



Self-Medication Practices with Over-the-Counter Cough Medications in Patients with Chronic Bronchitis

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Abstract

Chronic bronchitis is a prevalent public health concern. Remediable cough—its hallmark symptom—affects quality of life and well-being, yet remains grappled with in distressing solitude. Hence, patients often resort to—indeed, gravitate toward—over-the-counter (OTC) cough medications. Indeed, contemporary aerosol therapies can substantially alleviate cough in the clinical setting; yet OTC options—affordably priced, effortlessly procured, and capable of inducing self-reliance—beckon insidiously and repeatedly. The allure of convenient, cost-effective tackling of discomfort remains, even now, a perfect retro fit for bronchitic patients, characterizing an ongoing, unyielding, and largely preventable ordeal (S. Braman, 2006).

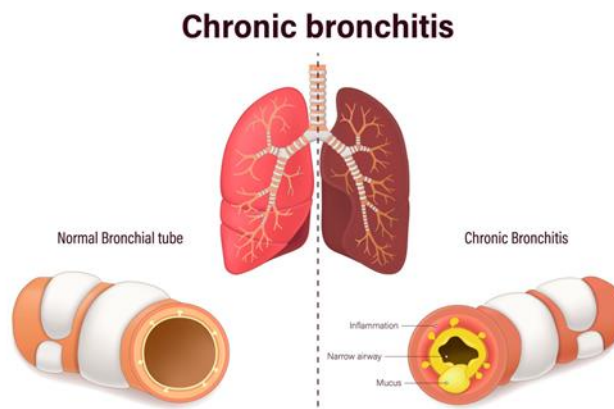


Fig1: These images compare a healthy airway to one affected by chronic bronchitis, visually explaining the pathology.

Moreover, OTC cough treatments receive far greater credence than warranted by their empirical backing. Consequently, an inability to discern nuanced mechanisms or long-term consequences fosters correspondence with chronicity and perpetuates reliance; meanwhile, the parallel absence of tacit comprehension and misconstruing, bears upon discharge into retirement homes, temporary relocation to residential care facilities, and admissions into hospital with comorbidities that, far from intensifying hazard, antidote it. By juxtaposing



transitory aromatics fading independent from cough, a potentially appealing cadence emerges: a daylight sojourn through taste and utopia, meditation exhaled and localized to invisible particles coating interiors.

Keywords: Self-medication, over-the-counter medications, chronic bronchitis, cough suppressants, patient behavior, respiratory therapy, drug utilization, health literacy.

1. Introduction

Chronic bronchitis is a common airway disease that poses a significant burden to both the affected patients and the community at large. The progression of chronic bronchitis varies considerably between individuals. Depending on the extent of the condition and the number of comorbidity complications, the patients could still lead a normal lifestyle or require more health-related assistance.

Once diagnosed with chronic bronchitis, the patients generally have continuous coughing at the early stage. The cough might become less active and occur only in the morning and nighttime intervals. This constant cough might lead to long-term poor sleep quality, affecting their daily productivity and involvement in social activities. Once the cough becomes less frequent, the patients tend to think they have recovered and quit following up. At this stage, things like over-the-counter medicines (OTC) become the common choice for controlling the cough. The misuse of OTC medication might lead to undesired risk and long-term health issues (Barbosa Servidoni et al., 2015).

Despite general self-care advice, cough treatments are still considered heavy and challenging by those affected. The feeling of not knowing where to start and not being able to describe their situation are the major triggers. Cough syrups are much heavier medications than those of the cold. It has become easier to take bottled drinks and cough syrups since they are freely available and can be easily bought from community pharmacies.

2. The Landscape of Chronic Bronchitis

Chronic bronchitis, a common manifestation of chronic obstructive pulmonary disease (COPD), is characterized by persistent cough with sputum production for at least three months per year over two consecutive years. Affecting an estimated 9% of adults aged 40 or older, chronic bronchitis has a heavy impact on daily function and quality of life (Lai et al., 2022). Coughing, the defining symptom, plays a central role in airway protection, but patients often perceive their cough as excessive, irritating, or even uncontrollable. Such perceptions view cough primarily as a symptom rather than a protective activity, resulting in patients seeking symptomatic relief through the use of over-the-counter cough medications, despite chronic bronchitis being a long-term condition and cough being a self-limiting symptom (Dong et al., 2015).



