

Dysfunctional breathing – extent of screening and treatment in Denmark 2016: an exploratory survey

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Background

Dysfunctional breathing (DB) is an identified cause of dyspnoea. DB is defined as biomechanical alterations of the breathing pattern without an inflammatory component for which no medical therapy is available. The only therapy supported by some evidence is targeted physiotherapy; however, high-quality trials are missing. Little is known about current DB screening and treatment practice in Denmark. Furthermore, major co-morbidities associated with DB are also unknown.

Materials & Methods

A cross-sectional survey was conducted between 16 May and 10 June 2016. Invited respondents were pulmonologists from all asthma centres (outpatient departments) in the five regions of Denmark. After up to three e-mail reminders, fifteen (75%) out of the 20 invited respondents answered. The electronic questionnaire encompassed screening of DB (habits/standards, tools, professions), treatment for DB (professions, type) as well as co-morbidities observed in patients with DB (pulmonary, other). Data was analysed to investigate frequencies.

Results

A range of screening methods was applied in 11 out of the 15 centres. Clinical observation was the most typical (6/11).

Figure 1.

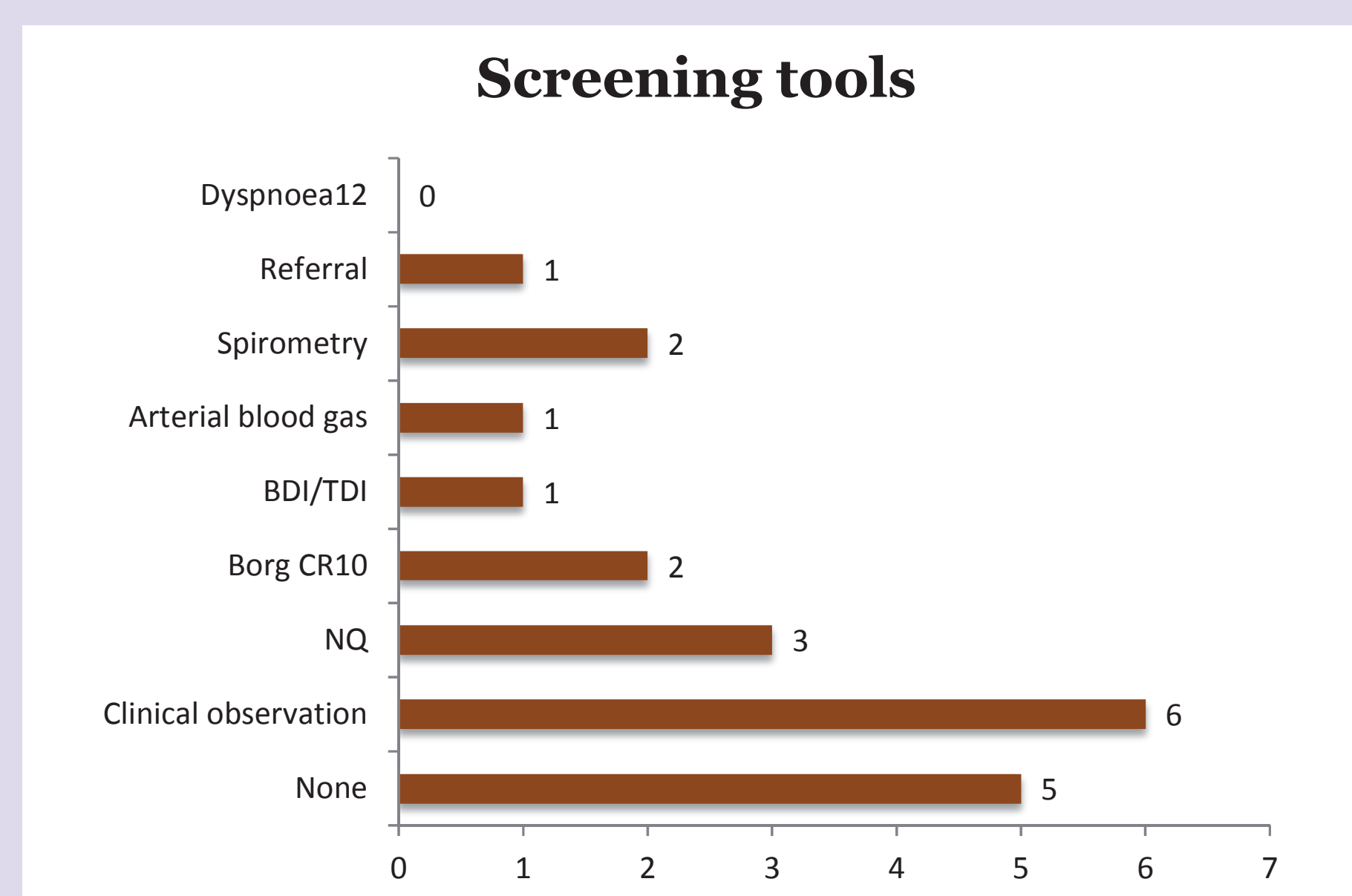


Figure 1: N=11 The responders could select one or more options. BDI/TDI: Baseline Dyspnoea Index/Transition Dyspnoea Index. NQ: Nijmegen Questionnaire.

In 5 out of 11 centres pulmonologists independently screened patients while multidisciplinary screening by up to three professions (pulmonologist, nurse, physiotherapist, speech therapist) was performed in other 5 centres. One pulmonologist referred patients to another hospital for screening.

Treatment was provided in 7 of the 15 centres but only systematically in 5. Multidisciplinary treatment was given in 4 centres. **Figure 2 and 3.**

