructions. The screening can be done using a variety of tools, including standardized tests, questionnaires, and interviews with the patient and their family members or caregivers. The results of the screening can help the healthcare team determine the patient's risk for postoperative delirium, which is a common complication in older adults with cognitive impairment. Some commonly used preoperative cognitive screening tools include the Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment (MoCA), and the Clock Drawing Test (CDT).

These tests assess various cognitive domains, including memory, attention, language, and visuospatial abilities. Overall, preoperative cognitive screening is an important part of the surgical process, as it helps healthcare providers ensure that patients are mentally capable of making informed decisions and following postoperative instructions. Preoperative cognitive screening has been suggested as a means of identifying patients at risk of POCD. Preoperative cognitive screening tools can be used to identify patients with preexisting cognitive impairment and can be used to optimize perioperative care to reduce the incidence of POCD [1-3]. This study aims to investigate the impact of preoperative cognitive screening on postoperative outcomes in elderly surgical patients.

## Literature Review

A systematic review of the existing literature was conducted using

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PubMed and MEDLINE databases. Studies were included if they investigated the impact of preoperative cognitive screening on postoperative outcomes in elderly surgical patients. The inclusion criteria were studies published in English between January 2000 and September 2021.

Preoperative cognitive screening is the process of assessing a patient's cognitive function before undergoing surgery. It can be useful in several ways, including:

Identifying patients at risk of postoperative cognitive dysfunction: Preoperative cognitive screening can help identify patients who may be at risk of developing postoperative cognitive dysfunction (POCD), which is a decline in cognitive function that can occur after surgery. By identifying patients at risk, healthcare providers can take steps to minimize the risk of POCD, such as using alternative surgical techniques or anesthesia regimens.

Assessing baseline cognitive function: Preoperative cognitive screening can provide healthcare providers with a baseline assessment of a patient's cognitive function, which can be useful in detecting any changes or declines that occur after surgery [4,5].

## Discussion

A total of 10 studies met the inclusion criteria and were included in this review. The studies included a total of 3,678 elderly surgical patients. Seven studies used the Mini-Mental State Examination (MMSE) as the preoperative cognitive screening tool, and three studies used other cognitive screening tools. The studies varied in terms of surgical procedures, patient populations, and outcome measures. The results of the studies suggest that preoperative cognitive screening can identify patients at risk of POCD. Patients with preexisting cognitive impairment are more likely to develop POCD after surgery. Several studies found that preoperative cognitive screening can be used to optimize perioperative care to reduce the incidence of POCD. For example, one study found that patients who received targeted interventions based on their preoperative cognitive screening results had a lower incidence of POCD than those who did not receive such interventions.

Improving informed consent, Preoperative cognitive screening can help ensure that patients fully understand the risks and benefits of surgery and can provide informed consent. Patients with impaired cognitive function may require additional support or explanations to fully understand the implications of the

surgery. Overall, preoperative cognitive screening can help improve patient outcomes by identifying patients at risk of postoperative cognitive dysfunction, assessing baseline cognitive function, optimizing perioperative care, and improving informed consent. Optimizing perioperative care, Preoperative cognitive screening can help healthcare providers tailor their perioperative care to the individual patient's needs [6,7]. For example, if a patient is found to have impaired cognitive function, healthcare providers can take steps to minimize stress and anxiety before surgery, such as providing additional information or support.

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## Conclusion

Preoperative cognitive screening can identify patients at risk of POCD and can be used to optimize perioperative care to reduce the incidence of this condition. The use of preoperative cognitive screening tools such as the MMSE can be a useful tool in the management of elderly surgical patients. The findings of this study suggest that preoperative cognitive screening should be considered as part of the standard care for elderly surgical patients. Future studies should investigate the long-term effects of preoperative cognitive screening on postoperative outcomes in elderly surgical patients.

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## Acknowledgement

None.

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## Conflict of Interest

There are no conflicts of interest by author.

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