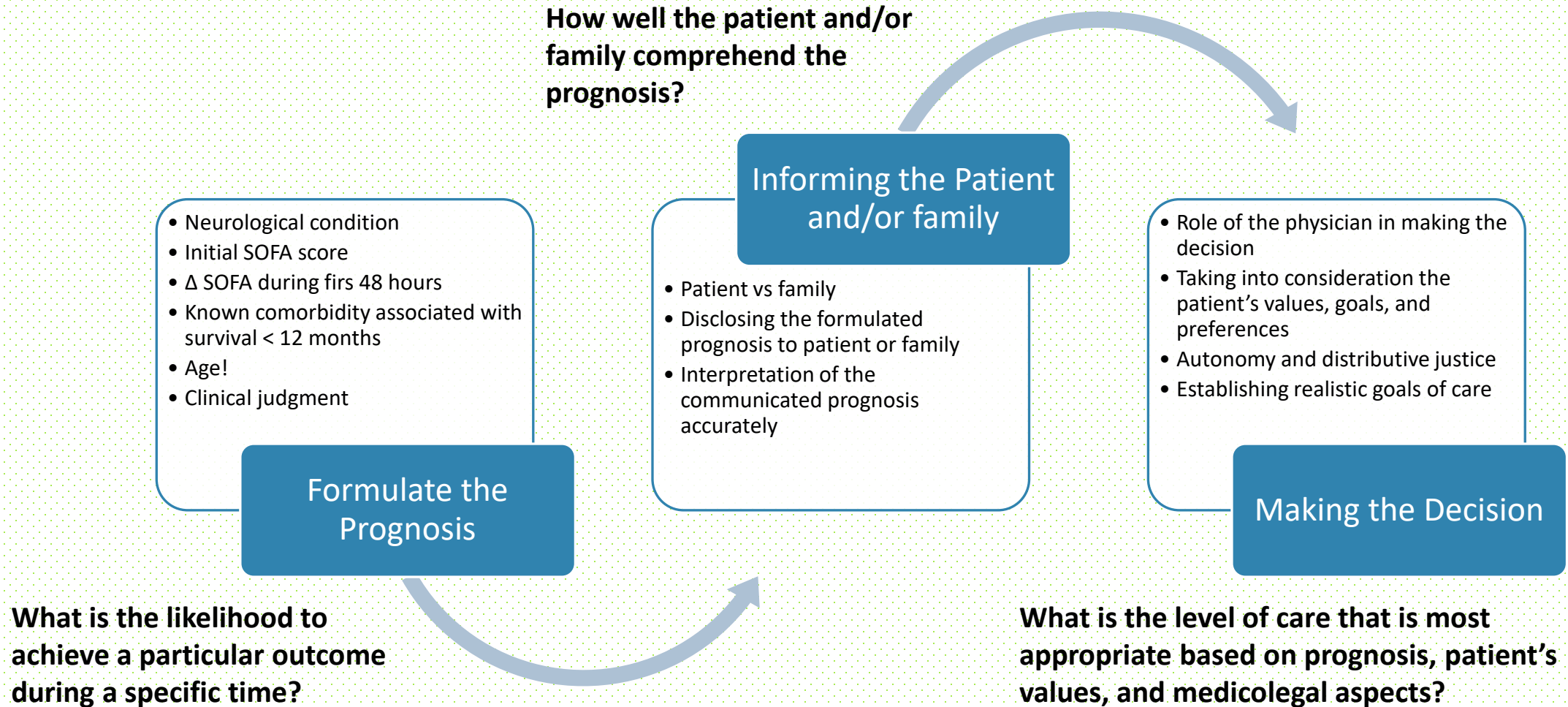




