Appendix 1

* *Score Equation of Principal Components*

Given the eigenvector , the following equation is obtained:

|  |  |
| --- | --- |
|  | (1) |

*= score of component j resulting from the analysis of principal components*

= *multiplicative constant of the k-th original standardized variable associated with component j*

*= value of the k-th original standardized variable for a given health region*

* *Complete Equation of ICI with standardized variables*

|  |  |  |
| --- | --- | --- |
|  |  | (2) |

Where:

*= standardized value of resuscitators per 10 thousand users*

*= standardized value of respirators/ventilators per 10 thousand users*

*= standardized value of ECG monitors per 10 thousand users*

*= standardized value of defibrillators per 10 thousand users*

*= standardized value of CT scanners per 10 thousand users*

*= standardized value of clinical beds/intermediate care per 10 thousand users*

*= standardized value of ICU beds per 10 thousand users*

*= standardized value of nurses per 10 thousand users*

*= standardized value of physical therapists per 10 thousand users*

*= standardized value of doctors per 10 thousand users*

*= standardized value of certified nursing assistants per 10 thousand users*

* *Derivation of the Complete Equation of the ICI as a function of the original variables*

|  |  |  |
| --- | --- | --- |
|  |  | (3.1) |
|  |  | (3.2) |

Where:

*= original value of resuscitators per 10 thousand users*

*= original value of respirators/ventilators per 10 thousand users*

*= original value of ECG monitors per 10 thousand users*

*= original value of defibrillators per 10 thousand users*

*= original value of CT scanners per 10 thousand users*

*= original value of clinical beds/intermediate care per 10 thousand users*

*= original value of ICU beds per 10 thousand users*

*= original value of nurses per 10 thousand users*

*= original value of physical therapists per 10 thousand users*

*= original value of doctors per 10 thousand users*

*= original value of certified nursing assistants per 10 thousand users*