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The Impact of Severe Asthma on the Quality of Life: A Systematc Review

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INTRODUCTION

- Asthma is one of the most common long term medical condition, with around 300 million people affected world wide[1]
- Asthma is an important contributor to the burden of illness and people with asthma experience poor life satisfaction and require a range of health services to manage their condition[2]
- Dependence on medication, regular hospital visit, and inability to fully integrate with peers are aspects that could negatively influence the quality of life (QoL)[3]
- Health-related quality of life (HRQoL) instruments used in clinical trials and longitudinal studies to measure the impact of asthma on QoL fall under two categories: disease-specific and generic[4]
- Disease-specific HRQoL instruments measure the specific impacts of the target disease [e.g. Asthma Quality of Life Questionnaire (AQLQ)] while, generic questionnaires aim to assess the impact of any and all adverse health states on HRQoL, without reference to the impacts of any specific disease [e.g. Short Form Health Survey – 36 (SF-36)]

OBJECTIVES

What is the impact of severe asthma in symptoms and well-being of adults and children?

- What is the overall impact in HRQoL?
- How is this impact distributed by the different dimensions of HRQoL: Physical Symptoms - coughing, wheezing, shortness of breath; Physical functioning - e.g. walking upstairs, exercise, sleep disruption; Disability - e.g. restriction in ability to perform normal activities, limited ability for activities of daily living; Psychological – mental and emotional health, behavior; Social - daily role, work, personal relationships

METHODOLOGY

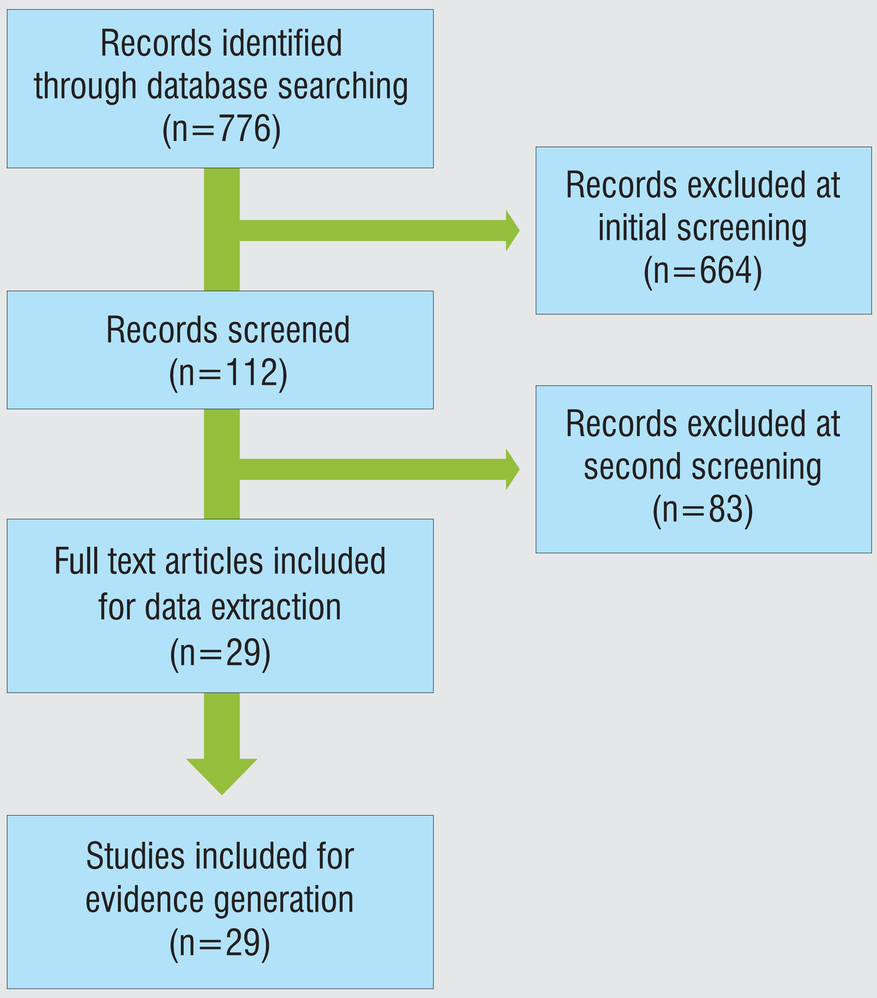
A targeted literature search was conducted of the relevant published evidence from the following databases:

- Embase
- MEDLINE

Retrieved citations and full texts were screened according to the following inclusion criteria:

- Disease: Severe asthma (both allergic and non-allergic asthma)
- Patient population: Both adults (≥18 years) and children (6-17 years)
- Study designs: Both randomized controlled trials (RCTs) and observational studies
- Outcomes: Baseline QoL data either measured on generic scale or disease-specific scale

RESULTS



- AQLQ was the most frequently used scale among the included studies, assessed in 13 studies followed by St George's Respiratory Questionnaire (SGRQ) in six studies
- Higher proportion of adult patients were receiving inhaled corticosteroids (ICS) + Long-acting beta-agonists (LABA) (35.4% - 100.0%) followed by ICS (74.4% - 84.0%), anti-leukotrienes (4.6% - 86.3%), Rapid-acting beta agonists (RABA) (42.4% - 77.0%), and Short-acting beta-agonists (SABA) (24.1% - 45.1%)
- Most common pharmacological treatments prescribed in children were ICS (100%) followed by LABA (87.0% - 96.0%) and anti-leukotrienes (71.0% - 100.0%)

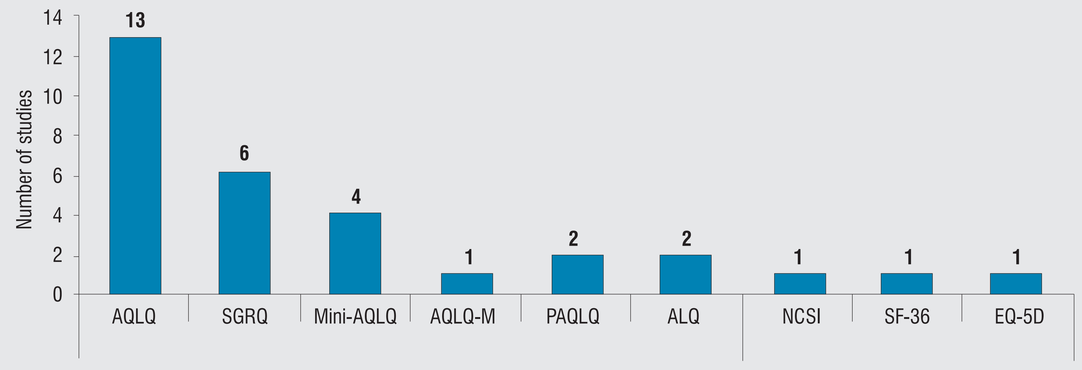


Figure 2: Types of disease-specific and generic scales assessed in the included studies

- Four studies compared AQLQ scores based on different severities of asthma[6,7,10,12]. Of these, three studies were conducted in adults while one study assessed children
- Data also suggested that patients with severe asthma have rapid deterioration in overall health status as compared to patients with mild-moderate asthma