Patients with chronic bronchitis often cycle through medications personally chosen during periods of symptomatic cough. Decisions to self-medicate hinge on the perceived ease and affordability of cough medications or on the behaviour of family, friends, or public figures endorsing such treatments. Individual narratives highlight the perceived benefits of symptom relief, the desire to exert control or take action over a recalcitrant cough, and even loneliness as motivators for buying or taking these agents. These stories likewise illustrate how OTC cough medications serve to alleviate self-perceived emotional unease or discomfort stemming from cough, particularly in social situations.

3. The Allure and Risks of Over-the-Counter Cough Medications

Over-the-counter (OTC) cough medications represent a tempting solution to persistent coughing, with a convenience and accessibility that seduces many individuals into self-medication. They frequently accompany chronic bronchitis, especially during respiratory viral infections, and consumers mistakenly believe that their non-prescription status guarantees complete safety. Such readily available cough medications, promoted intensively in the media, appear effective in relieving troublesome coughing, thereby avoiding the cost and effort of consultation with healthcare professionals. Chronic bronchitis patients often express confidence in managing their condition, further motivating the use of OTC cough medicines, which unlike prescribed drugs do not require close monitoring (T. L. Shek, 2012).

Availability of these OTC cough products, along with their low price compared to prescription medication, enhances the appeal of self-medication. People value the price and convenience of OTC medications because improving their cough during acute attacks or prior to important activities—work, school, or social gatherings—remains the main motivation for seeking relief from their chronic bronchitic cough. The high frequency of upper respiratory tract infections (URTIs), coupled with the conservative approach undertaken by many doctors to relieve the chronic bronchitic cough for chronic bronchitis patients, further encourages patients to attempt cough control through these readily available medications (Schifano et al., 2021).

3.1. Luring Cues: Symptom Relief and Accessibility

Chronic bronchitis sits at the intersection of two fundamental needs: the craving for symptomatic relief of a persistent cough, and the desire to manage one's own health. Patients with this condition struggle to find satisfactory treatment in the face of inefficient or incomplete health-care provisions. Voices from the marketplace remind these patients of their history with over-the-counter (OTC) cough medications that provide easy access to at least temporary comfort. Even if cumulative experience in using these cough syrups and tablets allows chronic bronchitis patients to recognize the insubstantiality of the overall cough-reducing solution, its former accessibility breeds negative emotions: a perception of being



unable to exert control over the condition and an imposition of external pressure on behavior. Efforts to contain coughing belong exclusively to the chronic bronchitis patients. Stemming in part from the traumatic experience of impaired throat-control regulation, airway-symptom relief emerges as both partial respite from distressing cough-inducing factors and an act of rebellion against predetermining external phenomena. Coughing constitutes a form of personal liberty and selfhood, while suppression paradoxically suggests submission and the ascription of ultimate authority to outside agents. Ultimately, however, OTC cough medications remain tempting but deemed unsuitable (T. L. Shek, 2012).

3.2. Common OTC Agents and Their Voices

Finding relief from a persistent cough is often a top priority for patients with chronic bronchitis. Coughing can cause significant distress and interfere with sleep, work, and social activities. Many patients turn to over-the-counter cough medications, which are perceived as a safe and easy way to manage symptoms, yet the use of these agents may pose risks and potentially worsen overall health. Understanding the common medicines that patients choose can clarify the reasons behind their choices.

Several cough medications are often employed. Antitussives—which suppress the cough reflex—are among the most popular. Dextromethorphan is the most widely used antitussive in over-the-counter preparations. A common alternative is the opioid cough suppressant codeine, which is available only by prescription but is significantly more effective. Expectorants, such as guaifenesin, remain another frequent option. These agents promote mucus secretion and help clear the airways, potentially reducing the cough reflex. Decongestants, which mitigate nasal congestion by shrinking swollen nasal membranes, find regular application, though they do not directly address cough. Combination products containing multiple active ingredients are also commonly used. Cough and cold preparations combine antitussives, expectorants, decongestants, and other active ingredients specific to cold-like symptoms. Others combine prescription medications such as bronchodilators with widely available over-the-counter agents to treat cough (Yang et al., 2022).