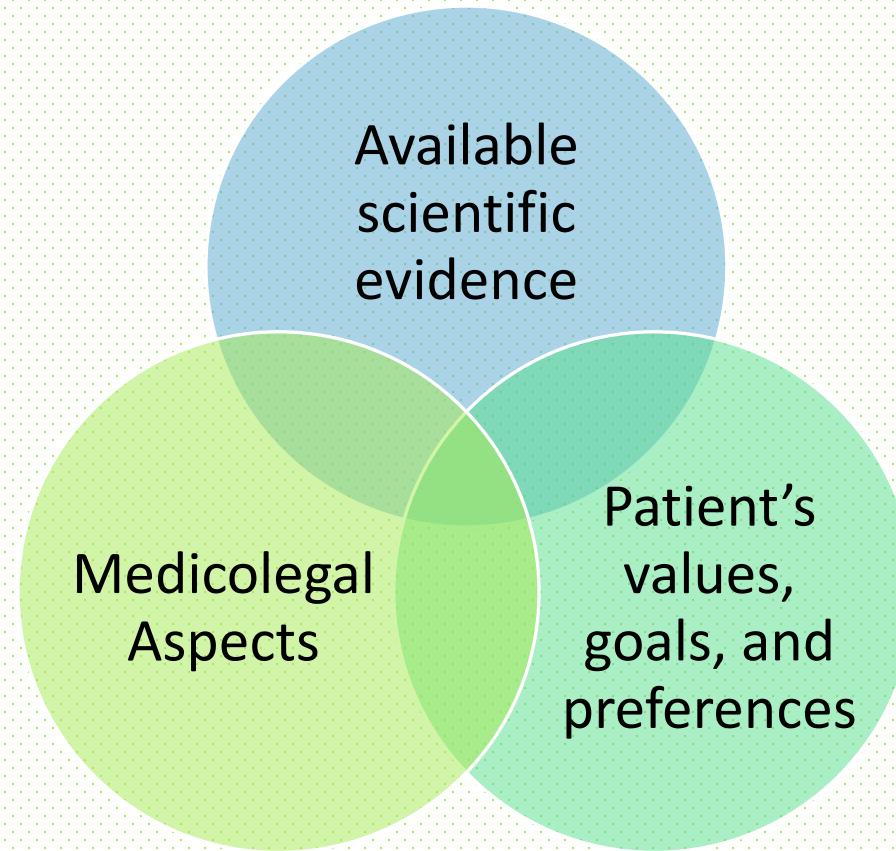
Spreading Knowledge – Improving Outcomes

