

Defining a severe asthma super-responder: findings from a Delphi process

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Rationale

- Clinicians are increasingly recognising severe asthma patients in whom biologicals and other add-on therapies lead to dramatic improvement often referred to as 'super-responders'.
- Currently, there is no agreed super-responder definition.

Aim

- To survey health care professionals using a modified Delphi process in order to define an international consensus-based definition of a severe asthma 'super-responder'.

Methods

- A modified Delphi process (Figure 1) was used to reach an international consensus based definition of a super-responder.¹
- Consensus on individual items required at least 70% agreement by panel members.
- The panel consisted of 115 participants (90% specialist pulmonologists or allergists) from 27 countries of whom 81 participated (94% specialist pulmonologists or allergists) from 24 countries in all three Delphi rounds.
- The initial items included in round one were derived from elements of response to severe asthma treatment identified in both clinical trials and clinical practice.

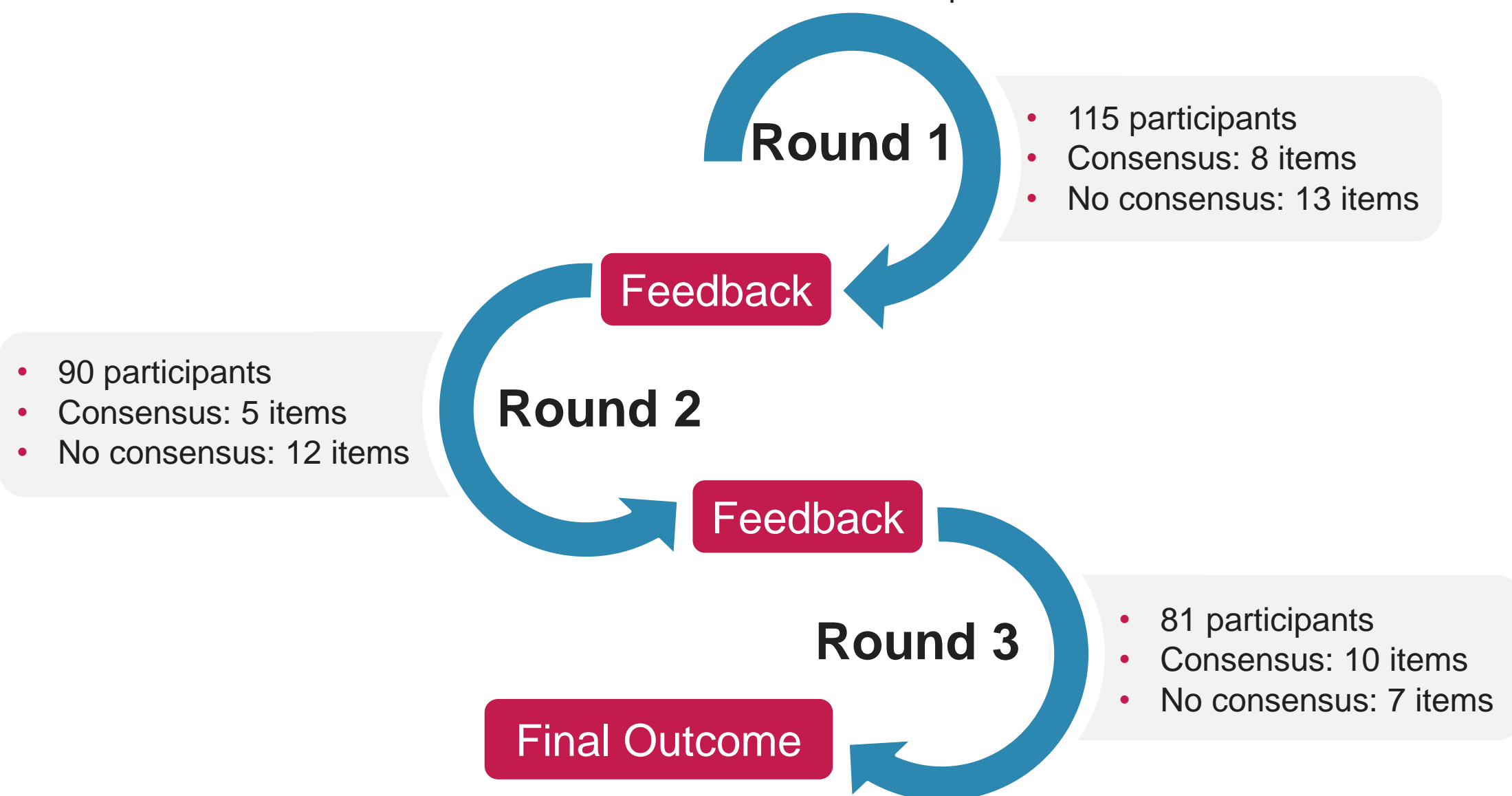


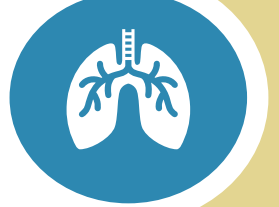





Figure 1 | The Delphi method consisted of three iterative rounds of voting where each Delphi panel member was issued an electronic questionnaire to complete independently. At round closure all responses were summarised and presented to the Delphi panel members prior to the next round of voting. The final round of voting brought the Delphi panel to a consensus on the definition of a super-responder.

Delphi panel: Adel Mansur, Aikaterini Detoraki, Alan Altraja, Alan James, Alexandra Nanzer-Kelly, Andréanne Côté, Andrew Menzies-Gow, Andriana Papaioannou, Anne-Maree Cheffins, Arnaud Bourdin, Bassam Mahboub, Brian Lipworth, Carlos Andrés Celis-Preciado, Carlos Torres-Duque, Caterina Bucca, Celeste Porsbjerg, Charlotte Ulrik, Chris Corrigan, Christian Taube, Claude Farah, Constance Katelaris, David Langton, Dermot Ryan, Désirée Larenas-Linnemann, Eleftherios Zervas, Enrico Heffler, Flavia Hoyte, Francesca Puggioni, George Christoff, Giorgio Walter Canonica, Giovanna Elisiana Carpagnano, Giuseppe Guida, Gregory Katsoulotos, Guy Brusselle, Hitashi Rupani, Hubertus Jersmann, Ian Clifton, Jaideep Dhariwal, James