

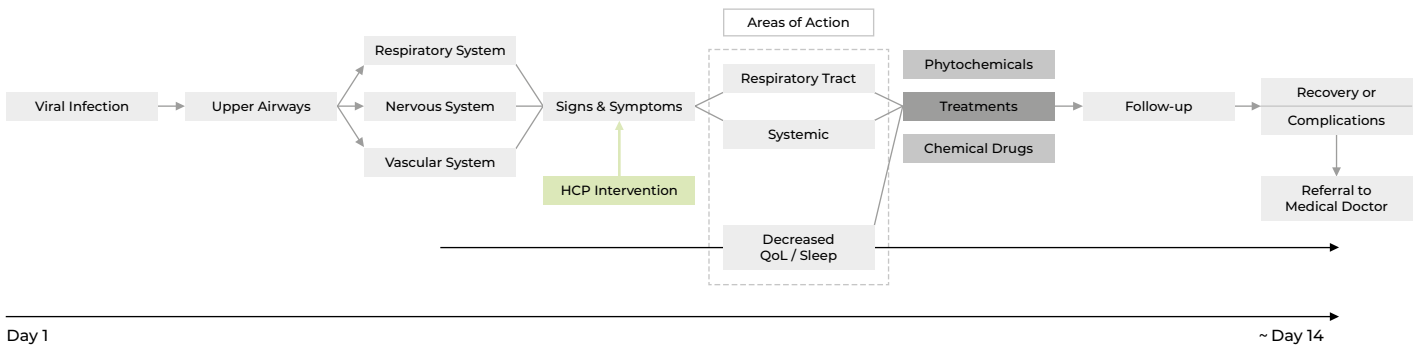
# Mild Upper Respiratory Tract Infections in the Post-COVID Era – Quo Vadis?

## Assembling the evidence: experts' current insights on an ageless illness

### Why care about MURTI?

Mild Upper Respiratory Tract Infection (MURTI) is a term coined to differentiate from the generally used phrase 'common cold'. While most people typically associate the common cold with nasal symptoms, MURTI encompass a broader range of symptoms (see Figure 1). Over 200 viruses are known to cause MURTI, and symptoms can vary depending on the causative virus and the host's response to infection. As respiratory viruses mutate frequently, it is impossible to gain complete immunity.<sup>1,2</sup>

Although usually mild and self-limiting, MURTI are responsible for substantial health-related costs due to absenteeism from work and medical expenses.<sup>3</sup> They are a leading cause of primary care consultations, contributing to the overuse of antibiotics and antimicrobial resistance due to misconceptions about antibiotic effectiveness against viruses.<sup>4</sup> The COVID pandemic has not only increased demand for pharmacist services but also for a more integrated approach to healthcare.<sup>5</sup>



**Figure 1:** MURTI are mainly due to viruses inducing respiratory and systemic signs and symptoms associated with a significantly decreased quality of life (QoL) for several weeks. Healthcare professionals (HCPs) advise on targeted symptomatic treatment of MURTI (courtesy of Prof. Patrick Poucheret and Dr. Guillermo Estrada Riobobos).

### Who should be involved in MURTI management?

Collaboration with other healthcare providers, especially during the pandemic, has expanded the role of pharmacists beyond dispensing medications to more proactive patient management (e.g., remote consultations and home delivery of medications).<sup>6</sup> Patients benefit from a multidisciplinary approach involving various professions and information sources, such as community pharmacists, primary care physicians and specialists (e.g., Ear-Nose-Throat).<sup>4</sup>

*"Patient education is carried out in collaboration with all healthcare professionals, and each one, based on their specialisation, can bring a different perspective to this work. It is therefore important to approach it in a multidisciplinary context."* **Ann Herzeel, MSc**

Community pharmacists offer initial consultations, patient education, preventive care, and orientation. They follow the consultation pathway and gather information using usual questioning techniques (see infobox).

*"Pharmacists are highly accessible healthcare professionals and are often the first point of contact for patients with respiratory symptoms. This accessibility allows them to provide timely advice, reducing the burden on primary care and emergency services."* **Dr. Guillermo Estrada Riobobos**

### What does MURTI management and treatment currently entail?

MURTI management in the post-COVID era requires a multidimensional approach that includes pharmaceutical care, patient education, and the integration of complementary therapies. A holistic approach to MURTI management means caring for the whole person, taking into consideration physical, mental, and social needs (see Figure 2). Pharmacists play a key role in providing accurate information in an understandable manner. It is their responsibility to offer solutions and provide reassurance.

