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Editorial

The Chronic Airways Assessment Test (CAAT™): Evolution From the COPD Assessment Test (CAT™)

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Abbreviations:

CAAT=Chronic Airways Assessement Test; **CAT**=COPD Assessment Test; **COPD**=chronic obstructive pulmonary disease; **GOLD**=Global initiative for chronic Obstructive Lung Disease; **GB**=governance board; **MCID**=minimal clinically important difference; **NOVELTY**=NOVEL Observational Longitudinal Study; **SGRQ**=St George's Respiratory Questionnaire; **SPIROMICS**=Subpoulations and Intermediate Outcome Measures in COPD Study

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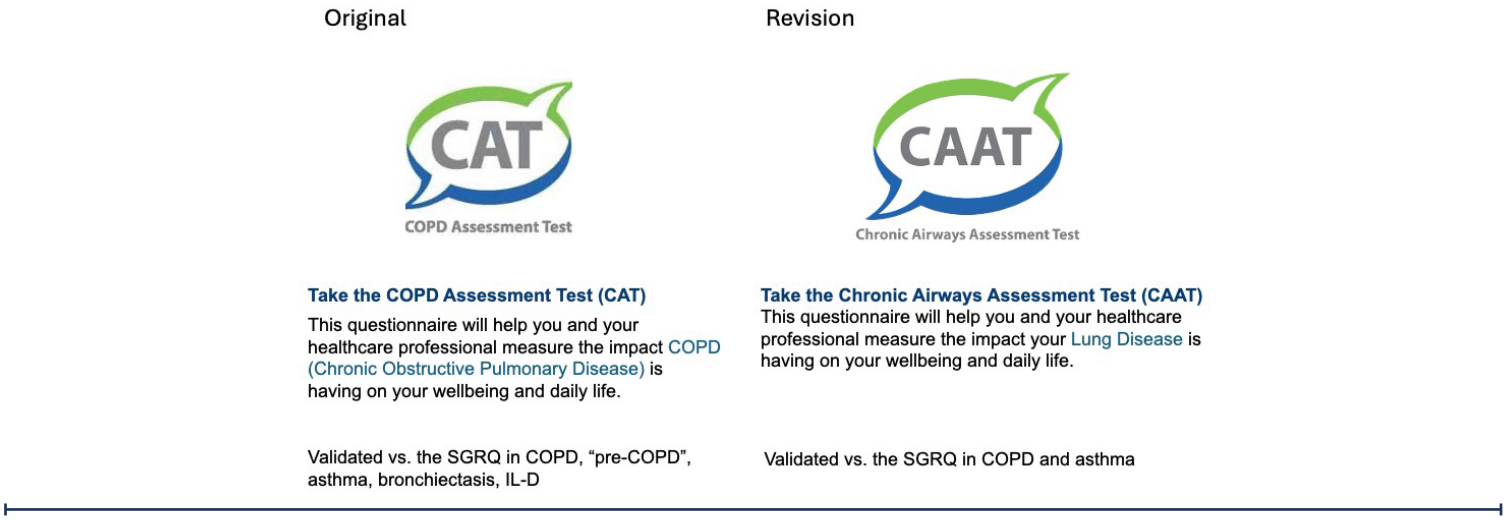
Introduction

The COPD Assessment Test (CAT™) is a validated, short (8-item) patient-completed questionnaire, with good discriminant properties, developed for use in routine clinical practice and research as a simple measure of health status of patients with chronic obstructive pulmonary disease (COPD).[1] Validation studies conducted during its development and in the years since it was launched in 2009 have demonstrated that it has properties very similar to more complex health status questionnaires such as the St George's Respiratory Questionnaire (SGRQ).[1] Despite the relatively small number of component items, it covers a broad range of effects of COPD on patients' health. Studies have shown that it is responsive to a change in a patient's health status and to treatment.[2,3,4] Since 2013, it has been incorporated as the preferred measure of symptomatic impact of COPD into clinical assessment schemes such as that suggested by the Global initiative for chronic Obstructive Lung Disease (GOLD)[5] and is included in the COPD Foundation Pocket Consultant Guide.[6] While initially developed and validated in COPD, several studies have demonstrated its potential role in diseases other than COPD, including "pre-COPD" (Subpopulations and Intermediate Outcome Measures in COPD study [SPIROMICS] I and SPIROMICS II),[7,8] bronchiectasis,[9,10,11] and interstitial lung disease.[12,13] However, the introductory sentence, which asked about the effect of COPD, was inappropriate for patients with other conditions. In 2017, to enable the CAT to be tested in asthma, the term "COPD" in the introductory sentence was changed to "pulmonary disease" (since changed to "lung disease") and the instrument was renamed the Chronic Airways Assessment Test (CAAT) – but still pronounced "cat"(Figure 1).