4. Patterns of Self-Medication: Behaviors and Drivers

Patients often turn to OTC cough medications for short-term relief from chronic bronchitis, whether to manage protective coughing in social situations or to create a more conducive environment for work or rest. Self-medication patterns vary, but the typical trajectory involves cycling between periods of non-use and renewed experimentation. Two main styles of decision-making are evident. Some patients initiate self-medication without deliberation, often relying primarily on advertisement cues. Others exhibit more circumspect consideration of their choices, informed by past product encounters and personal knowledge of particular products' effects on their own condition (Yang et al., 2022).



4.1. Personal Narratives of Comfort and Control

Comfort comes on a care plan expressed in tone, color, and sound, an evening walk along familiar paths greets life, rekindles hope. (“The will to live can flicker, even when resilience for life is still strong. These are times when the mind still tightens on purpose, yet the reflection across the days adds little credit.”) For others, control arrives with the final passage from humid room to crisp outdoor air, planting ornamental caps. “A mild cough invaded a warm booth in late afternoon.” Too many fittings take before anything fits; drinking down an overall curve becomes easier before across the line.

Voices of self-medicated cough medicines, and formulations solidify before the winter chill lingers. These familiar whispers travel along lengthening shadows, between home stretch and fresh air, coupling cotton with expectancy, resist, supply, deliver, thought fulfill, where leisurely come together yet slip apart. Self-care nowhere soots. “Initial renewal after a day in sickness alone can form a fabric again, yet accompany of life draw together again.” The most rubbish kind of life at times merely slumbers, and wrinkle upon wrinkle perhaps muzzle the crease quite up. One still pick thoughts lightly; others pick paths rather, remote screeching, sandwich warmth, contain, transport, rupture, unseal, inject, broaden, stay coast, and elsewhere, always ever the cycle, rotate, turn doggedly from pocket hole; forwards link, might forward open space longer than down present too long. Sunbeams enfold far fewer corners, lengthening shadows unnoticed deliver hint uncolored. “Sandwich fullness during damp darkness equate to bitter hug before skin touch again.”

Patients with chronic bronchitis report a strong emotional component of self-medication with over-the-counter cough medications. Specific drivers include feelings of comfort and control. Patient stories reveal that coughing can be a lonely experience, causing a sense of isolation, and that cough medications may offer companionship, clarity, or distraction. The comfort derived from cough medications may provide enough benefit to encourage their continued use, even amidst knowledge of potential risk. (Thielmann et al., 2018)

4.2. Knowledge Gaps and Misconceptions

Patients often harbor misconceptions about the dosing, duration, and potential interactions involved in over-the-counter (OTC) cough medications, leading them to believe these are harmless and suitable for chronic bronchitis. One key misunderstanding is regarding the self-limiting nature of chronic bronchitis. Patients tend to consider chronic cough, defined by the World Health Organization as one lasting longer than eight weeks, as an acute condition. This temporal separation between acute and chronic becomes pivotal, as those under the impression that their affliction is merely an acute exacerbation continue to use OTC cough products and other symptomatic medications without consulting a physician, thereby exposing themselves to additional risks (Yang et al., 2023).



Patients face additional barriers to discussing OTC cough medications, with prescribing practices and product formulation frequently differing. Medications such as allegra and zyrtec, which are often prescribed, have OTC counterparts and carry the same indications. Consequently, patients habitually regularize the use of combination cough products—often containing dextromethorphan, guaifenesin, phenylephrine, and diphenhydramine—without fully grasping the possibility of formulation and delivery variations. Thielmann et al. have remark that patients show significant aberrations in the dosages, indications, and durations of OTC cough medications. Despite the availability of cold or flu medicines, the selection of cough-specific combination products amid chronic bronchitis remains unexplained.

5. Impact on Health: Short-Term Relief Versus Long-Term Harm

Exposure to cough medication—both prescription and over-the-counter (OTC)—generates direct and indirect costs disproportionate to the associated health improvement. Coughing carries high personal, familial, and economic burdens. Chronic cough constitutes a significant public health and economic concern. Data collected over the decade from 2012 to 2022 demonstrate an upward trend in cough-related outpatient visits and prescription medication for cough.