*"Pharmacists are trained in symptom assessment, recommending appropriate over-the-counter treatments, and identifying red flags that indicate more serious conditions requiring referral for medical care."* **Dr. Guillermo Estrada Riobobos**

### Infobox

#### Role of the Community Pharmacist in MURTI Management

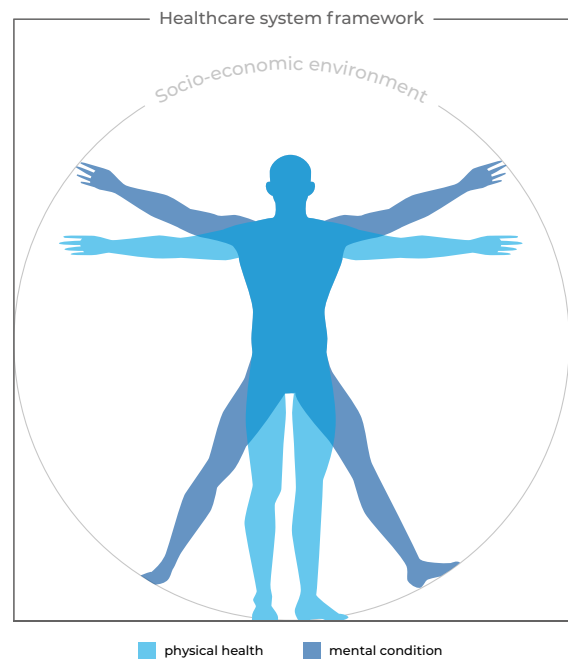
Pharmacists are seen as the first-line consultants for patients with MURTI.<sup>4</sup> The consultation pathway involves using the WWHAM questions to gather key information and applying shared decision-making (SDM) to ensure patient-centred care.

#### WWHAM Questions

- **W**ho is the medication for?
- **W**hat are the symptoms?
- **H**ow long have the symptoms been present?
- **A**ctions taken?
- **M**edication used?

#### Shared Decision-Making (SDM)

- Pharmacists and patients should work together to select the most appropriate treatment option, considering the patient's preferences
- Address patients' concerns with empathy and build a trusting relationship



**Figure 2:** Holistic management of MURTI patients requires addressing all dimensions of health: physical symptoms (light blue), mental well-being (dark blue), and the health-related socio-economic factors (circle), all within the structured framework of healthcare systems and support (box) to ensure comprehensive care (figure inspired by Leonard Da Vinci's drawing "The Vitruvian Man").

## Patient-centric treatment

Patients seek overall well-being rather than isolated symptom relief. Therefore, effective and holistic MURTI management needs to combine pharmacological and non-pharmacological interventions. Prevention techniques, such as hydrotherapy, stress reduction, and proper nutrition, are also crucial. Vaccination against some of the causative viruses are available and should be considered as appropriate. Furthermore, lifestyle factors like sleep, stress management, and immune support play a significant role in both prevention and recovery.<sup>4</sup>

*"For healthcare providers to intervene through a patient-centred holistic approach, the main entry-points are symptoms to generate a positive impact on quality of life and recovery (see Figure 1)."*

**Prof. Patrick Poucheret**

## Pharmacological treatment approach

A treatment plan needs to be relevant to the individual patient and focus on the patient's current needs. Treatment for MURTI targets the various, often overlapping, symptoms. Reduced physical symptoms will also lead to a greater sense of well-being. Chemical or plant-derived drugs can be used according to the patient's preference. Typically used chemical drugs include analgesics, decongestants, anti-inflammatories, antitussives, and antihistamines.<sup>4</sup>

In addition to conventional treatment, many "natural options", including medicinal products and food supplements, are available for the management of MURTI. There is a vast number of different phytochemicals containing plant-based compounds with proven antiviral, antioxidant, and immunomodulatory properties.<sup>7</sup> This makes it hard for both the patient and the pharmacist to navigate and challenges the pharmacist to synchronise patients' preferences with evidence-based treatments.

