



Letters to the Editor

Task Force for the Review, Modification and Development of Quality Indicators for Respiratory Intensive Care Units in Mexico[☆]

Grupo de trabajo para la revisión, modificación y desarrollo de indicadores de calidad para unidades de cuidados intensivos respiratorios en México

To the Editor,

These are times of transition in which healthcare delivery is capturing more attention and is clearly beginning to take an important position in patient care. The desire to improve patient safety has led to a series of initiatives aimed at implementing standard practices to improve quality in healthcare.¹ Quality indicators are standardized measures for determining the appearance and intensity of a phenomenon or event.² Intensive care units are not exempt from the application of an organizational model that can be measured from different angles and improved once areas of opportunity have been identified. One of the most important advances in the development of evidence-based quality indicators in intensive care has been made by the Spanish Society of Intensive and Critical Care Medicine and Coronary Units (SEMICYUC), together with the Avedis Donabedian Foundation.^{2,3} SEMICYUC generated quality indicators that were adopted by intensive care units in Spain and by other international scientific societies, such as the European Society of Intensive Care Medicine and the Indian Society of Critical Care Medicine. The proposals included not only general indicators, but also quality of care indicators for specific patient populations, such as coronary artery patients, who are often treated in dedicated units. Specialized units catering for patients with particular characteristics require specifically adapted indicators and standards, some of which may have to be more rigid than others.⁴

The aim of this project is to draw up recommendations for monitoring quality in units that, due to the type of patient they specialize in, share common features and are termed collectively “respiratory intensive care units”. The initiative was launched by the heads of the intensive care units in the chest clinics of tertiary and fourth-level hospitals in Mexico, namely (1) the Respiratory Intensive Care Unit of the Pulmonology and Thoracic Surgery of the Hospital General de México, (2) the Intensive Care Unit of the Instituto Nacional de Enfermedades Respiratorias (INER); (3) the Respiratory Intensive Care Unit of the Centro Médico Nacional “La Raza”, and (4) the Intensive Care Unit of the Department of Pulmonology and Intensive Care of the Hospital Universitario de Monterrey.

The first meeting of Task Force members took place during the 39th Annual Meeting of the Mexican Association of Critical

Table 1
Available Statistics From 2 of the Participating Units.^a

	RICU Hospital General de México (n=715)	ICU INER (n=87)
Age, years±SD	48±17	47.2±18.5
Sex, M/F (%)	52/48	58/42
SAPS 3, ±SD	50.7±18	–
APACHE II, ±SD	–	17.0±7.9
SOFA±SD	5.1±4.6	6.4±3.4
<i>Diagnosis on admission, %</i>		
Acute respiratory failure	44.2	67.1
Post-thoracic and neck surgery	22	10.3
Sepsis/septic shock	13	9.1
Cardiac arrest/cardiogenic shock	7.6	6.8
Neurological disease	5.5	–
Hypovolemic shock	4	–
Other	3.7	3.4
<i>Invasive mechanical ventilation, %</i>		
	60.5	–
<i>Non-invasive mechanical ventilation, %</i>		
	12.5	–
<i>RICU procedures, %</i>		
Tracheostomy	9.4	–
Bronchoscopy	13.2	–
Thoracocentesis	4.5	–
Pleurostomy	6.2	–
<i>Procedures prior to RICU admission, %</i>		
Tracheostomy	6.4	–
Pleurostomy	20.3	–
<i>Mortality, %</i>		
Predicted	26.5	27.5
Occurring in RICU	30.3	28.7
In-hospital	37.9	–
<i>Standardized mortality rate</i>		
	1.43	–
<i>RICU stay in days, ±SD</i>		
	8.12±12.4	10.8±7.1

APACHE II: Acute Physiology and Chronic Health Evaluation II; SD: standard deviation; INER: National Institute of Respiratory Diseases; M/F: men/women; SAPS 3: Simplified Acute Physiology Score 3; SOFA: Sequential Organ Failure Assessment; RICU: respiratory intensive care unit.

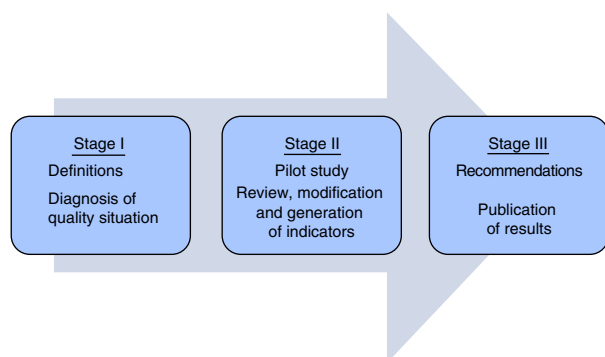
^a Data from the Centro Médico Nacional «La Raza» and the Hospital Universitario de Monterrey were considered insufficient or unreliable.

Medicine and Intensive Care in León, Guanajuato in October 2012. At the meeting, the initial general objectives were defined, as follows: (a) to specify the features defining a respiratory intensive care unit (RICU) in Mexico, and (b) to characterize the type of patients seen in these units and define their needs. In a second meeting in March 2013, an RICU was defined as an intensive care unit that treats critical patients with predominantly respiratory diseases, placing emphasis on distinguishing this term from that used in previous publications from other countries referring to intermediate and/or chronic care units for the withdrawal of mechanical ventilation.⁵ Available statistical data were considered

[☆] Please cite this article as: Álvarez-Maldonado P, Bautista-Bautista E, Huizar-Hernández V, Mercado-Longoria R, Cueto-Robledo G. Grupo de trabajo para la revisión, modificación y desarrollo de indicadores de calidad para unidades de cuidados intensivos respiratorios en México. Arch Bronconeumol. 2015;51:357–358.

