

# Transgender Healthcare Training

## Instructional Design Plan



## Introduction

Transgender individuals face unique challenges in accessing quality healthcare. Kachen and Pharr (2020) found that “500,000 transgender people experience healthcare disparities in the United States” (p. 147) due to factors like fear of discrimination from healthcare institutions. This leads to conditions going untreated. For example, those who are assigned female at birth will likely need to visit a gynecologist, but their PCP may neglect to refer a patient to receive specialist care if the patient does not trust that their provider is inclusive.

However, healthcare providers are also undereducated on transgender healthcare. One study found that 87% of medical students reported receiving training on transgender healthcare, but 52.5% felt that they needed more training (Jewell & Petty, 2024). Generations of prior healthcare providers received less instruction or never received instruction. Seelman et al. (2017) found that “50% of respondents indicated that they had to teach their medical provider about basic transgender information.” Thus, there is an educational gap on the medical needs of transgender patients among medical providers, regardless of age or experience. This course attempts to fill that gap with special consideration to:

1. Keep content at the beginner level. The learner probably has never met a transgender person and may have absorbed transphobic rhetoric, so it is important to introduce and explain every concept.
2. Ensure content is empirically supported and oriented towards improving the quality of services.
3. Focus on the human experience of individual transgender patients.
4. Deliver content in short modules over a longer period to minimize psychological discomfort and allow for reflection time.

This course is meant to be an entry-level course for providers in family medicine or PCPs and explains the basic terminology, the experience of a transgender person seeking healthcare, and the basics of transgender healthcare. These practitioners are essential for maintaining health over time (Hostetter et al., 2020), initiating preventive healthcare (Rose et al., 2018), and recommending patients for more specialized services when necessary. They are highly educated individuals who, for the most part, are motivated by compassion and a desire to produce the most positive health outcomes for their patients. Relative to other medical professionals, PCPs tend to be paid less (HRSA, 2024), with a heavy workload and little time to converse with each patient (HRSA, 2024; Manca et al., 2007). For these professionals to care for transgender patients, they need to have a basic understanding of a transgender person’s experience and ongoing medical needs at all stages of life and transition.

## Goal and Objectives

Goal	Increase inclusion and comfort for transgender patients
Objective 1	Define key terms such as transgender man/woman, some essential terms and common stereotypes/misconceptions
Objective 2	Explain general healthcare needs for transmen and transwomen
Objective 3	Explain common problems trans people generally face statistically and what kind of discrimination they face in healthcare
Objective 4	Practice communication with transgender patients

## Organization

This course utilizes programmed instruction for digital delivery through an LMS. The content will be broken up into eight modules, and the learner should complete two modules each week across four weeks. Each week, the learner should spend about an hour working through the content.

The modules introducing the topic and providing contextual background information will be more traditional slides with some interactivity to check for understanding. The content is fact-based, which lends itself well to multiple-choice questions or matching terms and definitions.

The major instructional activities have learners practice communication skills so they can have more open and informed conversations with their transgender patients, even though they, as primary care physicians, are not likely to be administering treatment or medications directly related to medical transition.

<b>Curriculum Summary</b>		
Week 1	Introduction Objective 1	<p>Description:</p> <ul style="list-style-type: none"> <li>• Introduce the problem and the importance of the course for learners and patients.</li> <li>• Introduce learners to characters they'll follow throughout the course and what their experiences or fears are when seeking healthcare.</li> <li>• Introduce the foundational non-medical terms needed to understand the rest of the course, including transgender, cisgender, non-binary, gender, sex, gender dysphoria, and gender expression.</li> </ul> <p>Learning Activity: Match terms with definitions.</p>
	Experience from a trans person's perspective Objectives 1, 2, and 3	<p>Description:</p> <ul style="list-style-type: none"> <li>• Interview-style videos of the characters tell learners the common dangers, fears, or barriers that transgender people face and the supporting data.</li> <li>• Explaining the differences between transwomen, transmen, and non-binary people.</li> <li>• An overview of the medical transition process for different groups, including the pre-decision thought processes and motivations.</li> </ul> <p>Learning Activities:</p> <ul style="list-style-type: none"> <li>• Use a four-way Venn diagram to sort different qualities between trans men, trans women, cis men, and cis women.</li> <li>• Use interactive scales for learners to guess statistics about transgender healthcare; similar to trivia.</li> <li>• Match transgender healthcare interventions to their symptoms and timeframe.</li> </ul>
Week 2	Practical tips Objective 4	<p>Description:</p> <ul style="list-style-type: none"> <li>• This section tells the learner what to do and has accompanying videos demonstrating the skills such as inclusive language in action.</li> </ul>
	Example case 1 Objective 4	<p>Description:</p> <ul style="list-style-type: none"> <li>• A practice case where the learner can work through a conversation with a patient. The learner will be given the patient's demographic details and any prior notes.</li> </ul> <p>Learning Activity: c</p>
Week 3	Example case 2 Objective 4	<p>Description:</p> <ul style="list-style-type: none"> <li>• A practice case where the learner can work through a conversation with a patient. The learner will be given the patient's demographic details and any prior notes.</li> </ul> <p>Learning Activity: AI practice simulation</p>

