The Aneurysm Dependent Quality of life (AneurysmDQoL) Summary

Background

The AneurysmDQoL is a self-completion measure designed specifically to assess individualised quality of life in patients who have been diagnosed with an abdominal aortic aneurysm (AAA). The AneurysmDQoL was developed in 2013 (Peach, Romaine, Thompson, Hinchliffe & Bradley, 2014; Peach, Wilson, Plowright, Romaine, Thompson, Hinchliffe, & Bradley, 2015) and validated in 2014 (Romaine, Peach, Thompson, Hinchliffe, & Bradley, 2015) and is based on the Audit of Diabetes Dependent Quality of Life (ADDQoL) (Bradley, Todd, Gorton, Symonds, Martin, & Plowright, 1999) and sister –DQoLs for other conditions (RDQoL: Bradley, 1997; ThyDQoL: McMillan, Bradley, Razvi, & Weaver, 2008; MacDQoL: Mitchell & Bradley, 2004; RetDQoL: Brose & Bradley, 2010). The specific life domains to be included in the AneurysmDQoL were determined during focus group discussions and in-depth interviews with individual patients as described by Peach et al. (2015) followed by psychometric development as described by Romaine et al. (2015).

The AneurysmDQoL is a 24-item measure including two overview items designed for audit purposes which measure generic 'present QoL' and AAA-specific 'impact of AAA on QoL'. A further 22 items measure the impact of having an abdominal aortic aneurysm on specific aspects of life and the importance of these aspects of life for QoL (See Figure 1 for an example item). In addition the questionnaire includes a free-text item. This allows patients to comment on any other QoL domains not covered in the questionnaire.

Being an 'individualised' measure it is not assumed that all items are applicable to everyone: five items, including working life, have a preliminary 'not applicable' option. Secondly, it is not assumed that all aspects of life are equally important to QoL for all individuals. Importance of each aspect of life is measured and used to weight the ratings of the impact of AAA on each aspect of life. These weighted impact scores can be averaged to provide a highly personalised assessment of the impact of AAA on an individual's QoL in the form of an 'Average Weighted Impact' (AWI) score.

2	Are you currently working, looking for work or would you like to work?				
	res [] If yes, complete (a) and (b).				
	No 🔲 If <i>no</i> , go straight to 3 (a).				
(a)	If I had never had an aneurysm, my working life would be:				
	very much better	much better	a little better	the same	worse
(b)	For me, having a working life is:				
	very important	important	somewhat important		not at all important

Figure 1: AneurysmDQoL item example

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The AneurysmDQoL is designed for use with adults and includes patients who are being monitored prior to aneurysm repair as well as those who have undergone aneurysm repair. The questionnaire may be administered by mail or in clinic for a range of purposes including:

- i. an assessment tool with individuals;
- ii. an assessment tool with groups of patients;
- iii. a broad cross-sectional survey instrument;
- iv. a routine part of clinical audit cycles;
- v. an outcome measure for clinical research trials evaluating new treatments.

Conditions of use of the AneurysmDQoL

The AneurysmDQoL is made available to users by formal arrangement with the copyright holder, Professor Clare Bradley via Health Psychology Research Ltd, which licences her questionnaires. Requests should be made to Jonathan Gilbride at Health Psychology Research Ltd [see below]. A user agreement is necessary to avoid breach of copyright and to ensure that the latest and most appropriate version of the questionnaire is used.

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References

Arbuckle, J.L. (2012). Amos (Version 21) [Computer Program]. Chicago: SPSS.

