Preface
As part of its mission to change how health is prescribed, Fullscript developed this report to contribute to the growing knowledge of treatment adherence in integrative medicine. The insights contained in this report may inform the development of adherence-based educational opportunities and content in functional and integrative medicine, as well as future adherence-related features within the Fullscript platform.

About Fullscript
Fullscript is an industry-leading health technology platform that facilitates virtual dispensing for practitioner-grade supplements and develops evidence-based clinical research and educational content to contribute to the rapidly emerging field of integrative medicine. In order to meet the needs of its practitioners, support their treatment recommendations for patients, and advance scientific understanding in the area of treatment adherence, Fullscript sought to combine a comprehensive literature review strategy with practitioner interviews, surveys, and internal data, as outlined in this report.

Executive summary
Purpose
Treatment adherence is a topic that is well studied but not well understood. Low treatment adherence is a significant issue that limits the effective management and treatment of chronic conditions, creating significant healthcare burden, costs, and poor patient outcomes. Still, there is no broad or straightforward solution to address non-adherence to treatment.

- $100-290 billion: Estimated cost of non-adherence to the U.S. healthcare system
- 30-69%: Estimated rate of hospital admissions due to medication non-adherence

The complexities and interplay between factors that may influence treatment adherence necessitate a personalized approach to understanding, identifying, analyzing, addressing, monitoring, and evaluating both the reasons for non-adherence and the strategies that may facilitate acceptance of and commitment to treatment plans.

The Centers for Disease Control and Prevention (CDC) estimates that:

- 60% of U.S. adults live with at least one chronic disease
- 40% of U.S. adults live with two or more chronic diseases

This report provides a review of the factors that influence treatment adherence, describes current limitations for how adherence is measured, and provides insight into some of the most well-studied interventions that may improve treatment adherence, particularly in the context of medication use. The report also includes findings from a set of studies conducted by Fullscript, drawing upon insights collected from integrative practitioners using the Fullscript platform to recommend supplement and lifestyle-oriented treatment plans.

Key findings
Our literature review illustrated the complexities within treatment adherence research and management. There are many ways to measure and interpret treatment adherence depending on practitioner, patient, and intervention-related considerations. Generally, treatment adherence rates decline for all patients over time, and the likelihood of this is influenced by several hundred different factors, such as practitioner/patient education, cost, feasibility, and patient readiness to change. Proposed interventions should consider underlying barriers to adherence and treatment-related factors, and may vary depending on the stage of disease management.

Our Fullscript practitioner survey and interviews identified similar themes. Practitioners listed factors such as cost and patient's feelings of being overwhelmed and readiness to change as primary barriers to adherence. To increase the likelihood of adherence, all practitioners should consider establishing trust with patients, using a slow and simple treatment approach (so as not to overwhelm patients), scheduling regular follow-up appointments, having clear and open communication, and using an evidence-based approach to rationalize treatment choices and monitor progress.
Practical Strategies for Improving Adherence

1. **Realistic cost**
   - Consider whether options with health insurance coverage are available.
   - Use a staged approach to introduce treatments one at a time and set realistic goals in line with financial restrictions.

2. **Patient readiness**
   - Assess the likelihood a patient will adopt a behavior by asking open-ended questions about motivations, attitudes, and beliefs about treatment.
   - Practice strategies such as motivational interviewing or other theoretical and evidence-based behavior strategies to communicate empathy and a shared partnership/investment in the patient’s well-being.
   - Provide education to reassure the patient about the availability of evidence-based treatments and how they work, potential side effects of treatment, information about the condition, and the importance of adherence.
   - Use lab testing to help demonstrate the need for treatment and track progress.

3. **Staged approach**
   - Facilitate treatments with simplified regimens via reduced dosing frequency (e.g., sustained-release) and fewer therapies (e.g., combined pills).
   - Provide multiple options for increased flexibility.
   - Suggest the use of pre-assembled dosing (e.g., blister packs), pill organizers, or other methods that can remind patients whether a dose was used or not.
   - Link treatment with a patient’s simple daily habits (e.g., teeth brushing).
   - Be clear about which aspect of the health problem to prioritize.

4. **Communication**
   - Provide multiple opportunities for treatment reminders using tools like text messages, phone calls, and applications.
   - Provide feedback on adherence using quantitative and qualitative data.
   - Provide multiple points of contact and follow up in between appointments to determine how the treatment is coming along.
   - Provide opportunities for in-clinic and face-to-face interactions when possible.

5. **Streamline care**
   - Involve other practitioners with various training and schedule flexibility in the process or provide referrals.
   - Incorporate multiple strategies as necessary, particularly with behavioral and educational components, for long-term adherence assistance.
   - Engage in adherence training as a professional development opportunity.

References