



Hôpitaux  
Universitaires  
Genève



UNIVERSITÉ  
DE GENÈVE

## Lay Summary

### MEDICAL AND NON-MEDICAL FACTORS THAT INFLUENCE THE DECISION TO ADMIT A SERIOUSLY ILL PATIENT TO INTENSIVE CARE

#### Project team

PD Dr Monica ESCHER

Dr Stéphane CULLATI

Prof Pierre DAYER

Dr Patricia HUDELSON

Prof Mathieu NENDAZ

Prof Thomas PERNEGER

Prof Bara RICOU

MA, Fabienne SCHERER

#### Contact address

PD Dr Monica ESCHER

Hôpitaux Universitaires de Genève

Rue Gabrielle-Perret-Gentil 4

1205 Genève

+41 22 372 99 33

[monica.escher@hcuge.ch](mailto:monica.escher@hcuge.ch)

June 12, 2016



SCHWEIZERISCHER NATIONALFONDS  
ZUR FÖRDERUNG DER WISSENSCHAFTLICHEN FORSCHUNG



End of Life

National Research Programme NRP 67

## **1. Background**

The physical and psychological burden intensive care imposes on patients is justified only if a significant benefit can be achieved in terms of survival and quality of life. Intensive care is a scarce and expensive resource, accounting for 10% to 20% of in-hospital costs. To admit patients most likely to benefit is also a matter of justice and of fair allocation of resource.

The decision making process which results in admitting or not admitting a patient to intensive care is often referred to as triage. Triage is especially complex for patients with a serious underlying illness and elderly patients with multiple comorbidities. These patients can benefit from intensive care, but they are at high risk of dying during their stay in the intensive care unit (ICU). Existing triage guidelines may be difficult to put into practice and defined criteria are not always applied. Physiological scores do not accurately predict individual prognoses. Triage decisions are neither totally rational nor totally explicit, and unconscious cognitive processes potentially lead physicians to make biased decisions. Acceptance of an invasive treatment varies among patients, and knowledge of an individual's values and treatment preferences should guide medical decision making. The elicitation of patient preferences however necessitates a discussion about prognosis, which was shown to be a difficult task in an acute hospital and not routinely done.

Available research about admission to intensive care focuses on ICU physicians and on the association of single factors with the admission decision. The admission decision however is a multifaceted process involving the physician caring for the patient and the ICU physician. Although it is likely that the physicians' unique perspectives influence the decision to admit a patient to intensive care, how the decision making actually proceeds has not been explored. This issue is particularly relevant for seriously ill patients as uncertainty concerning the benefit and burden of intensive care compared to usual care is likely to be important. The decision about the best course of action is then more likely to be influenced by non medical factors. How the decision making actually proceeds, and which determinants influence the



decision to admit a patient to intensive care in real clinical situations is not known. We proposed to address this issue in our project.

## **2. Goals of the project**

The main aims of the project were:

1. to identify medical and non medical factors that influence the decision-making process to admit a patient to the ICU
2. to determine in a quantitative manner if contextual non medical factors contribute to the admission decision in clinical situations involving seriously ill patients at high risk of death within 12 months
3. to assess the physicians' satisfaction with the decision making process and its components (in particular, each physician's roles).

## **3. Methods**

The project took place in the Geneva University Hospitals, a tertiary care teaching hospital. Participants were physicians working in the Division of General Internal Medicine and in the Division of Intensive Care, who were involved in decisions to admit a patient to the ICU. The project took place in two consecutive stages.

During the first stage, we used a qualitative design. We conducted one-to-one interviews with 12 internists and 12 ICU physicians. Physicians were asked to recall and comment on two significant clinical situations, and to reflect on their experiences. Their opinions were also sought regarding ideal decision making processes. The inductive approach provided an in-depth exploration of the ICU admission process and enabled to determine the factors that affect it.

The results of the qualitative part were used to develop a questionnaire for the quantitative part.

The second stage was designed to quantitatively assess the influence of predefined factors on the decision making process in real clinical situations. We also assessed the physicians' satisfaction with the decision making process. A questionnaire was developed for the purpose



of the project. It took 5 to 10 minutes to complete. All consecutive requests for ICU admission made for patients hospitalized in the Division of General Internal Medicine were identified. The ward physician and the ICU physician involved in the clinical situation were contacted by phone and administered the questionnaire. The decision – admission or not – was recorded. Socio-demographic characteristics of the physicians were collected the first time they participated. Patient characteristics (age, sex, comorbidities, mortality at 28 days, etc) were collected in the medical file.