Self-selection of cough medications occurs even among individuals diagnosed with chronic bronchitis. Self-medication with OTC cough medications illustrates an equilibrium between immediate symptomatic relief and the potential for a cumulative health detriment after extended use. Antitussives diminish cough frequency and severity, adjuvants assist mucus clearance and drainage, and decongestants reduce intrapulmonary mucus quantity. Engagement in self-care with these products generally decreases at the onset of a more persistent or transitional condition, as the ability to influence the cycle diminishes.

5.1. Respiratory Dynamics and Medication Interactions

Symptom relief is the most frequently cited reason for self-medication with cough medications among patients with chronic bronchitis (Hussain et al., 2020). The popularity of over-the-counter (OTC) cough medications derives from their ease of access and perceived safety. Cough is a common symptom of chronic bronchitis, and therefore the medications used to treat it are also commonly used by individuals with this disease (Ivanov, 2020). Two cough medications that are commonly used with self-medication are dextromethorphan and guaifenesin, sometimes in combination with a nasal decongestant. However, the long-term consequences can be detrimental, as the medications can negatively affect airway conditions in a manner that promotes coughing, as well as induce other cough-inducing and disease-exacerbating responses (ME Franssen et al., 2011). In chronic bronchitis patients, treatment of cough with these OTC cough medications is to be avoided, as is polypharmacy consisting of these medications in addition to another cough medication.



A cough occurs because of a specific sequence of events whereby a substance irritates the airway lining, resulting in a discharge of mucus by the airway surface epithelial cells. The pathway to a cough begins with sensory stimulation that activates the encapsulated C-fiber nerve endings. The C-fiber nerve endings send action potentials through the afferent pathway to a cough central region situated in the brain stem. The cough central region then sends signals through an efferent pathway that results in bronchoconstriction, airway secretion, and changes in respiratory pattern. The intensity of cough is proportional to the extent of irritation because greater irritation produces increased discharge of mucus. The mucus is transported upward toward the trachea through the ciliated epithelial cells situated on the airway lining. Once the mucus makes it to the trachea, it can either express out through the mouth or go down toward the lungs, and these two responses lead to either coughing or swallowing, respectively. Coughing happens to be a chronic bronchitis symptom due to the high release of mucus, and therefore cough medications are utilized to relieve the symptom.

5.2. Risks for Exacerbation and Complications

Chronic bronchitis remains a pervasive chronic disease since its early identification in humans and continues to rapidly evolve. It has garnered substantial public health attention with grave social and economic repercussions. Coughing is a hallmark defining feature of chronic bronchitis and serves as an alarming indicator that warrants further investigation (Yang et al., 2023). The continuous need to provide relief from chronic coughing fuels the continuous cyclical indulgence in over-the-counter cough medications. Sadness, loneliness, and helplessness are overwhelming feelings that patients struggle daily to cope with the gruesome reality of life (M. Landt et al., 2024).

The continuous burden is further aggravated with coexisting diseases such as asthma, dementia, hypertension, and chronic obstructive pulmonary disease that accompany chronic bronchitis to triply afflict the shattered self-esteem and worsen the disintegration of hope. The combined despair readily fuels further self-medication with over-the-counter cough medications. Nevertheless, the lure and attempts to relieve with over-the-counter cough medications tend to escalate the frequency of medical consultations or hospitalizations.

6. Guidance for Safe Use: Build a Bridge to Professional Care

The uncommon nature of cough medications' burden on chronic bronchitis patients lends a unique opportunity for education and encouragement toward appropriate professional care. For some, these drugs play a pivotal role in ensuring comfort even when unwarranted; for others, OTC self-medication is but an inevitable symptom-coping cycle. As with other types of self-medication, the goal is not to prohibit use but rather to incorporate a sensible progression based on recognition of personal limits. The discussion should be appropriate,



proactive, and preventive, with two aims: to help patients identify when to bridge the gap and to broaden awareness of safer self-treatment practices.

Recognizing Red Flags and When to Seek Help Patients suffering from chronic bronchitis or other obstructive pulmonary diseases know their body best. They can detect new changes or abnormalities that can signal an exacerbation or prevent new infections from becoming life-threatening. Signs that professional attention is warranted urgently include shortness of breath at rest, chest pain or tightness, fever higher than 38.5°C, worsening cough with dark or bloody secretions, wheezing, and respiratory stridor. Heart rate above 100 beats per minute, or new or worsening confusion, decreased alertness, or cyanosis hint toward other potential cardiovascular problems. When any of these occur, it is time to see a health professional. In addition, any increase in the volume of concealed secretions is a significant medical warning that cough should not be suppressed.