*"Due to the wide range of causative agents, there is currently no cure for MURTI. Instead, there are a wide range of therapeutic options which target different symptoms. For example, there are pharmacological options to treat sore throat, nasal congestion and cough. Some phytochemicals, such as menthol, have shown the potential to target multiple symptoms."* **Dr. Laura Sadofsky**

Integrative medicine—taking account of the whole person, including all aspects of lifestyle<sup>8</sup>—is increasingly used and popular in the EU. It can include phytotherapy to shorten disease duration and improve respiratory symptoms, sleep and QoL. Phytochemicals play a key role in both prevention and treatment of MURTI. The main advantage of using a phytochemical is its multitarget action and the possibility of combining it with standard therapies. It is, however, essential to consider potential drug interactions, as well as the contraindications and adverse effects of each individual drug (see Figure 3).

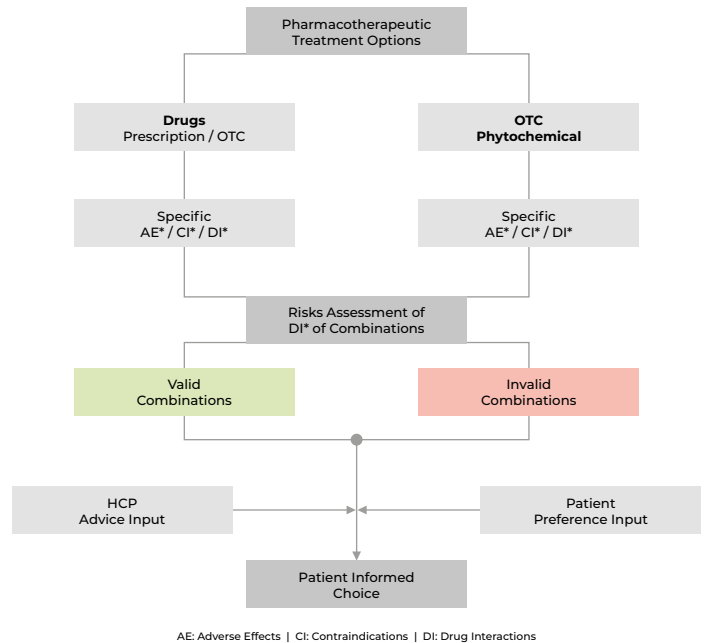
*"Phytotherapy can shorten disease duration and improve respiratory symptoms, sleep and quality of life on a broad population level. Treatment should be initiated early in the disease course."*

**Prof. Andreas Michalsen**

Phytochemicals (for example, eucalyptol, menthol, and thymol) have shown a good safety profile for the nasal mucosa and might be suitable for early treatment of symptoms. They are effective at very low concentrations and can have a broad antimicrobial and antiviral spectrum for topical use.<sup>9,10</sup>

*"Medicinal plants play a key role in MURTI, both as preventive and therapeutic agents. Essential oils, especially those with eucalyptol, have shown efficacy and safety for their broad-spectrum 'anti-pathogenic' activity, as well as for their balsamic and bronchodilator effects. Herbal products like echinacea and propolis can boost the immune system. Propolis has the strongest evidence for treating mild pharyngitis due to its anti-inflammatory, antiviral, and antimicrobial properties. Honey is particularly important for cough relief. Other plants, like liquorice and pelargonium, target the respiratory tract specifically."*

**Dr. Marco Biagi**



**Figure 3:** Choosing the right treatment involves patient's insights and pharmacist's expertise. Patients provide details about their symptoms and might request specific medication. Having ruled out severe conditions, the pharmacist advises the patients on available treatment options, including possible combinations, and considers patients' preferences (courtesy of Prof. Patrick Poucheret).

## Non-pharmacological treatment approach

MURTI management should not just look at symptoms but include mental and emotional well-being. Behavioural malaise, for example, is associated with this illness and causes reduced alertness, impacting patients' mood and safety at work. Adequate sleep and stress management are vital for recovery, as MURTI can impair sleep quality and reduce overall well-being and work performance.<sup>11</sup>

*"As well as symptomatic relief, it is important to emphasise the interconnections between the physical symptoms, sleep quality and well-being. The overall aim must be to prioritise patient well-being and to foster collaborative care."* **Prof. Andrew Smith**

Commonly used complementary and integrative medicine self-care strategies include general lifestyle interventions such as physical activity, spending time in nature, healthy eating, and Mind-Body-Medicine (MBM)-interventions such as yoga, meditation, and relaxation techniques.<sup>12</sup> Meditation, for example, is a powerful tool for reducing MURTI illness burden.<sup>13</sup>


## Conclusion and outlook

Aristotle declared that "The whole is greater than the sum of its parts". When applied to pharmacist-patient encounters, this principle requires addressing a broad range of conditions, including physical as well as mental well-being. The management of MURTI should therefore be individualised and holistic, combining conventional and integrative therapies. Healthcare providers must guide patients through these options, promoting safe, effective, and evidence-based treatments. A comprehensive framework for healthcare providers could help enhance patient care and awareness.