#### **4. Results**

##### *Qualitative part*

The aim of this part of the project was to determine how the decision to admit or not a patient to intensive care was made, to identify determinants of the decision, and to assess if these determinants acted as barriers or facilitators of the admission decision.

We identified a general process guiding the physicians' decision to admit or not an acutely ill patient to intensive care. During triage, the physicians assess the patient, trying to determine his vital and functional prognosis ("clinical task"), and simultaneously think about appropriately allocating resources without endangering the safety of the acutely ill patient, and the safety of other patients in the ICU and on the ward ("managerial task"). Physicians identify grey zones, usually involving seriously ill or elderly patients with comorbidities, when making the appropriate admission decision is difficult. In grey zones, the decision making is more likely to be influenced by non medical determinants. Determinants making the admission decision more complex include circumstantial factors (nights/week-ends, lack of time, incomplete previous knowledge of the patient), and lack of beds. Shortage of beds sometimes leads ICU physicians to delay the admission decision ("temporization") in the hope that the patient's situation will evolve favorably and that ICU admission can be avoided. Determinants facilitating the decision include patient preferences, especially when the decision is about renouncing intensive care, and code status. The code is the indication concerning the intensity of treatment appropriate for the patient. For example, full code means that all the available medical



interventions must be used (including cardio-pulmonary resuscitation and intensive care) The code is based on patient goals of care and it is documented in the patient's file. Families may either facilitate the decision – when they communicate the patient's values and preferences -, or make it more complex – when they speak for themselves, putting forward their own needs. The quality of interactions between the internist and the ICU physician may also make the decision making process easier or more difficult.

When there is no code in the patient's file, or when the code does not seem appropriate, the physicians find it more difficult to make the admission decision. Moreover it is emotionally taxing because they are going to make a life-death decision. Physicians rely on the ICU physician's expertise, especially to renounce intensive care. They also resort to *a priori* consensus to justify ICU admission. For example, in the absence of code, physicians prefer to "err toward life" and they are more likely to admit the patient.

#### *Quantitative part*

As expected, both the internists and the ICU physicians estimated that the patient's chances of survival were better in case of admission to the ICU. Physicians' prediction of survival for each individual patient was compared with patient actual survival at 1 month. We found that physicians' estimates were accurate, for patients admitted to the ICU and for patients not admitted to the ICU. Our results suggest that the perception of the internists and of the ICU physicians about the decision making process differed. They were asked to estimate the influence of various items on the decision and, on the whole, the degree of agreement between them was low. Most of the time the internists and the ICU physicians estimated that their counterpart completed his expected tasks during triage in a satisfactory way. Temporization on the ICU physician's part was noted in a minority of cases. Internists however mentioned it more often than ICU physicians (11% vs 3.5%).

## **5. Significance of the results for science and practice**



Our results show that the decision to admit or to refuse a seriously ill patient to intensive care is challenging. Physicians make patient-centred, life-death decisions. These decisions are made at the patient's bedside, in time pressured circumstances, and often without all the relevant information available. We identified several determinants of the decision making process. Their influence varies according to the clinical situation. It may be minimal when the situation is clear, and it may be important in borderline situations (grey zones). As hypothesized, non medical determinants may facilitate or hinder the decision making process. Some are not amenable to change (e.g., ICU requests during the nights and week-ends, number of ICU beds available). Others determinants point to areas of possible improvement. Our results show that, in clinical situations of great uncertainty as to the benefit of intensive care, physicians rely on patient preferences to guide the decision making. Efforts should be made to elicit patient values and health care wishes more often and earlier in the disease process. Advance care planning should be promoted, as well as the writing of advance directives and the designation of a health care proxy. We found that code status is a core determinant of the admission decision in complex clinical situations involving seriously ill and elderly patients with comorbidities. Goals of care should be explicit enough in order to substantiate the choice of code status for the patient. Documentation of goals of care and code status in the medical file should be routinely done. The quality of interactions between physicians is important to deal with complex life-death decisions. Satisfaction with the manner colleague physicians complete their expected tasks during the decision making process is likely to contribute to good interactions. Recognition of the other physician's expertise will certainly help. Interventions to foster mutual satisfaction and respect between physicians should be developed.