Fingleton, Jane Duke, Janet Rimmer, Jo Douglass, João Fonseca, Job van Boven, John Corless, John Harrington, Jorge Maspero, José Luis Miguel, Kanok Pipatvech, Karrinda Kenny, Kenneth Chapman, Konstantinos Kostikas, Lauri Lehtimäki, Li Ping Chung, Liam Heaney, Liang-Wen Hang, Louis-Philippe Boulet, Luis Perez-de-Llano, Luisa Ricciardi, Majdy Idrees, Manlio Milanese, Maria Elisabetta Conte, Maria Teresa Costantino, Mariko Koh Siyue, Mark Fitzgerald, Mark Hew, Matthew Peters, Ming-Ju Tsai, Mitesh Patel, Mohammad Hashim Khan, Mohsen Sadatsafavi, Mona Al-Ahmad, Mona-Rita Yacoub, Mónica De Gennaro, Naghmeh Radhakrishna, Nicola Alexander Hanania, Nikolaos Papadopoulos, Njira Lugogo, Norma Linaker, Nunzio Crimi, Paddy Dennison, Parameswaran Nair, Patrick David Mitchell, Paul O'Byrne, Paul Pfeffer, Paula Kauppi, Pauline Hughes, Peter Middleton, Peter Wark, Philip Bardin, Pin-Kuei Fu, Praveen Akuthota, Rekha Chaudhuri, Ricardo Campos, Riyad Al-Lehebi, Roberta Parente, Rovira Francisco, Sally Wenzel, Santus Pierachille, Shrikant Pawar, Stelios Loukides, Stephen Fowler, Tara Mackenzie, Thomas Brown, Tze Lee Tan, Unnur Björnsdóttir, Vanessa McDonald, Veronica Lawriwskij, Vibeke Backer, Violina Vasileva, Ying-Chun Chien, Zinta Harrington.

Results: The super-responder definition

Improvement should involve 3 or more criteria (at least 2 of which should be major criteria) and should be assessed over 12 months.

Major Criteria	Minor Criteria
 Exacerbation elimination	 75% exacerbation reduction
 Large improvement in asthma control (≥ 2x the minimal clinically important difference)	 Well controlled asthma
 Cessation of maintenance oral steroids (or weaning to adrenal insufficiency)	 ≥ 500mL improvement in FEV1

Conclusions

This international consensus-based definition of severe asthma super-responders is an important prerequisite for better understanding of super-responders – their prevalence, predictive factors and the mechanisms involved. Further research is needed to understand the patient perspective and more precisely measure quality of life in super-responders.

References

- Eubank, B. H. et al. *BMC Med Res Methodol.* 2016 May 20;16:56. doi: 10.1186/s12874-016-0165-8.

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To view members of the Delphi panel, download this poster, view more information on both the methodology and results scan this QR Code.