Prognostication of Critical Illness

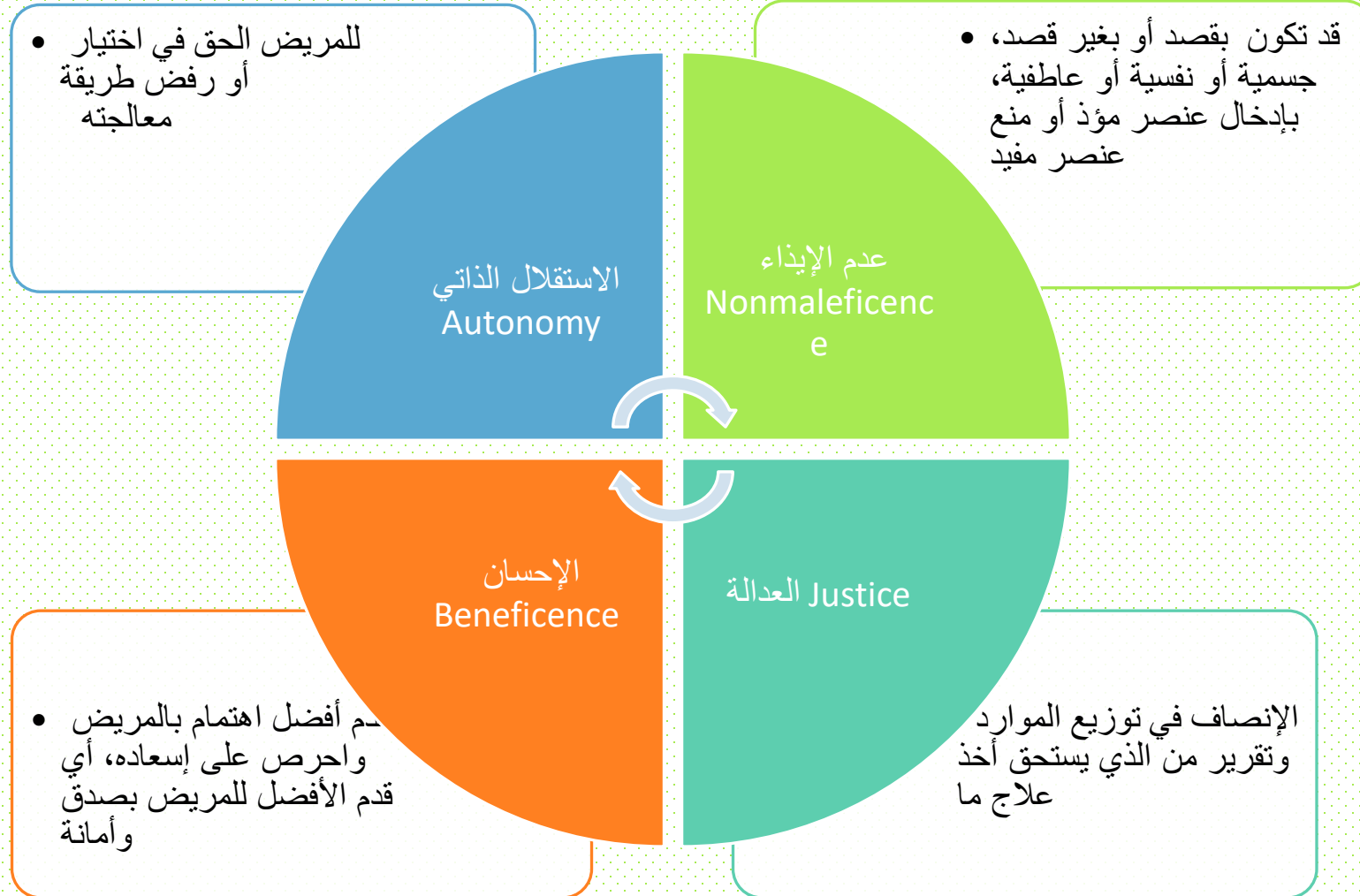
Decision Making Process

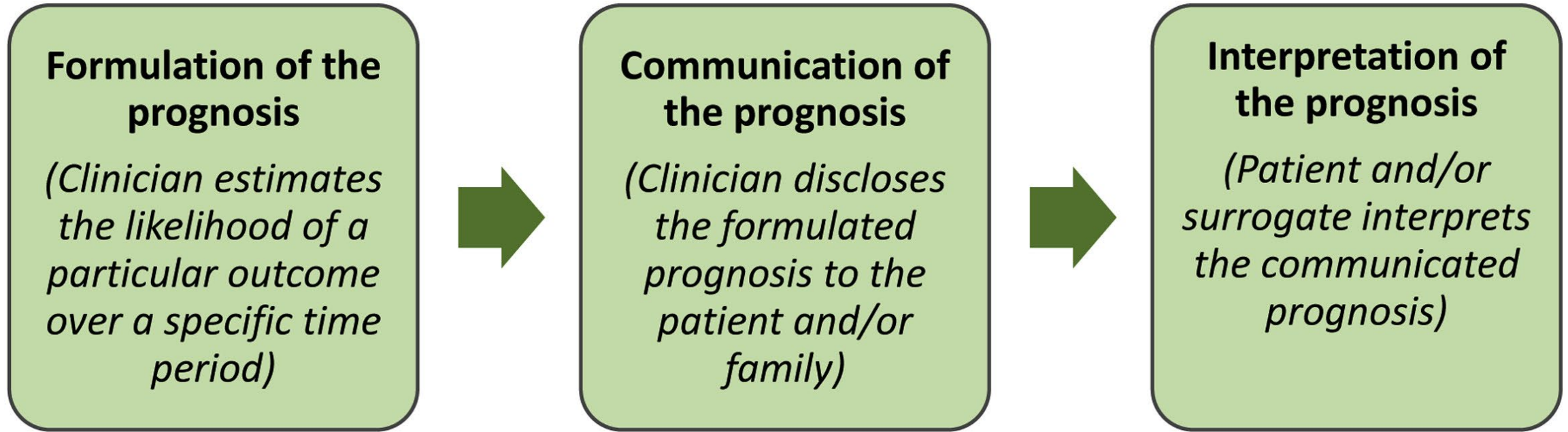


Shared Decision-making



القيم الأساسية في القضايا الأخلاقية الطبية





Prognostication Components

SOFA

Table 1. Sequential [Sepsis-Related] Organ Failure Assessment Score^a

System	Score				
	0	1	2	3	4
Respiration					
Pao ₂ /Fio ₂ , mm Hg (kPa)	≥400 (53.3)	<400 (53.3)	<300 (40)	<200 (26.7) with respiratory support	<100 (13.3) with respiratory support
Coagulation					
Platelets, ×10 ³ /μL	≥150	<150	<100	<50	<20
Liver					
Bilirubin, mg/dL (μmol/L)	<1.2 (20)	1.2-1.9 (20-32)	2.0-5.9 (33-101)	6.0-11.9 (102-204)	>12.0 (204)
Cardiovascular	MAP ≥70 mm Hg	MAP <70 mm Hg	Dopamine <5 or dobutamine (any dose) ^b	Dopamine 5.1-15 or epinephrine ≤0.1 or norepinephrine ≤0.1 ^b	Dopamine >15 or epinephrine >0.1 or norepinephrine >0.1 ^b
Central nervous system					
Glasgow Coma Scale score ^c	15	13-14	10-12	6-9	<6
Renal					
Creatinine, mg/dL (μmol/L)	<1.2 (110)	1.2-1.9 (110-170)	2.0-3.4 (171-299)	3.5-4.9 (300-440)	>5.0 (440)
Urine output, mL/d				<500	<200

Abbreviations: Fio₂, fraction of inspired oxygen; MAP, mean arterial pressure; Pao₂, partial pressure of oxygen.