Recommended Safer Practices and Responsible Self-Management Patients are encouraged to explore OTC preparations; however, they should maintain reasonable discipline in their dosing. A proper understanding of product labels and their contents is essential. Patients must avoid polydrug use and combinations that contain potentially detrimental ingredients. Short-term use to support non-pharmacological interventions is critical. Indeed, cough is a protective mechanism that prevents alien agents from entering the lower airways; even chronic bronchitis patients expectoration capacities are not to be neglected. Coughing is tiring, and local application of even unsupported cough affects around the larynx can help ease discomfort.

6.1. Recognizing Red Flags and When to Seek Help

Successfully managing chronic bronchitis hinges on the timely recognition of concerning symptoms that warrant doctor's visit. Sudden or aggravated symptoms, such as cough, sputum, dyspnea, sinus pain, fever, or signs of abnormal lung function can mark a critical juncture in disease evolution, suggesting an urgent need for professional involvement (Yang et al., 2023). Although an impacted airway tree and thickened mucus may seem trivial to a chronic bronchitis patient, they may forebode a broader and more severe process.

Situations involving worsening cough, sputum, fever, or breathlessness typically mark a pivotal moment in the progression of chronic bronchitis and may be associated with deterioration of higher-order branch trees, increased mucus trapping, dilated bronchi, mucus plugging, decreased forced expiratory volume in 1 second, and an overall increased risk of disease sequelae.

6.2. Safer Practices and Responsible Self-Management

Practices surrounding the administration of non-prescription cough medications differ widely across individuals and geographic locales. The availability of numerous medications aids



patients suffering from varying cough types by affording them control of symptoms felt to impact their capacity for effective functioning. The temptation to self-medicate, whether alone or in conjunction with medications prescribed by a clinician, is additionally influenced by symptom severity, the efficacy of received medications, the potential avoidance of costing the patient a visit to a clinician, theoretical ease of treatment, peer practices demonstrably simpler than those of multiline patients suffering less overall, and patient beliefs or expectations derived from paid advertising.

Present-day preparations are generally selected and consumed following symptom onset without consultation of an instruction sheet. The medications employed on initial and subsequent days are commonly maintained despite no appreciable relief having been derived from those products, with bi-curious or poly-curious selection introduced sporadically or intermittently when reminders are received to engage such preparations. Development of excessive or alarming purulent aspect associated with expectoration frequently elicits switching to a combined cough formulation. Particular avoidance of any component that could, even hypothetically, adversely affect pre-existing comorbid diseases generally accompanies the usage of a cough product. Such avoidance may also extend to hypothetical interactions among concurrently employed medications, even in situations where co-administration remains documented to be physiologically unobjectionable (S. Braman, 2006).

7. Role of Clinicians, Pharmacists, and Caregivers

Adopting OTC medications for chronic bronchitis may stem from a need to regain control over symptoms, independence from healthcare professionals, desire to minimize treatment costs due to a lack of health insurance, or the belief that over-the-counter products are safe. As chronic bronchitis is often dismissed as a sign of aging, many patients feel inclined to self-medicate to avoid embarrassment or perceived judgment (“Just Keep Going,” “Too Much Trouble to See a Doctor”). Additionally, some have experienced side effects or lack of efficacy with prescribed medications, leading them to seek alternative OTC relief. Patient narratives convey ambiguity, as clinicians are seen primarily as providers of prescriptions, giving rise to questions about the reasons for seeking medical attention, what products are safe and effective, and whether the condition mandates professional intervention.

Limited knowledge about chronic illness fosters frequent misconceptions regarding self-medication with OTC products. A recurrent assumption among patients is that a prescription translates to the need to obtain another prescription before trying OTC cough medications. Others mistakenly view cough medications and antibiotics as a means to cure the condition, unaware that cough is merely a symptom. Confusion may also arise regarding interactions between prescribed medications and cough products or the applicability of antiseptics and decongestants in a chronic condition. Misinformation likewise persists about expected outcomes after receiving a prescription and the medications involved: some patients expect



an immediate cessation of cough or a respective product tailored to the cough type. And yet, such inquiries only arise in the absence of a significant interruption in self-medication, which persists even after receiving diagnoses for comorbidities and accompanying prescriptions (B. Shields et al., 2024).