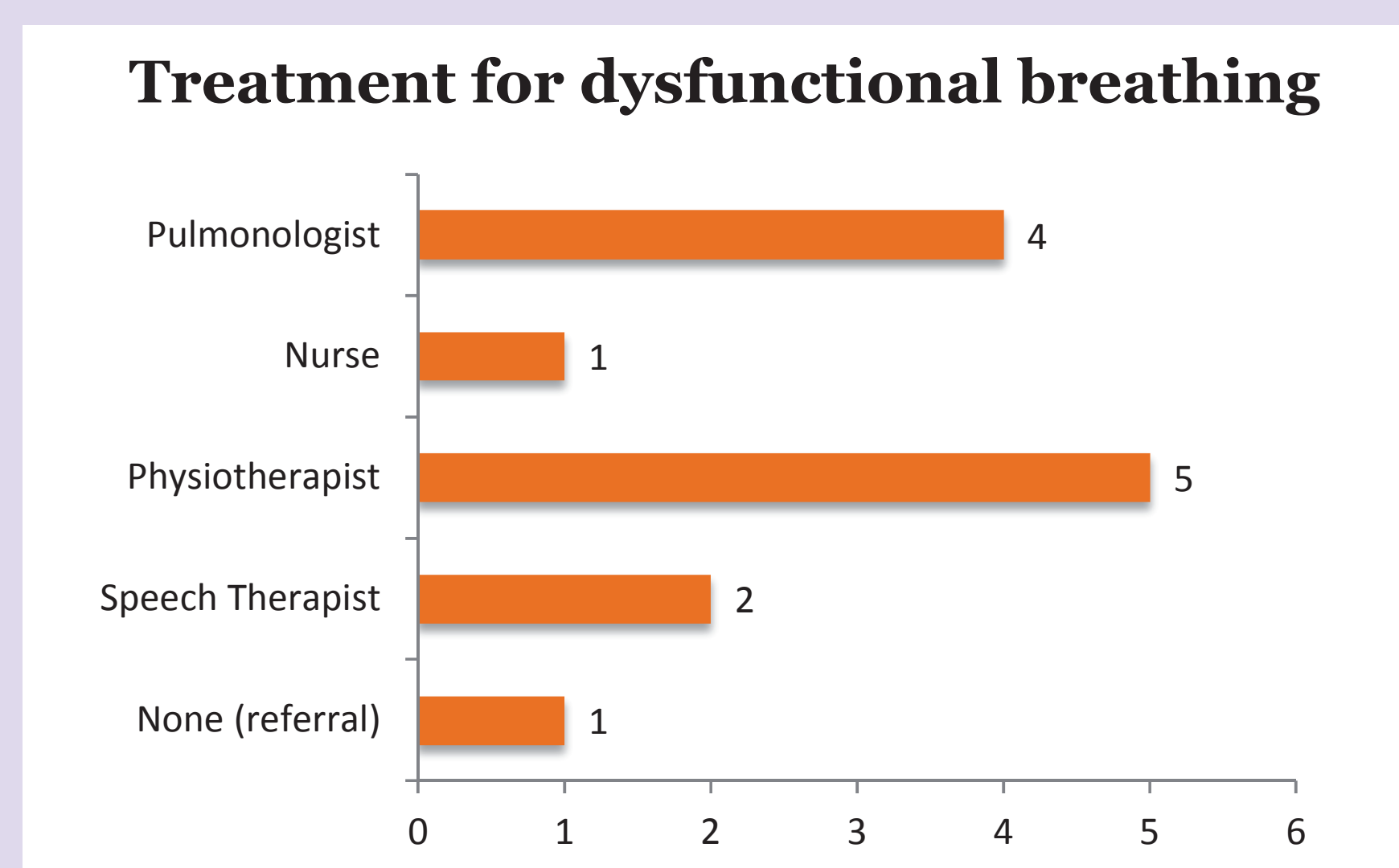


Figure 2: N=7 The treatment was delivered by a range of professions. The responders could select one or more options.