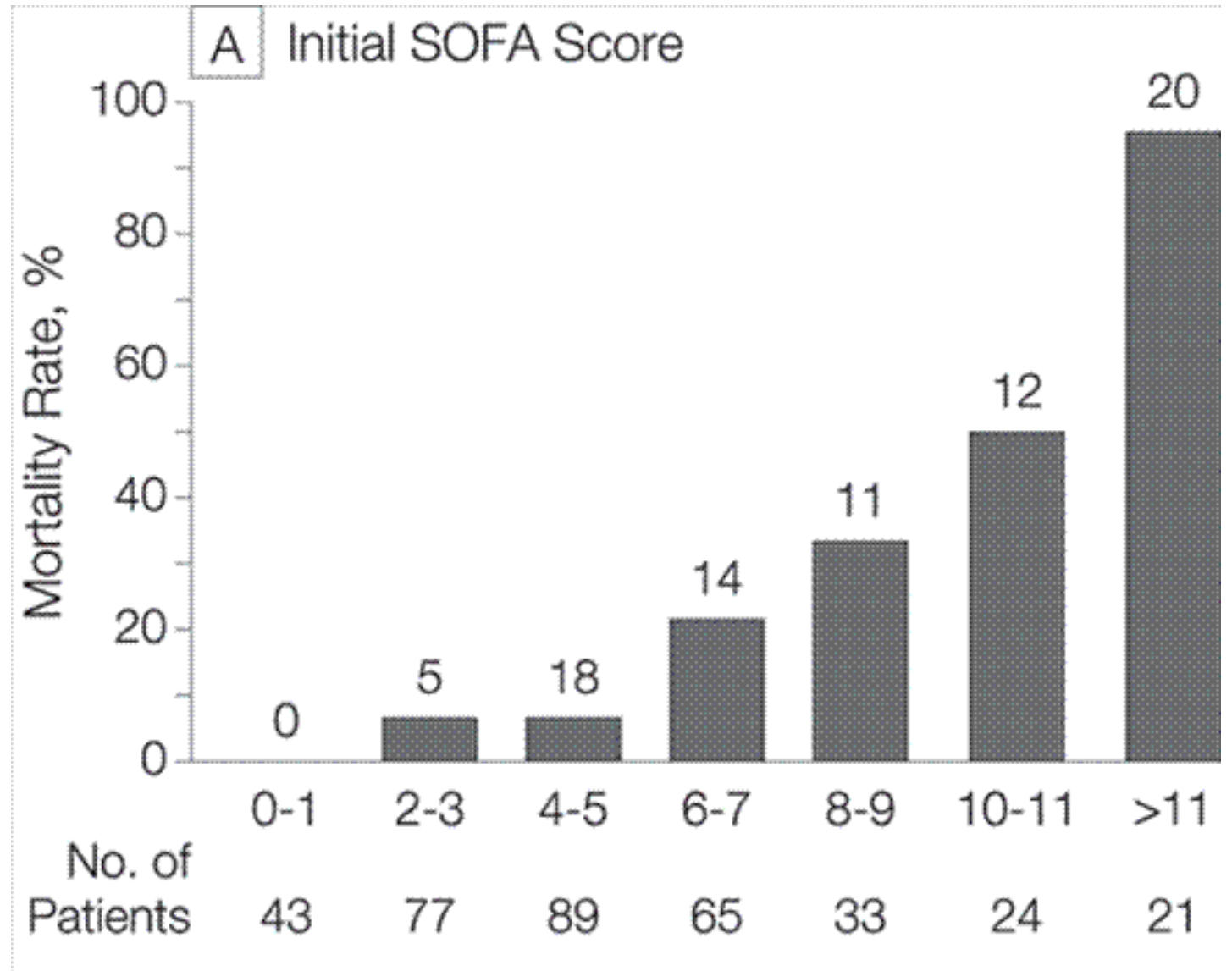
^a Adapted from Vincent et al.²⁷

^b Catecholamine doses are given as μg/kg/min for at least 1 hour.

^c Glasgow Coma Scale scores range from 3-15; higher score indicates better neurological function.