Figure 1. Comparison of the Original COPD Assessment Test (CAT) and the Chronic Airways Assessment Test (CAAT)



SGRQ=St George's Respiratory Disease; ILD=interstitial lung disease

The Chronic Airways Assessment Test

The purpose of the CAAT™ is the same as the CAT: to measure the impact of a patient's disease on their health status or health-related quality of life. It consists of the same 8 questions as the CAT, the only modification being to change the introductory sentence and title. Scoring is the same as for CAT and will be referred to as the CAAT score. The first data for CAAT were published from the Okinawa COPD Case-Finding Assessment Study in Japan,[14] and the NOVEL Observational Longitudinal Study (NOVELTY) in asthma and/or COPD.[15] A detailed psychometric validation of CAAT using data from the NOVELTY study, which was conducted in 19 countries, showed that it is a valid measure in both asthma and COPD. Importantly, the CAAT and CAT were highly consistent in participants who took both tests and demonstrated strong correlations to the SGRQ.[16] While asthma patients and COPD patients responded slightly differently to some items, the overall CAAT scores in asthma showed that it reflects the impact of the disease on a patient's health status in the same way as in COPD. Further validation published in the *ERJ Open Research* shows that the CAAT demonstrated consistent cross-sectional validity across asthma and/or COPD, and demonstrated its applicability to assess health status in these conditions for both clinical practice and research purposes.[17] The equivalence of CAT and CAAT in COPD supports continued use of a 2-unit minimal clinically important difference (MCID) in COPD. The MCID for CAAT is yet to be officially established, however, this will be able to be obtained from ongoing pharmacologic and pulmonary rehabilitation studies that are using the CAAT as an outcome measure. An international validation study in bronchiectasis was initiated in 2025. Additionally, multiple, ongoing, or recently completed interventional and observational clinical studies are including the CAAT as an endpoint (Table 1).

The Chronic Airways Assessment Test Governance Board

The use and further development of both the CAT and CAAT is overseen by a governance board (GB) accountable for: (1) maximizing the value of the CAAT and CAT by promoting uptake and usage for clinical practice and research; (2) maintaining the integrity of CAAT and CAT by developing and approving translations; (3) oversight of both the CAAT and CAT in terms of materials, platforms, and additional development; and (4) updating the CAAT User Guide and Implementation Guide for health care professionals on how to use and interpret CAT and CAAT scores in the form of a user manual available through the GAAPP website (https://gaapp.org/caat-cat/) that also includes multiple translations of the CAAT and educational content for patients and providers. Multiple translations of the new online CAAT calculator are now available at https://caat.gaapp.org/.

The CAAT GB is hosted by the Global Allergy and Airways Patient Platform, a not-for-profit patient organization that is based in Vienna, Austria, and represents over 175 global patient advocacy groups. Members include chairs of the science committees of GOLD and the Global Initiative for Asthma, global clinical users (physicians and allied health professionals), and researchers from academia, patient advocacy groups, and industry. A broad clinical and scientific advisory panel listed on the CAAT website includes global academic experts and industry users who participate in ad hoc discussions and who contribute to GB research and education projects. The CAT, CAAT, and their logos remain trademarked by the GSK group of companies.