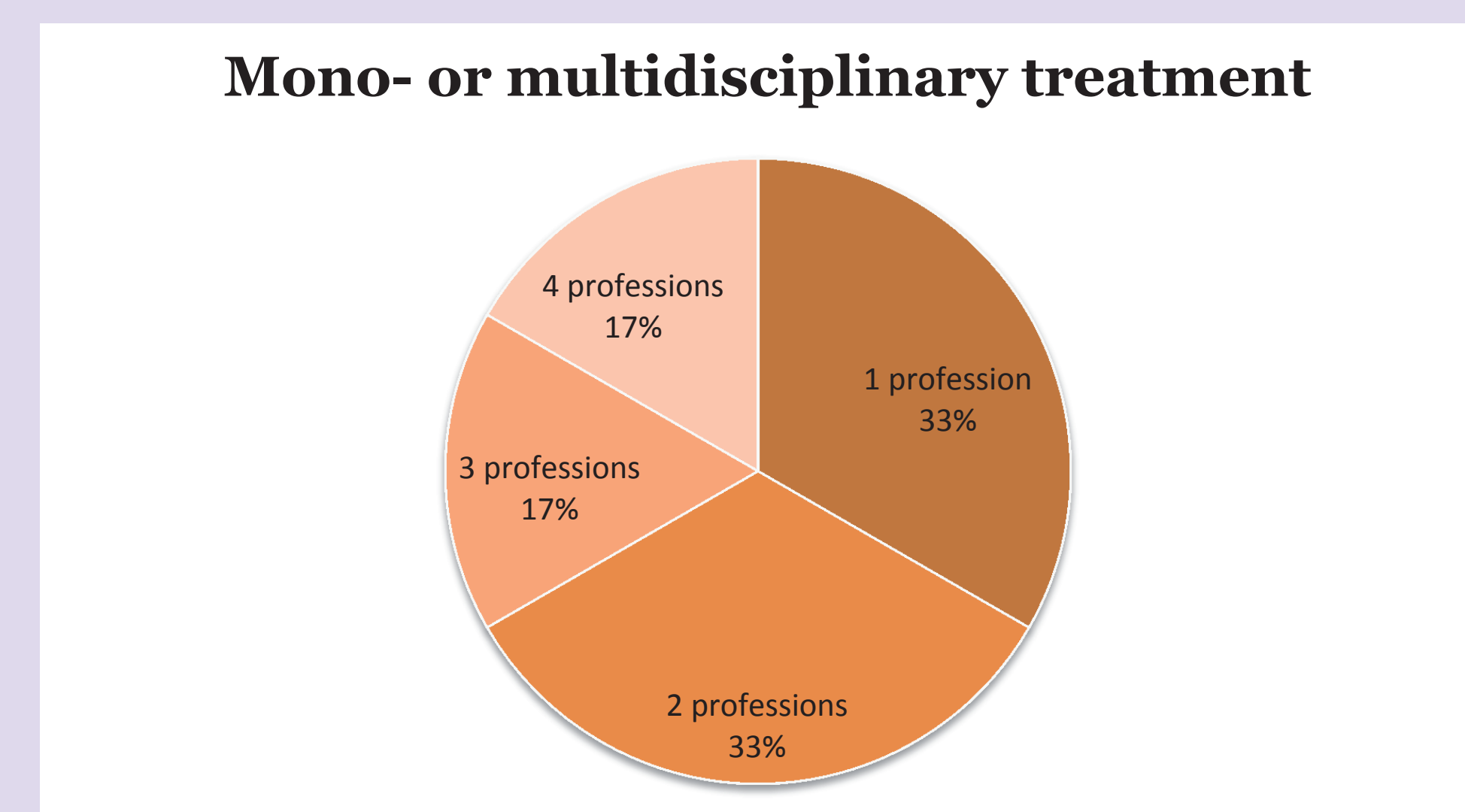


Figure 3: N=6 One or up to four professions were involved in the treatment. Professionals were pulmonologists, nurses, physiotherapists, speech therapists.