	Common reservations  Objective 4	Description: <ul style="list-style-type: none"> <li>• A period of reflection that acknowledges the common problems that healthcare providers may experience or the frustration they may feel.</li> <li>• Reiterate the benefits that patients receive by pushing through discomfort.</li> </ul>
Week 4	Example case 3  Objective 4	Description: <ul style="list-style-type: none"> <li>• A practice case where the learner can work through a conversation with a patient. The learner will be given the patient's demographic details and any prior notes.</li> </ul> Learning Activity: AI practice simulation
	Next steps/ resources	Description: <ul style="list-style-type: none"> <li>• Reiterating the importance of learning and why inclusivity improves the quality of healthcare</li> <li>• Providing a list of resources for further learning experiences</li> </ul>

### Learning Environment

The learning environment refers to the physical situation and context in which the learner receives the content. Ideally, this course will be taken independently in a quiet office so that the provider can focus on the material away from others' commentary or distractions. This would allow the learner to be in the best conditions to use critical thinking and overcome any psychological discomfort as they confront transphobic beliefs, either personally held or absorbed from the general public. Unfortunately, the busy schedules that providers face, the need to prioritize care-related tasks such as note-taking or calling insurance, or a lack of physical space will likely be present in the learning environment. Nurses, for example, likely do not have their own dedicated office but are still healthcare providers who may serve transgender patients.

This course will use a learner-centered environment because this is a controversial issue in which people are likely bringing limited or incorrect knowledge into the space, as demonstrated by many transgender people needing to teach their provider (Seelman et al., 2017).

The first three modules will use a direct learning environment where a voice-over narrator or the on-screen text will tell the learner what they need to know. The learning will become more open-ended in the practice exercises as the learner takes initiative to navigate each example case. The problem and context around the patient's case will be given to the learner, but they can experiment with the phrasing, style, and approach as they would in real interactions. This is meant to facilitate a smoother transition between learning modules and real-life interactions.

This course will take place once a year to refresh everyone's knowledge, but it should also be administered to new providers in the office or practice. This course can be taken at any point in the year, however, due to the longer time span, it would be ideal to administer the course during a relatively less-busy time of the year.

### Learning Activities

To support learning objective 1, learners will match 10 general terms with definitions. The learner will drag one term to align horizontally with the correct definition. These terms will be more general terms to talk about transgender individuals and ensures the learner is exposed to the terms that will be used throughout the rest of the course. This exercise will not include medical terms.

In a later module, learners will sort different qualities between trans men, trans women, cis men, and cis women using a four-way Venn-diagram. This verifies that learners understand the definitions of each identity and the similarities and differences between each. It also lets learners see similarities

between cisgender women and transgender women, which will combat the otherness that is often hidden in conversations about transgender people.<sup>1</sup> This is a more difficult exercise because it requires learners to be precise in their language around gender identity which is not practiced in general society. However, healthcare providers should possess this skill when communicating with patients in a medical context.

To support learning objective 2, learners will match transgender healthcare interventions to their outcomes and timeframe. There are many different medical interventions, but a PCP needs only to be aware of hormone replacement therapy (HRT) types and timelines, the existence of surgical options, and the existence of psychological therapies. This exercise has four parts.

- First, learners will sort treatments into five categories: HRT for transmasculine people, HRT for transfeminine people, surgical treatments for transmasculine people, surgical treatments for transfeminine people, and other treatments.
- On the second slide, learners will match those treatments to their likely outcomes, which will refresh learners on the definition of each treatment.
- On the third slide, learners will organize the outcomes for HRT along a timeline spanning 0-5+ years for each treatment path (masculinizing treatments/androgens and feminizing treatments/antiandrogens).

To support learning objective 3, learners will use interactive scales and guess statistics about transgender healthcare. Similar to trivia, learners will be presented with a question and a slider where they will guess percentages or numbers. This activity will use 5 facts taken from empirical studies about the state of transgender healthcare with citations in case the provider wants to investigate further. This exercise will serve as motivation and solidify the legitimacy and scale of the problem that the course is addressing.