Table 1. Clinical Trials Including the Chronic Airways Assessment Test

Name	Disease	Intervention	ClinicalTrials.gov ID
Phase 2a, 28-day Investigational Use Study of ARINA-1 in Non-Cystic Fibrosis Bronchiectasis (NCFBE) With Excess Mucus and Cough	NCFB	ARINA-1	NCT05495243 (completed)
TAKINGCARE - TAcKIING the Needs of Carers of People With Chronic respirAtoRy disEases	CRD	NA	NCT06459011
Chronic COUGH Management in Interstitial Lung DisEase (COUGH-LESS)	ILD	Cough control measures	NCT06782893
Expand Pulmonary Rehabilitation to Other Chronic Respiratory Diseases Than COPD (ExPuRe)	CRD	Pulmonary rehabilitation	NCT06636487
Phase 2a Study to Assess the Efficacy and Safety of AZD4604 in Adult Patients With Moderate-to-Severe Asthma Uncontrolled on Medium-High Dose ICS-LABA (AJAX)	Asthma	AZD4604	NCT06020014
A Phase II Study of Ensifentrine in Non-Cystic Fibrosis Bronchiectasis	NCFB	Ensifentrin	NCT06559150
Simeox Therapy At Home Versus Standard of Care in NCFB Patients with CMH	NCFB	Simeox®	NCT06237348 (completed)
Long-term Evaluation of the SIMEOX Device at Home in Non-cystic Fibrosis Bronchiectasis (Home-BRAC)	NCFB	Simeox®	NCT06487273
Observational Study of Obstructive Lung Disease (NOVELTY)	COPD, asthma	NA	NCT02760329 (completed)
Home Airway Clearance in Patients With Bronchiectasis (Home-Care Bronchiectasis)	Bronchiectasis	Airway clearance	NCT04742270 (completed)

NCFB=noncystic fibrosis bronchiectasis;CRD=chronic respiratory diseases; ILD= interstitial lung disease; COPD=chronic obstructive pulmonary disease

Use and Implementation of the Chronic Airways Assessment Test

Clinical and academic users can use the CAAT for patient care as a tool for the review of health status without prior permission from the CAAT GB. Authors of published papers may wish to notify the GB of the paper, which could form a useful resource for others. Studies sponsored by for-profit industry research users are required to complete a request for use with the Mapi Research Trust eProvide platform and pay an appropriate licensing fee.[18] Publications should include the following statement: "The COPD Assessment Test (CAT) and the Chronic Airways Assessment Test (CAAT) and the CAT logos are trademarks of the GSK group of companies. ©2009-2024 GSK 'Group of Companies' or its licensor. All rights reserved."

Conclusions

Members of the CAAT GB (and its predecessors on the CAT GB[19]) initiated the evolution of the CAT to the CAAT. Based on recent evidence, the CAAT GB now recommends that clinicians transition to using the CAAT for all COPD patients and consider adopting it for asthma patients of all levels of severity. It should be noted that CAAT is used to complement but not replace measures of asthma symptom control, such as the Asthma Control Questionnaire[20] or Asthma Control Test.[21] Although health status is widely assessed in COPD clinical practice, this is not the case for asthma, so the use of the CAAT will fill this gap in asthma. In addition, the CAAT includes clinical features such as mucus production and lack of energy that are not routinely recorded in asthma studies.

It is recommended that a patient is asked to complete the CAAT when they are diagnosed and at appropriate points, as indicated by a change in the patient's condition (for example, an exacerbation or hospitalization) or a change in treatment (e.g., before and after pulmonary rehabilitation, or stepping up respiratory medication). Patients can download the CAAT or use a printed form and complete it while waiting in the clinic or at home prior to consultation.

For clinical trials and research users, transitioning to using the CAAT is also recommended. For new observational, epidemiological, and/or cohort studies in asthma and/or COPD, it is recommended that the CAAT be used. For existing COPD observational and research studies that are using the CAT, this should be continued until the end of the study. However, for pharmaceutical and medical device users who are conducting COPD studies for regulatory submissions, it is recommended to continue the use of the CAT until there is a clear indication from regulatory authorities about the CAAT. For trials submitted to the U.S. Food and Drug Administration, refer to Type 5 Drug Master File 32316 submitted in 2018 by the CAT Governance Board and the COPD Foundation.[19]

For inquiries on the CAT and CAAT, the CAAT Governance Board may be contacted at CAAT@GAAPP.org.

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