Co-morbidities associated with dysfunctional breathing are shown in **figure 4 and 5.**

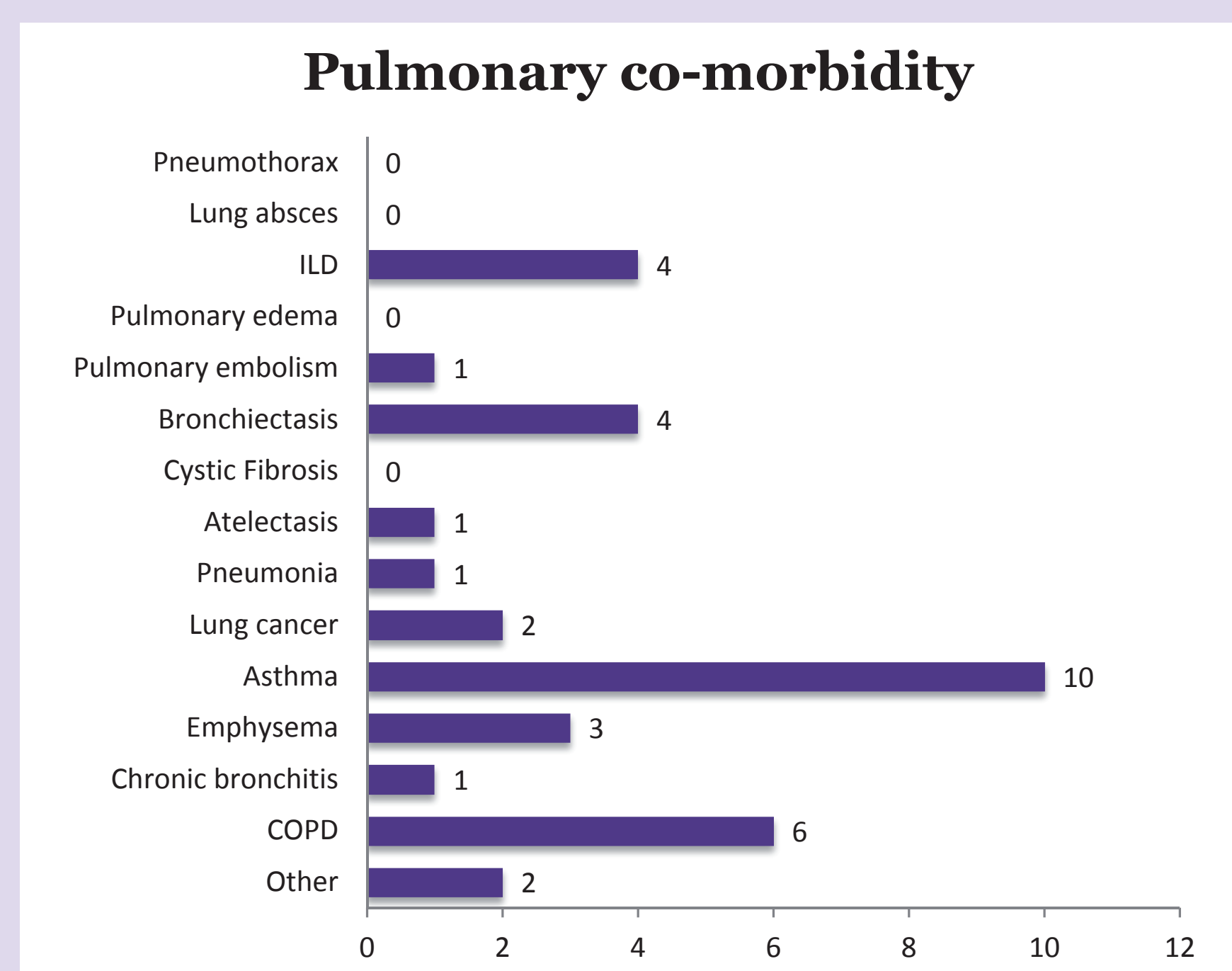


Figure 4: N=11 The responders could select one or more options.

COPD: Chronic Obstructive Lung Disease. ILD: Interstitial Lung Disease. Other: Adipositas, sleep apnoea, anxiety, work-related stress.