Table 2
Objectives.

Diagnose the quality situation by means of a pilot scheme to monitor the most relevant quality healthcare indicators for respiratory patients in participating units (Stage I)
Review existing evidence-based quality indicators for the respiratory population or specialty and study their applicability and relevance for respiratory intensive care units (Stage II)
Modify the most relevant quality indicators for the respiratory population, based on the available scientific evidence, for use in units specializing in respiratory intensive care, adapted to their specific needs (Stage II)
Generate quality indicators for respiratory intensive care units based on the key processes identified in those units (Stage II)
Draw up recommendations for the use of quality indicators in respiratory intensive care units (Stage III)
Publish the results of the project in scientific journals (Stage III)

**Fig. 1.** Task force working plan for the review, modification and generation of quality indicators for respiratory intensive care units.

deficient (Table 1) and the team agreed to complete the first stage of the project by collecting relevant information from a prospective cohort. Specific project objectives that will be addressed in 2 subsequent stages are described in Table 2 and Fig. 1.

The Task Force is currently receiving support from their respective hospitals (the most important tertiary and fourth-level centers

in the Mexican health system), as well as the backing of the Mexican Pulmonology Council. In the future, we hope to gain the support of the Mexican College of Critical Medicine, the Mexican Society of Pulmonology and Thoracic Surgery and other scientific societies, with the aim of achieving the widespread dissemination of acceptable results.

References

- Safe Practices for Better Healthcare: A Consensus Report, 2003. Available in: <http://www.qualityforum.org/txsafeexecsumorder6-8-03PUBLIC.pdf> [accessed 12.01.06].
- Martín MC, Cabré L, Ruiz J, Blanch L, Blanco J, Castillo F, et al. Indicadores de calidad en el enfermo crítico. *Med Intensiv.* 2008;32:23–32.
- Indicadores de calidad en el enfermo crítico. Actualización de 2011. Available in: http://www.semicuc.org/sites/default/files/actualizacion_indicadores_calidad_2011.pdf [accessed 01.10.11].
- Álvarez-Maldonado P, Cueto-Robledo G, Cerón-Díaz U, Pérez-Rosales A, Navarro-Reynoso F, Cicero-Sabido R. Indicadores de calidad en una unidad de cuidados intensivos respiratorios. Análisis inicial de la base de datos DEDUCIR. *Med Intensiv.* 2012;36:518–20.
- Torres A, Ferrer M, Blanquer JB, Calle M, Casolíve V, Echave JM, et al. Unidades de cuidados respiratorios intermedios. Definición y características. *Arch Bronconeumol.* 2005;41:505–12.

Pablo Álvarez-Maldonado,^{a,*} Edgar Bautista-Bautista,^b Víctor Huizar-Hernández,^c Roberto Mercado-Longoria,^d Guillermo Cueto-Robledo^a

^a *Unidad de Cuidados Intensivos Respiratorios, Servicio de Neumología y Cirugía de Tórax, Hospital General de México O.D., Mexico City, Mexico*

^b *Departamento de Medicina Crítica, Instituto Nacional de Enfermedades Respiratorias, INER, Mexico City, Mexico*

^c *Unidad de Cuidados Intensivos Respiratorios, Servicio de Neumología, Centro Médico Nacional "La Raza", IMSS, Mexico City, Mexico*

^d *Servicio de Neumología y Cuidados Intensivos, Hospital Universitario, Monterrey, Nuevo León, Mexico*

* Corresponding author.

E-mail address: pamyacs@yahoo.com (P. Álvarez-Maldonado).

Bronchoaspiration of Foreign Bodies. Clinical Case and Review[☆]



Broncoaspiración de cuerpos extraños. Caso clínico y revisión

To the Editor,

At the end of the nineteenth century, foreign body (FB) aspiration had a mortality rate of 50%, but this has gradually fallen since the first endoscopic extraction performed by Gustav Killian. Modifications of the extraction technique followed, and today, flexible bronchoscopy is one of the most widely used methods in these cases. We present the case of a 67-year-old man diagnosed with aspiration of a dental drill bit used for dental implants.

The patient came to the Emergency Department from a dental appointment one hour earlier, during which a drill bit had accidentally fallen into his oral cavity while he was undergoing root

canal treatment, and disappeared; the dentist believed that the patient had swallowed it, and referred him to our hospital. The patient was asymptomatic on arrival. Chest X-ray and computed axial tomography (CT) (Fig. 1) revealed the drill bit in the bronchus intermedius, with no associated complications. Oral bronchoscopy was performed under sedation, and the bit was removed en bloc using crocodile forceps (Fig. 1). The patient was discharged 24 h later.

The first published case of endoscopic extraction occurred on 30th March 1897, when a 63-year-old German farmer experienced dyspnea, cough and hemoptysis after aspirating a pork bone (11 mm long and 3 mm wide). Using a modified Mikulicz-Rosenheim esophagoscope (a rigid tube illuminated with a head mirror) and rigid forceps, Gustav Killian managed to remove the splinter from the right main bronchus.¹

FB aspiration is most common in males aged between 1 and 2-years,² with a mortality of 7% in children <4 years. The incidence in adults is <0.4%,³ mostly in the geriatric population, or in association with neurological diseases, alcohol or drug abuse, traumatic intubation, mental retardation, dental treatment and tracheotomy patients. The type of FB depends on the age: in children, up to 55% are of vegetable origin (peanuts and seeds²); in adults, Blanco et al. reported 32 cases of bronchoaspiration out of 9781 bronchoscopies

[☆] Please cite this article as: Gómez López A, García Luján R, de Miguel Poch E. Broncoaspiración de cuerpos extraños. Caso clínico y revisión. *Arch Bronconeumol.* 2015;51:358–359.