*"The pharmacist's role is to convey accurate, scientific information in a way that is understandable to the patient and to ensure that the patient processes this information correctly."*


**Ann Herzeel, MSc**


## Experts Panel

 **Prof. Andrew Smith (PhD)**, School of Psychology, Cardiff University, Cardiff, UK.

 **Ann Herzeel, MSc**, pharmacy owner, Brussels, Belgium.

 **Dr. Marco Biagi (PhD)**, Department of Food and Drug, University of Parma, Parma, Italy.

 **Prof. Dr. med. Andreas Michalsen**, Institute of Social Medicine, Epidemiology and Health Economics, corporate member of Freie Universität Berlin and Humboldt-Universität, Charité-Universitätsmedizin, Berlin; Department of Internal Medicine and Nature-based Therapies, Immanuel Hospital Berlin, Berlin, Germany.

 **Dr. Laura Sadofsky (PhD)**, Center for Biomedicine, Hull York Medical School, University of Hull, Hull, UK.

 **Prof. Patrick Poucheret (PhD, PharmD)**, Qualisud, Université de Montpellier, CIRAD, Institut Agro, IRD, Avignon Université, Université de La Réunion, Montpellier, France.

 **Dr. Guillermo Estrada Riobobos (PhD)**, Spanish Society Clinical Family and Community Pharmacy (SEFAC), Madrid, Spain.

References  
1 Eccles R. Understanding the symptoms of the common cold and influenza. *Lancet Infect Dis.* 2005;5(11):718-725. | 2 Hendley JO. Epidemiology, pathogenesis, and treatment of the common cold. *Semin Pediatr Infect Dis.* 1998;9(1):50-55. | 3 Jaume F, Alobid I, Mullol J, Quintó L. Direct Costs of Acute Rhinosinusitis in Spain: A Prospective and Observational Study (PROSINUS). *J Investig Allergol Clin Immunol.* 2023;31(6):481-488. | 4 Smith A, Kardos P, Pfaar O, et al. The treatment of mild upper respiratory tract infections - a position paper with recommendations for best practice. *Drugs Context.* 2023;12:2023-4-2. Published 2023 Jul 25. | 5 Warr H, Gandhi A, Hussain S, Greenwood D. Community pharmacy services during the COVID-19 pandemic: Insights from providers and policy makers. *Explor Res Clin Soc Pharm.* 2023;12:100344. | 6 Moore A. No going back: How the pandemic is changing community pharmacy. *The Pharmaceutical Journal.* Available at: <https://pharmaceutical-journal.com/article/features/no-going-back-how-the-pandemic-is-changing-community-pharmacy> (accessed 14 October 2024). | 7 Zveřinská D. Rational phytotherapy as an alternative treatment for acute respiratory tract infections. *Pediatrica i Medycyna Rodzinna.* 2022;18(139-145). | 8 Ring M, Mahadevan R. Introduction to Integrative Medicine in the Primary Care Setting. *Prim Care.* 2017;44(2):203-215. | 9 Stathis C, Victoria N, Loomis K, et al. Review of the use of nasal and oral antiseptics during a global pandemic. *Future Microbiol.* 2021;16(2):119-130. | 10 Valussi M, Antonelli M, Donelli D, Frenzuoli F. Appropriate use of essential oils and their components in the management of upper respiratory tract symptoms in patients with COVID-19. *J Herb Med.* 2022;28(10):451. | 11 Smith AP. Twenty-five years of research on the behavioural malaise associated with influenza and the common cold. *Psychoneuroendocrinology.* 2015 Jun;38(6):744-51. | 12 Jentler M, Erenhan A, Koppold DA, et al. Self-care and lifestyle interventions of complementary and integrative medicine during the COVID-19 pandemic: A cross-sectional study. *Front Med (Lausanne).* 2023 Jan 9;9:1033191. | 13 Barrett B, Hayney MS, Muller D, et al. Meditation of exercise for preventing acute respiratory infection: a randomized controlled trial. *Ann Fam Med.* 2012 Jul-Aug;10(4):337-46.