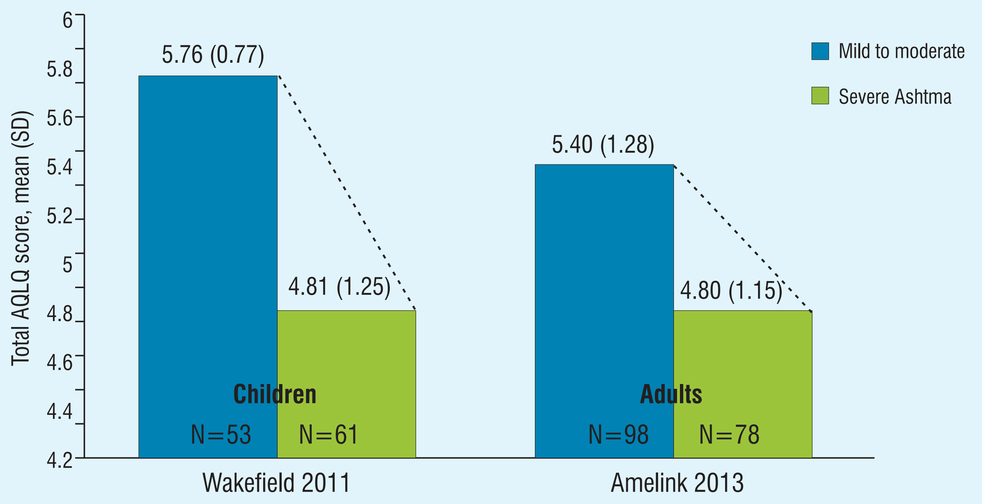


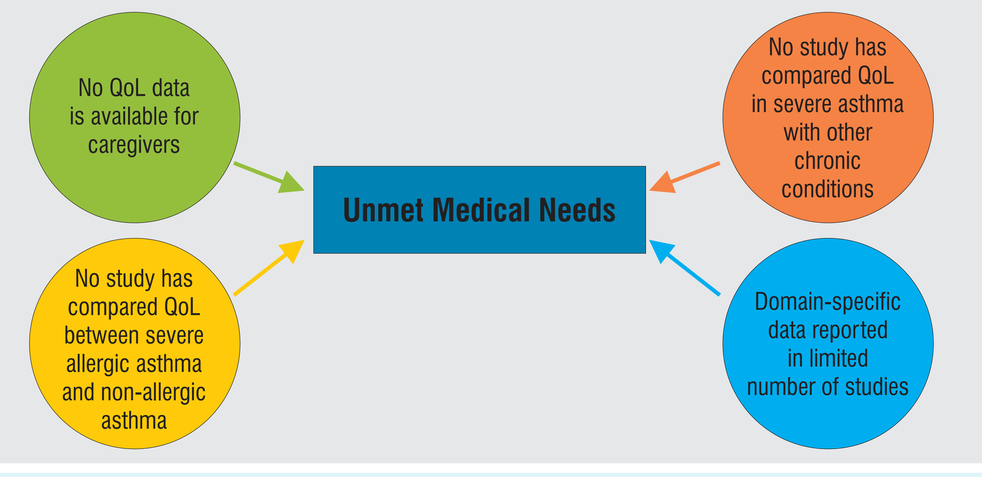
Figure 4: Total AQLQ scores according to different severities of asthma

LIMITATIONS

- Of the included studies, seven studies had low sample size (<50 patients)
- Heterogeneity existed in the included studies with respect to the different point estimates and variance measures employed in these studies for assessing the QoL scores
- Findings may not be generalized due to large variations observed in settings, patient populations and scales assessed

CONCLUSIONS

- Patients with severe asthma had lower total QoL scores as assessed through different scales, indicating worse QoL
- Symptoms and activity limitations are the two main domains that potentially affect the QoL in patients with severe asthma
- Patients with severe allergic asthma have poor QoL as compared to patients with severe non-allergic asthma
- QoL is largely impaired in children with severe asthma than adolescents
- Poor asthma control status has a profound negative impact on the QoL in patients with severe asthma
- Based on severity, patients with severe asthma have rapid deterioration in overall health status as compared to those with mild-moderate asthma



REFERENCES

1 Global Strategy for Asthma Management and Prevention 2012 update. Available at www.ginasthma.org
2 Ampon AD, Williamson M, Correll PK, Marks GB. Thorax 2005;60:735-739
3 Rance KS. J Multidiscip Healthc. 2011;4:299-309
4 Chapman KR. Respiratory Medicine 2005;99:1350-1362
5 Dal-Negro RW, Pradelli L, Tognella S, Micheletto C, Iannazzo S. Eur Ann Allergy Clin Immunol 2011;43: 45-53
6 Rubin AS, Souza-Machado A, Andradre-Limam M, Ferreira F, Honda A, Matozo TM. Journal of Asthma 2012;49:288-293
7 Wakefield S, Whitlock D, Penugonda M, Fitzpatrick AM. Am J Respir Crit Care Med 2011;183:A5467
8 Novelli F, Latorre M, Lenzini G, Seccia V, Bartoli ML, Cianchetti S, Bacci E, Dente FL, Paggiaro P. Allergy 2013;68:538-539. Jones PW1, Quirk FH, Baveystock CM. Respir Med. 1991;85:25-31
9 Jones PW1, Quirk FH, Baveystock CM. Respir Med. 1991;85:25-31
10 Dal-Negro, Tognella S, Pradelli L. Journal of Asthma, 2012;49:843-848
11 Kupczyk M, Brinke A, Sterk PJ, Bel EH, Papi A, Chanez P, at el. Clinical & Experimental Allergy 2014;44:212-221
12 Carvalho-Pinto RM, Cukier A, Angelini L, Antonangelo L, Mauad T, Dolhnikoff M, Rabe KF, Stelmach R. Respiratory Medicine 2012;106:47-56

Poster presented at ISPOR 18th Annual European Congress, 7-11 November, 2015, MiCo-Milano Congressi, Milan, Italy