- Bentler, P.M. (1990). "Comparative Fit Indexes in Structural Models. *Psychological Bulletin*, 107(2), 238-46.
- Blunch, N.J. (2008). *Introduction to structural equation modelling using SPSS and AMOS*. London: Sage.
- Bradley, C. (1997). Design of a renal-specific individualised quality of life questionnaire (RDQoL). *Peritoneal Dialysis International, 17*(Supplement 1), S72.
- Bradley, C., Todd, C., Gorton, T., Symonds, E., Martin, A., Plowright, R. (1999). The development of an individualized questionnaire measure of perceived impact of diabetes on quality of life: The ADDQoL. *Quality of Life Research*, *8*, 79-91.
- Brose, L.S. & Bradley, C. (2010). Psychometric development of the individualised Retinopathy-Dependent Quality of Life Questionnaire (RetDQoL). *Value in Health, 13*(1), 119-127.
- Byrne, B.M. (2010) *Structural Equation Modeling with AMOS Basic Concepts, Applications, and Programming.* New York: Lawrence Erlbaum Associates.
- Hu, L.-T. & Bentler, P.M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.). *Structural equation modelling: Concepts, issues and applications* (pp.76-99). Thousand Oaks: CA: Sage.
- Hu, L.-T. & Bentler, P.M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*, 1–55.
- Jackson, D. L., Gillaspy, J.A. & Purc-Stephenson, R. (2009). Reporting practices in confirmatory factor analysis: An overview and some recommendations. *Psychological Methods*, *14*(1), 6-23.
- Kenny, D. (2015). Measuring Model Fit [online] Available: http://davidakenny.net/cm/fit.htm. Accessed: 18.11.2015.
- McMillan, C., Bradley, C., Razvi, S., & Weaver, J. (2008). Evaluation of new measures of the impact of hypothyroidism on quality of life and symptoms: The ThyDQoL and ThySRQ. *Value in Health*, *11*(2), 285-294.
- Mitchell, J. & Bradley, C. (2001). Psychometric evaluation of the 12-item Well-Being Questionnaire for use with people with Macular Disease. *Quality of Life Research* 10, 465-473. http://www.springerlink.com/content/xj7l4444p36q78j2/
- Mitchell, J. & Bradley, C.(2004). Design of an individualised measure of the impact of macular disease on quality of life (the MacDQoL). *Quality of Life Research; 13(6),* 1163-75.
- Muthén, L.K. & Muthén, B.O. (1998-2011). *Mplus User's Guide. Sixth Edition.* Los Angeles, CA: Muthén & Muthén.
- Peach, G., Romaine, J., Thompson, M.M., Hinchliffe, R.J. & Bradley, C. (2014). Development and validation of condition-specific patient-reported outcome measures (PROMS) of quality of life, symptoms and treatment satisfaction for patients with aortic aneurysms. *British Journal of Surgery* 101 (S4) 37, O129. doi: 10.1002/bjs.9508 <u>http://onlinelibrary.wiley.com/doi/10.1002/bjs.9508/pdf</u>
- Peach, G., Wilson, A., Plowright, R., Romaine, J., Thompson, M., Hinchliffe, R.J., & Bradley, C. (2015).
 Design of three new condition-specific questionnaires to assess quality of life, symptoms and treatment satisfaction of patients with abdominal aortic aneurysms: The Aneurysm-DQoL, Aneurysm-SRQ and Aneurysm-TSQ. *Value in Health*, 18 (7) A398, Abstract #PCV138. DOI: http://dx.doi.org/10.1016/j.jval.2015.09.908

- Romaine, J., Peach, G., Thompson, M.M., Hinchliffe, R.J., & Bradley, C. (2015). Psychometric development of three new condition-specific questionnaires to measure quality of life (Aneurysm-DQoL), symptoms (Aneurysm-SRQ) and treatment satisfaction (Aneurysm-TSQ) of individuals with abdominal aortic aneurysms. *Quality of Life Research* 24 (suppl 1), 41-42, Abstract #202.3 doi: 10.1007/s11136-015-1078-4
- Schumacker, R.E. & Lomax, R.G. (2004). *A beginner's guide to structural equation modelling* (2nd Edn.). Mahwah, NJ: Lawrence Erlbaum Associates.

Tabachnick, B.G. & Fidell, L.S. (2007). Using Multivariate Statistics (5th ed.). New York: Allyn and Bacon.

Ullman, J.B. (2001). Structural equation modelling. In B.G. Tabachnick & L.S. Fidell, *Using multivariate statistics* (4th ed. pp 653-771). New York: Allyn & Bacon.

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