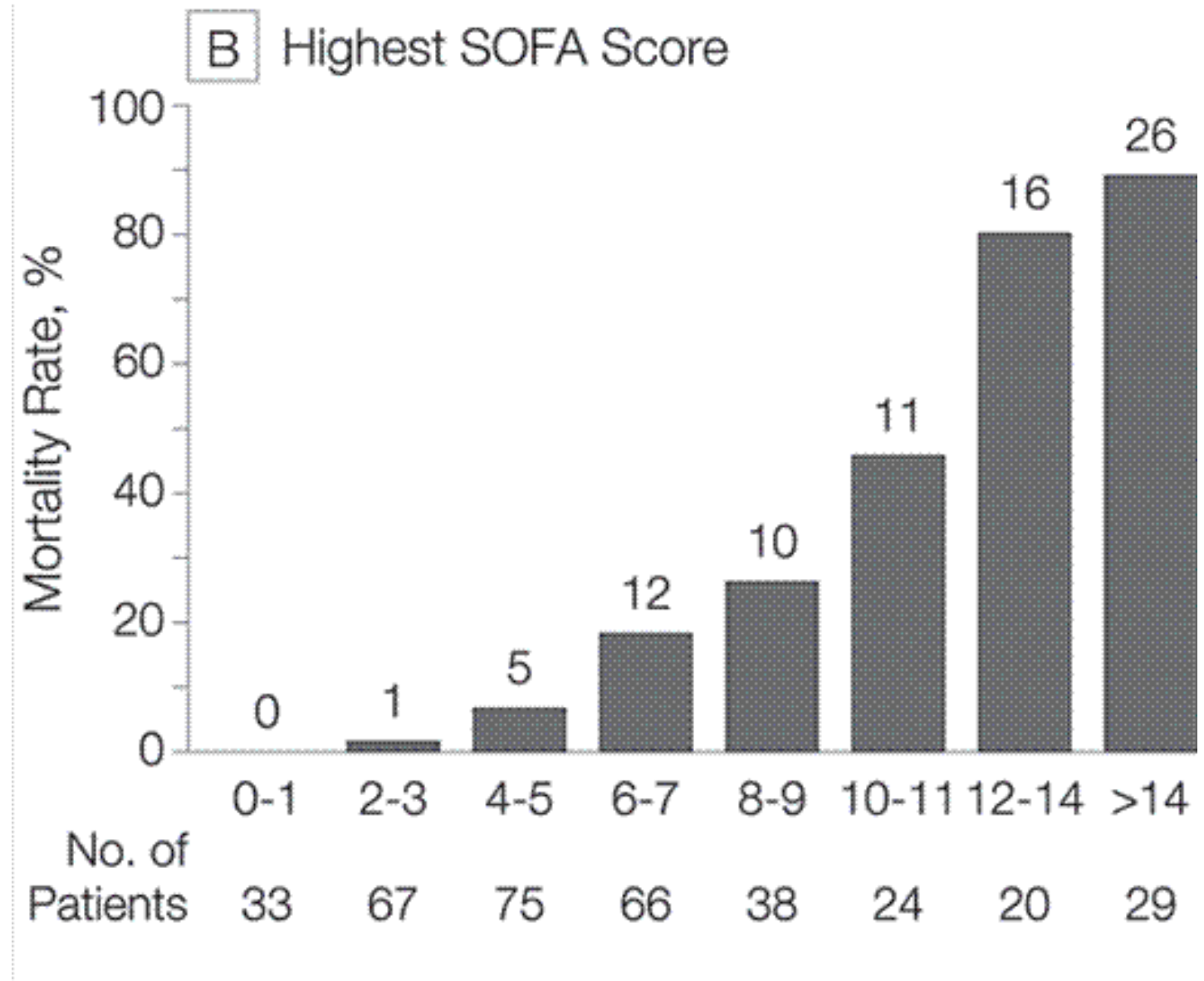
Mortality based on Initial SOFA Score

Ferreira FL, Bota DP, Bross A, Mélot C, Vincent J. Serial Evaluation of the SOFA Score to Predict Outcome in Critically Ill Patients. *JAMA*. 2001;286(14):1754–1758