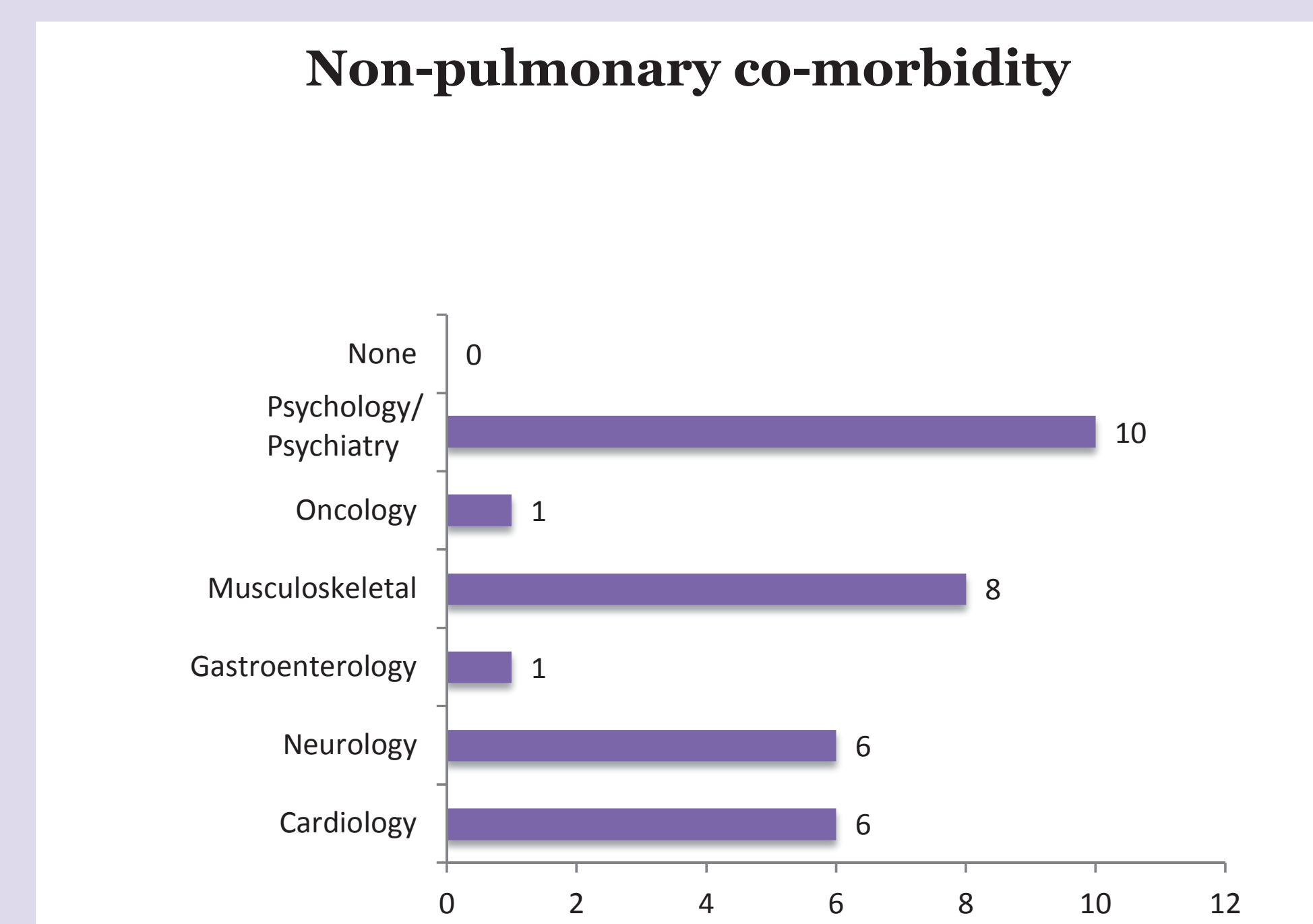


Figure 5: N=11 The responders could select one or more options.

Conclusions

Current Danish screening and treatment for dysfunctional breathing is heterogeneous. Only half of the asthma centres in Denmark treat dysfunctional breathing.

Both pulmonary and non-pulmonary co-morbidities are typical.

Perspectives

Evidence on the effects from a standardised physiotherapy, including respiration modification and exercises, is needed before implementation.

A large multicentre trial will take place in 2017-18 in Denmark.

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