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**Non-invasive sphygmomanometers —**  
**Part 2:**  
**Clinical investigation of intermittent**  
**automated measurement type**  
**AMENDMENT 1**

iTeh **STANDARD PREVIEW**  
*Sphygmomanomètres non invasifs —*

**(standards.iteh.ai)**  
*Partie 2: Investigation clinique pour type ponctuel à mesurage*  
*automatique*

*ISO 81060-2:2018/Amd 1:2020*

**AMENDEMENT 1**

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CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Fax: +41 22 749 09 47  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
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Published in Switzerland

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This document was prepared jointly by Technical Committee ISO/TC 121, *Anaesthetic and respiratory equipment*, Subcommittee SC 3, *Respiratory devices and related equipment used for patient care*, and Technical Committee IEC/TC 62, *Electrical equipment in medical practice*, Subcommittee SC D, *Electromedical equipment*.

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# Non-invasive sphygmomanometers —

## Part 2: Clinical investigation of intermittent automated measurement type

### AMENDMENT 1

#### Clause 3

Add the following after 3.4:

#### 3.5

##### TOTAL LIMB CIRCUMFERENCE RANGE

range, from the smallest limb circumference to the largest limb circumference, intended by the MANUFACTURER for use with the AUTOMATED SPHYGMOMANOMETER

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#### 5.1.4

Replace the text with the following, and renumber the subsequent formulae:

#### 5.1.4 \* Limb size distribution

a) Limb circumferences shall be distributed as follows:

- 1) at least 20 % of the subjects shall have a limb circumference which lies within each quarter of the TOTAL LIMB CIRCUMFERENCE RANGE;
- 2) at least 10 % of the subjects shall have a limb circumference which lies within the highest octile of the TOTAL LIMB CIRCUMFERENCE RANGE; and
- 3) at least 10 % of the subjects shall have a limb circumference within the lowest octile of the TOTAL LIMB CIRCUMFERENCE RANGE.

b) Additionally, for a SPHYGMOMANOMETER intended for use with multiple CUFF sizes, each CUFF shall be tested on at least  $N_{\text{cuff}}$  subjects as calculated according to [Formula \(1\)](#).

$$N_{\text{cuff}} = \frac{r_{\text{cuff}}}{2 \cdot r_{\text{total}}} \cdot N_{\text{total}} \quad (1)$$

where

$N_{\text{total}}$  is the total number of subjects in the study;

$r_{\text{cuff}}$  is the size of the limb circumference range for the individual cuff;

$r_{\text{total}}$  is the size of the TOTAL LIMB CIRCUMFERENCE RANGE.

- c) The CLINICAL INVESTIGATION REPORT shall provide the specified arm circumference range of each CUFF in centimetres (inches).
- d) The CLINICAL INVESTIGATION REPORT shall include plots showing all subject results by arm circumference, where the Y axis shows the difference between SPHYGMOMANOMETER-UNDER-TEST and REFERENCE BLOOD PRESSURE VALUES and the X axis shows the actual arm circumference of the subjects.
- e) These plots should also indicate the borders of each CUFF with vertical lines.
- f) Plots shall be provided for both:
  - 1) SYSTOLIC BLOOD PRESSURE; and
  - 2) DIASTOLIC BLOOD PRESSURE.

*Check compliance by inspection of the CLINICAL INVESTIGATION REPORT.*

#### 5.2.3, list item h)

Replace the text with the following:

- h) \*CUFFS for the reference SPHYGMOMANOMETER shall have:
  - 1) a bladder length of 75 % to 100 % of the upper arm circumference;
  - 2) a bladder width of 37 % to 50 % of the upper arm circumference; and
  - 3) a 2-piece construction comprising:
    - i) a distensible inner BLADDER; and
    - ii) a non-distensible outer sleeve.

*Check compliance by inspection of the CLINICAL INVESTIGATION REPORT.*

#### 6.1.4

Replace the text with the following:

##### 6.1.4 \* Limb size distribution

- a) Limb circumferences shall be distributed as follows:
  - 1) at least 20 % of the subjects shall have a limb circumference which lies within each quarter of the TOTAL LIMB CIRCUMFERENCE range;
  - 2) at least 10 % of the subjects shall have a limb circumference which lies within the highest octile of the TOTAL LIMB CIRCUMFERENCE range; and
  - 3) at least 10 % of the subjects shall have a limb circumference within the lowest octile of the TOTAL LIMB CIRCUMFERENCE range.
- b) Additionally, for a SPHYGMOMANOMETER intended for use with multiple CUFF sizes, each CUFF shall be tested on at least  $N_{\text{cuff}}$  subjects as calculated according to [Formula \(1\)](#).
- c) The CLINICAL INVESTIGATION REPORT shall provide the specified arm circumference range of each cuff in centimetres (inches).

- d) The CLINICAL INVESTIGATION REPORT shall include plots showing all subject results by arm circumference, where the Y axis shows the difference between SPHYGMOMANOMETER-UNDER-TEST and REFERENCE BLOOD PRESSURE values and the X axis shows the actual arm circumference of the subjects.
- e) These plots should also indicate the borders of each cuff with vertical lines.
- f) Plots shall be provided for both:
  - 1) SYSTOLIC BLOOD PRESSURE; and
  - 2) DIASTOLIC BLOOD PRESSURE.

*Check compliance by inspection of the CLINICAL INVESTIGATION REPORT.*

*Annex C*

Add the following entries:

bladder	ISO 81060-1:2007, 3.2
total limb circumference range	3.5

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