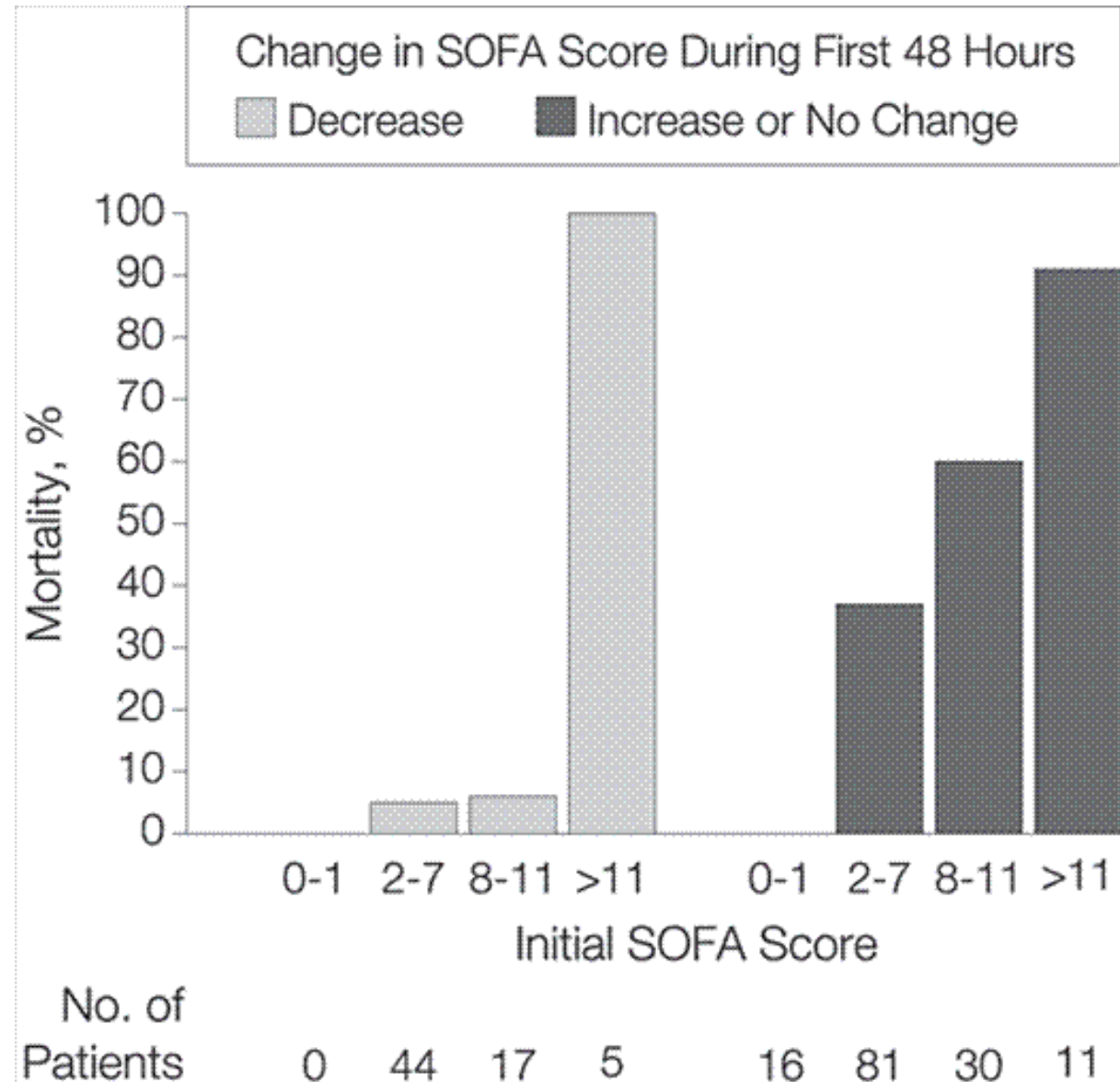
Mortality based on Highest SOFA Score

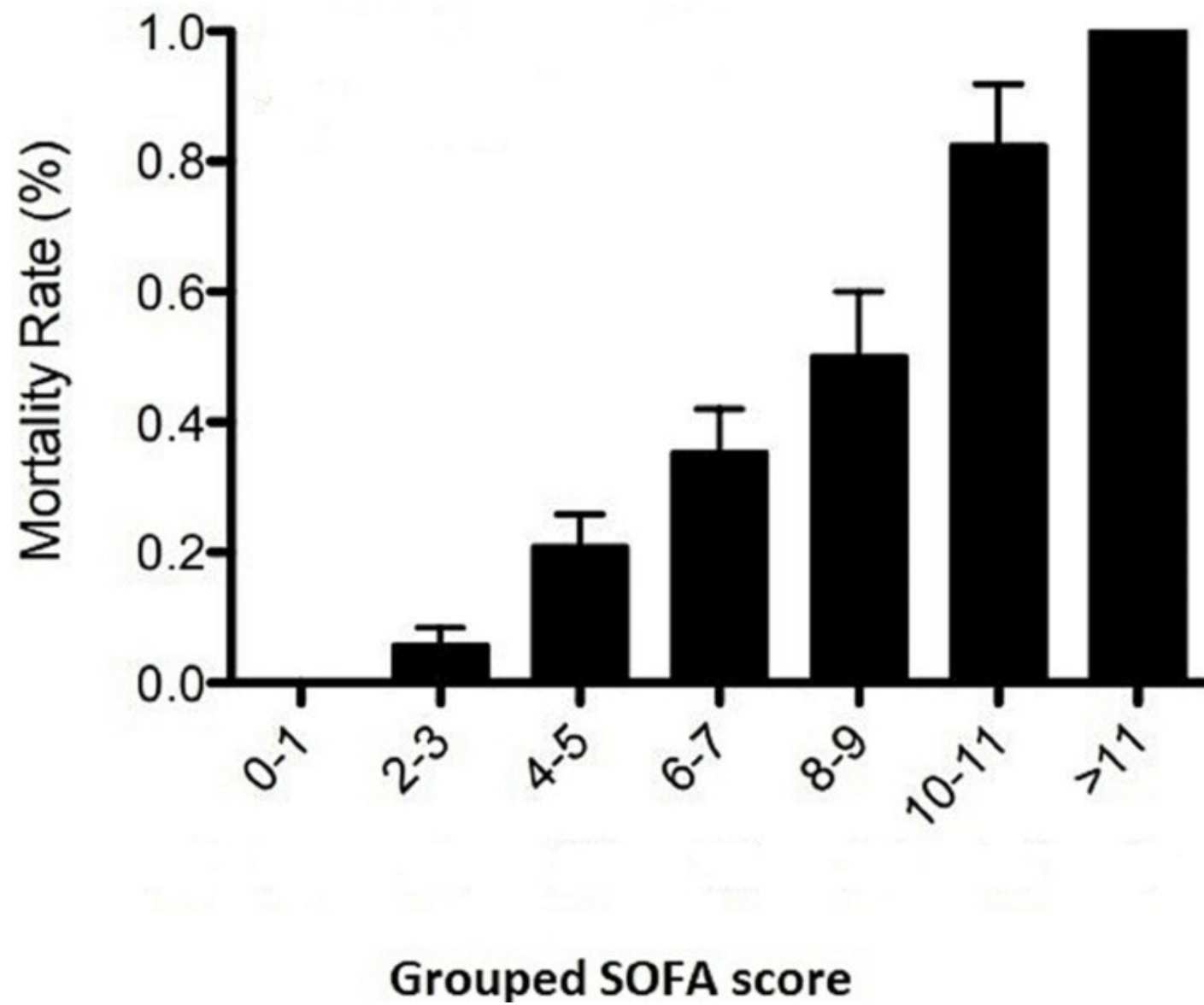
Ferreira FL, Bota DP, Bross A, Mélot C, Vincent J. Serial Evaluation of the SOFA Score to Predict Outcome in Critically Ill Patients. *JAMA*. 2001;286(14):1754–1758



Mortality Associated with Change of SOFA Score during the First 48 Hours

Ferreira FL, Bota DP, Bross A, Mélot C, Vincent J. Serial Evaluation of the SOFA Score to Predict Outcome in Critically Ill Patients. *JAMA*. 2001;286(14):1754–1758





Proposed Strategy for Ventilator Allocation of Scarce Mechanical Ventilators

Principle	Specification	Point System			
		1	2	3	4
Prognosis for short-term survival	Adults (SOFA) or pediatrics (PELOD-2)	SOFA score ≤ 8 PELOD-2 ≤ 12	SOFA score 9-11 PELOD-2 12-13	SOFA score 12-14 PELOD-2 14-16	SOFA score > 14 PELOD-2 ≥ 17
Prognosis for long-term survival	Prognosis for long-term survival (assessment of comorbid conditions)	Severe comorbid conditions; death likely within 1 y	...
Secondary consideration					
Lifecycle considerations	Prioritize those who have had the least chance to live through life's stages (age)	Age 0-49 y	Age 50-69 y	Age 70-84 y	Age ≥ 85 y

Examples of severe comorbid conditions with associated life expectancy < 1 year are listed:.

1. NYHA class IV heart failure.
2. Advanced lung disease with FEV1 $< 25\%$ predicted, total lung capacity $< 60\%$ predicted, or baseline PAO2 < 55 mm Hg.
3. Primary pulmonary hypertension with NYHA class III or IV heart failure.
4. Chronic liver disease with Child-Pugh score > 7 .
5. Severe trauma.
6. Advanced untreatable neuromuscular disease.
7. Metastatic malignant disease or high-grade primary brain tumors.

Decision Making Process

