### Policy Title
Lung volume reduction by surgery or endobronchial valve for severe emphysema in adults

### CRG:
A01 Specialised Respiratory

### NPOC:
Internal Medicine

### Date
9 April 2019

### Description of comments during consultation
Papers supplied by Olympus, manufacturers of Spiration valve system, an umbrella type valve.

### Action taken by Public Health lead
All papers referenced read in full by Public Health lead and the situation is as follows:

1. The NICE IPG 600 refers to endobronchial valves and makes no differentiation between umbrella and duckbill valves.
2. The Schulmann paper is just about the comparison of Chartis and QCT as a means of assessing collateral ventilation.
3. The Herth paper is an expert review and not original research.
4. The Criner paper (the EMPROVE study) has not been published in a peer reviewed journal so is not considered further.
5. The Li study (the REACH Trial) was published in December 2018 so after the NICE guidance publication. It was published in Respiration, a journal where a number of papers on LVR have been published. It looks like a well-constructed non-blinded trial of 107 patients who are non UK / European cohort and all but one are male. It uses the Spiration umbrella valve for which there has been less evidence historically and for which there are fewer studies referenced by NICE publications. It reached statistically significance for FEV1, SGRQ mMRC score at 1,3 and 6 months. Statistical significance for RV, 6MWT and CAT score either inconsistent across time or not found. The comment is made that FEV1 affected by which target lobe used and also a query if a specific Asian phenotype in COPD exists. The study does not use Chartis but QCT.
| Outcome | Li: A well-constructed study on the use of the umbrella valve which shows statistical significance in some pertinent respiratory markers in a non-European cohort. However, the bulk of the evidence in the area remains with duckbill valves as seen in NICE guidance. |