

## **Appendix 8: consensus calculations**

Calculations previously used by Vella and colleagues were used to identify which themes achieved consensus (1). A theme required both strong group support and a high level of agreement (as defined below) to be included in the service specification. For each theme, specific criteria were then drafted based on the qualitative analysis of discussion of the theme in the meeting transcript. Due to the large number of themes, it was not possible to draft and agree criteria in the meetings or via survey.

### *Consensus – group support*

Median were calculated for the second and final ratings of each theme. Themes with median ratings of 7-9 were deemed to have strong support, 4-6.5 moderate support and 1-3.5 weak support as recommended by Vella and colleagues (1).

### *Consensus – group agreement*

The level of agreement EDPPs had in their support of themes was calculated as follows:

1. Mean absolute deviation was calculated for each theme (the collective average of the difference between the overall median rating and each experts rating)

e.g. for Theme X, where A = median rating; B = expert 1 rating;  
C = expert 2 rating:

$$(A - B) + (A - C) / 2 = \text{Mean absolute deviation of X}$$

2. The median of all mean absolute deviations was calculated

e.g. for Themes X, Y and Z with Mean absolute deviations of 1, 2 and 3 respectively the median was calculated as 2.

3. For each theme, the difference between its mean absolute deviation (1) and the median of all mean absolute deviations (2) was used to determine level of agreement

e.g. for Theme X:

Mean absolute deviation of X – Median of all mean absolute deviations = level of agreement

e.g. for Theme Y

Mean absolute deviation of Y – Median of all mean absolute deviations = level of agreement

Categories of agreement were defined as thirds (0.33) of the mean absolute deviation from the median of all mean absolute deviations. Given that the median of all mean absolute deviations was calculated to be 0.67, mean absolute deviations  $\leq 1.00$  = high agreement, 1.01-1.33 = moderate agreement, and  $>1.33$  = low agreement.

Themes that achieved both strong group support (median rating 7-9) and high agreement (mean absolute deviation  $\leq 1.00$ ) were deemed to have achieved consensus and taken forward to standard development.

1. Vella K, Goldfrad C, Rowan K, Bion J, Black N. Use of consensus development to establish national research priorities in critical care. *BMJ*. 2000;320(7240):976.