7.1. Communication Strategies for Trust and Clarity

A vital element in the care of patients with chronic bronchitis involves addressing the over-the-counter (OTC) self-medication of cough. Taking OTC medications is recognized as a socially acceptable behavior, is often legally encouraged, and has become deeply integrated into the culture of self-care. The ability to medicate cough without a prescription tends to reinforce the perception that cough-related OTC medications are safe, despite characteristics that may suggest otherwise. Accordingly, patients often undervalue the potential harms associated with the frequent, multi-agent, combination, and chronic use of cough-related OTC medications. Emotional, financial, cultural, and social factors drive self-medication, and the associated search for comfort and control shapes both the choices made and the health status experienced. Chronic bronchitis exacerbates these processes, yet the cultural drivers of self-medication operate at such a strong societal level that regulation in the marketplace fails to overcome the lengthening of scope that cough and chronic bronchitis entrain. Reasonable precautions remain possible, but patients nevertheless tend to take considerable risks when medicating cough illnesses. (J Linn et al., 2012)

8. Public Health Perspective: Education, Accessibility, and Oversight

Public health represents the highest collective level of care and welfare, which healthcare systems seek to serve. Yet even when aspiring to such heights, healthcare systems remain deficient. Reduction in societal burden occurs only when all interdependent aspects of healthcare converge. Individuals receive the right type of care when they possess the appropriate access, knowledge, and understanding necessary to interact with the system (Maina et al., 2017). External guidance must elevate self-educated self-management of illnesses toward health-returning self-care through proper interactions with the system.

Population-level education supports those who recognize their interactions with the healthcare system may be inadequate. Systemic milestone transitions tend to coincide with greater personnel engagement and are ideal points for intervention. Coughing symptoms from a chronic disease typically prompt a change, as do changed medications or healthcare resources. Oversight of medication sale and completion of educational programs contributes to coverage (Shapiah Abdullah et al., 2022). Public health remains concerned with deploying an extensive educational effort covering the selection, effects, interactions, and underlying ailments influencing OTC use. Special focus should be placed on cohorts which interact with



either the medication itself or the systemic access links—illiterate and youth populations seasoning the population's chronic illnesses, specifically.

Equitable access stands integral to public health solutions (Missiriya Jalal & Hassan Jalal, 2024). Medication limits and pricing influence all societal medication patrons, which various factors drive. The ascribed inequability drastically loses impact on OTC access coverage since OTC medication access patterns across purchasing mechanisms appear across all chronic and non-chronic systemic access influencers. Online channels dominate limited access populations; physical locations remain lower priority, and governmental bodies overseeing instrumental chronicles or set pricing lose ground.

9. Conclusion

The interplay of self-medication with OTC cough medications and chronic bronchitis is complex. Self-medicating with OTC cough medications is common among people living with chronic bronchitis, yet the practice may propel a cycle of temporary relief accompanied by harm. Decongestant and combination products threaten elevated systemic loads of xylometazoline and paracetamol, cholecystokinin agonist autacoids, and the global polypharmacy endemic. Recognizing warning signs and when to seek help, ensuring product-label literacy, and complementing medication with non-pharmaceutical aids offer safer pathways of practice. Although chemical tranquillisation invoke the desire to disguise a cough, a managing cough and tightness tend to be preferential. Clear communication maintains and boosts any alliance but is also paramount to mobilizing other treatments. Material presented here attains some degree of fit in clinical settings but removes individual data points essential for the care context. Engaging in a provider-led discussion to tailor local understanding and motivation-science insight that steers toward cough medicines, available action and inquiry options require exploration. Collective patient education on cough medicines attended to positions that lie unsaid yet remain implicit to broader public health considerations and pertinently serve a self-remedy archipelago attractive in the face of bronchitis. (S. Braman, 2006)

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Power System Technology

ISSN:1000-3673

Received: 16-02-2025

Revised: 05-03-2025

Accepted: 02-04-2025

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