

Person—pH of arterial blood gas, level N[.NN]

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Person—pH of arterial blood gas, level N[.NN]

Identifying and definitional attributes

Metadata item type:	Data Element
Short name:	pH of arterial blood gas
METEOR identifier:	320831
Registration status:	Health! , Recorded 14/07/2006
Definition:	The pH of a person's arterial blood gases.
Data Element Concept:	Person—pH of arterial blood gas
Value Domain:	pH level N[.NN]

Value domain attributes

Representational attributes

Representation class:	Total
Data type:	Number
Format:	N[.NN]
Maximum character length:	3

	Value	Meaning
Supplementary values:	9.99	Not recorded Not stated/inadequately described

Data element attributes

Collection and usage attributes

Guide for use: Any pH value of < 6.5 or > 8 is considered invalid.

Source and reference attributes

Submitting organisation:	ANZICS Database Management Committee
Reference documents:	Knaus WA, Draper EA, Bergner M, Murphy DJ, Harrell FE. The APACHE III Prognostic System: Risk Prediction of Hospital Mortality for Critically Ill Hospitalized adults. Chest 1991;100:1619–1636

Relational attributes

DSS specific information:

Blood samples are taken at intervals during the first 24 hours of a patient's entry to an intensive care unit. Several measurements of the pH of a patient's arterial blood gas are taken in this time period.

Used in the calculation of APACHE II and APACHE III scores.

Code 9.99 if arterial pH is not recorded.

APACHE II:

For adults, the value to be recorded for use in the calculation of the APACHE II score is the one that achieves the highest score determined using the APACHE II score weights shown in the table below.

APACHE II	High abnormal range					Low abnormal range			
	pH	≥7.7	7.6-7.69		7.5-7.59	7.33-7.49		7.25-7.32	7.15-7.24
Score	+4	+3	+2	+1	0	+1	+2	+3	+4

APACHE III

For APACHE III scores, the highest scoring pH is selected in conjunction with the level of carbon dioxide in the same blood sample.

APACHE III	PaCO ₂									
	<25	25- <30	30- <35	35- <40	40- <45	45- <50	50- <55	55- <60	≥60	
<7.15	12						4			
7.15-<7.2										
7.20-<7.25	9		6		3		2			
7.25-<7.30										
7.30-<7.35			0			1				
7.35-<7.40	5									
7.40-<7.45										
7.45-<7.50			2			12				
7.50-<7.55	3				12					
7.55-<7.60										
7.60-<7.65	0									
>7.65										