

# Analysis of factors affecting the length of stay in the intensive care unit (ICU) among the aged patients with general anesthesia and non-cardiac surgery

<b>Submission date</b> 23/12/2024	<b>Recruitment status</b> No longer recruiting	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 02/01/2025	<b>Overall study status</b> Completed	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 30/12/2024	<b>Condition category</b> Other	<input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

This study aims to understand why some older patients need to stay longer in the intensive care unit (ICU) after surgery. ICU stays can be very expensive, and this research looks at different factors related to the patient and the surgery that might cause longer stays.

### Who can participate?

Participants in this study must meet three criteria:

They are younger than 60 years old.

They did not have general anesthesia or heart surgery.

Their stay in the ICU was less than 4 hours.

### What does the study involve?

Participants will have their medical data reviewed to see if there are any common factors that lead to longer ICU stays. This involves looking at their health records and the details of their surgeries.

### What are the possible benefits and risks of participating?

There are no direct benefits or risks to participants since the study only involves reviewing existing medical records. However, the findings could help improve care for future patients by identifying ways to reduce ICU stays.

### Where is the study run from?

National Research Institute for Family Planning and Chinese PLA General Hospital (China)

### When is the study starting and how long is it expected to run for?

March 2024 to October 2024.

Who is funding the study?  
National Clinical Research Center for Geriatric Diseases (China)

Who is the main contact?  
Prof. MAO Qunxia at flysolo\_mqx@126.com  
Prof. Gao Linggen at gaolinggen@163.com

## Contact information

### Type(s)

Principal investigator

### Contact name

Prof Qunxia Mao

### ORCID ID

<https://orcid.org/0009-0005-5817-2651>

### Contact details

226, Building 12, Dahuisi Road, Haidian District  
Beijing  
China  
100081  
+86 13001272802  
flysolo\_mqx@126.com

### Type(s)

Principal investigator

### Contact name

Prof Linggen Gao

### Contact details

28 Fuxing Road, Haidian District  
Beijing  
China  
100000  
+86 15801612879  
gaolinggen@163.com

### Type(s)

Scientific

### Contact name

Miss Yujia Zhu

### ORCID ID

<https://orcid.org/0009-0002-1016-727X>

### Contact details

233, Building 12, Dahuisi Road, Haidian District  
Beijing  
China  
100081  
+86 15756487837  
yjzdoreen@163.com

### **Type(s)**

Public

### **Contact name**

Mr Lei Chen

### **Contact details**

28 Fuxing Road, Haidian District  
Beijing  
China  
100000  
+86 13811332489  
chenleighcpl@163.com

## **Additional identifiers**

### **Protocol serial number**

S2024-555-01, NCRCG-PLAGH-2023003

## **Study information**

### **Scientific Title**

Analysis of factors affecting the length of stay in the ICU among the aged patients with general anesthesia and non-cardiac surgery

### **Study objectives**

This study investigated the contributions of patient-related and procedure-related factors in prolonging the length of stay in the ICU (ICU LOS) among the aged with general anesthesia and non-cardiac surgery.

### **Ethics approval required**

Ethics approval required

### **Ethics approval(s)**

approved 01/01/2023, Medical ethics committee of PLA General Hospital (28 Fuxing Road, Haidian District, Beijing, 100853, China; +86 10 6693 7166; jfjzyygw@163.com), ref: S2024-555-01

### **Study design**

Retrospective observational case control study

### **Primary study design**

Observational

**Study type(s)**

Other

**Health condition(s) or problem(s) studied**

Analysis of factors affecting the length of stay in the ICU among the aged patients with general anesthesia and non-cardiac surgery

**Interventions**

The aged patients undergoing general anesthesia and non-cardiac surgery (2007 -2020) from a hospital, who aged over 70 years will be enrolled. Patient data from a hospital between December 2007 and June 2020 will be used in this study. Patient-related and procedure-related traits of patients were collected and are presented as continuous or categorical variables. The continuity variables included age, ICU admission and discharge times, laboratory tests (i.e. white blood cell count, mean erythrocyte hemoglobin, mean erythrocyte hemoglobin concentration, gammaglutamyl transferase level, urobilinogen level, urea level, alanine aminotransferase level, total bilirubin level, prealbumin level). Categorical variables included patient gender, surgical methods, pathological diagnoses, and ultrasound examinations.

**Intervention Type**

Other

**Primary outcome(s)**

Length of stay in the ICU (LOS), which was calculated as the difference between ICU admission and discharge times measured using patient records

**Key secondary outcome(s)**

There are no secondary outcome measures

**Completion date**

09/10/2024

**Eligibility****Key inclusion criteria**

1. Patients undergoing general anesthesia and non-cardiac surgery (2007 -2020) from a hospital, who are aged over 70 years
2. The operation method was general anesthesia and non-cardiac surgery
3. Patients stayed in the ICU for more than 4 hours

**Participant type(s)**

Patient

**Healthy volunteers allowed**

No

**Age group**

Senior

**Lower age limit**

70 years

**Sex**

All

**Total final enrolment**

546

**Key exclusion criteria**

Does not meet inclusion criteria

**Date of first enrolment**

06/12/2007

**Date of final enrolment**

17/07/2020

**Locations****Countries of recruitment**

China

**Study participating centre****National Research Institute for Family Planning**

No. 12, Dahuisi Road, Haidian District

Beijing

China

100081

**Study participating centre****Chinese PLA General Hospital**

No. 28, Fuxing Road, Haidian District

Beijing

China

100000

**Sponsor information****Organisation**

Chinese PLA General Hospital

**ROR**

<https://ror.org/04gw3ra78>

**Organisation**

National Research Institute for Family Planning

**Funder(s)****Funder type**

Government

**Funder Name**

National Clinical Research Center for Geriatric Diseases

**Results and Publications****Individual participant data (IPD) sharing plan**

The dataset for this study will not be made available due to the sensitive nature of the patient information it contains. It is protected by confidentiality agreements and ethical guidelines. Although informed consent was obtained from participants, it specifically prohibits the sharing or publication of identifiable patient data in any public forum or setting, in accordance with privacy laws and institutional ethical standards.

**IPD sharing plan summary**

Not expected to be made available