To support learning objective 4, learners will go through three practice case simulations. Brown and Green (2016) highlight that simulations provide a space for safe exploration and experimentation in making decisions. Given how controversial the topic is and how impactful poor execution of communication can be on a patient, learning in a simulated example can capture nuance without negatively impacting patients. These cases will cover a breadth of characteristics a transgender person can possess, such as age, race, socioeconomic status, and other health conditions. The provider will also be given notes and reminders on what they should discuss with the patient and possible topics to start with.

Example Case 1: A Latino transman, age 24, bisexual with one partner, low-income, working retail part time and attending community college. Has a history of mild asthma, generalized anxiety disorder (diagnosed at 19), no surgical history, currently taking testosterone for 1.5 years. Interested in a double mastectomy.

The provider should spend 15-30 minutes on each practice case. Depending on the budget, designers should consider experimenting with AI chat models to have a dynamic, synchronous

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<sup>1</sup> Even well-intentioned allies will say “women” to refer to cisgender women and “trans women” to refer to transgender women when “women” inherently includes transgender women. A similar comparison is comparing women and Black women. A qualifier is appropriate when talking about differences in definition or experiences (e.g. stereotypes about Black women versus stereotypes about Asian women are not the same) but would not be appropriate in the context of commonalities between groups (e.g. Black women experiencing misogyny versus women experiencing misogyny). There is no clear reason to add a qualifier to one side of the comparison when it can prompt people to search for a reason to other.

experience (see Appendix A for more details). The provider will be given a total of three cases with charts to mimic the paperwork they usually have for a real patient.

### **Evaluation**

Each module will begin and end with a brief, 5-8 question quiz, taking about 5 minutes each. The quizzes will be multiple choice and have five answer choices for each question. The initial quiz is to determine a base level of knowledge and to test for retention from previous models because there will be about a week between completion of sets of modules. The pre-quiz will have some questions that see where learners are starting and will not be graded. The quiz at the end of each module will verify short-term retention and only ask about content from that module. The end-of-module quiz and any questions asked about prior material will be graded. Given that the questions will ask objective questions, passing will be set at 80% for each quiz. Participants will be able to retake quizzes 2 additional times for a total of 3 attempts, but they will not be shown the correct answer for any missed questions to ensure they are reevaluating their answer choices rather than.

The AI interactive exercises will not be part of the summative evaluation process, however, it will benefit the quality of the final product to do formative evaluations of this element because it is a relatively novel element that should be tested for efficacy. This can be done through Likert scale surveys asking about learners' confidence and feeling of capability to manage an in-person patient.

The efficacy of the entire course can be measured through post-appointment patient surveys, however, there will likely not be a large data set given how few transgender people there are. Over time, the data set may get larger as LGBTQ+ people hear peer recommendations. The number of transgender and LGBTQ+ patients is itself an indicator of the success of the intervention because they feel safe disclosing their identity.

### **Conclusion**

This course plan is designed for healthcare providers in family medicine offices. It is meant to give an overview of what transgender people experience when pursuing healthcare, including the overall statistics and from an individual anecdotal perspective. The course teaches providers the basics of transgender healthcare, which they likely did not receive instruction on in medical school. It teaches terminology and theory before moving into a practical application section. This section is characterized by practice cases in which the provider can use AI generative technology to build their skills in communication, technical understanding of transgender healthcare options, and intentional use of inclusive language. Ultimately, this course is meant to improve healthcare outcomes for transgender people and help providers improve the quality of their services.

The primary limitation is the resources that can be dedicated to developing a novel AI training model. While there is the potential to add a relatively organic and dynamic learning activity, learners might feel a dissonance practicing with an AI avatar in place of a human. They may also feel that the exercises leave too much space for error as they practice discussing topics and terminology they likely have not used before.

## Appendix

<b>Objective 4: Practice Exercises</b>		
AI Avatar Simulation	Language Model Simulation	Programmed Examples
<p>The premium version for these exercises could mimic a telehealth appointment where a provider gets on a video call with an AI virtual reality character that can move, respond, hesitate, and sound somewhat realistic using AI voice models. The provider can speak with the avatar as if conducting a regular patient interaction, letting the AI guide the conversation about their health concerns.</p> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- Expensive to develop</li> <li>- The provider may feel a sense of uncanny valley, which creates an unnatural conversation</li> <li>- The provider is put on the spot, which adds pressure to be politically correct with their language</li> </ul>	<p>Use a generative language model such as ChatGPT to have an interactive roleplay conversation. This most directly mimics an email conversation or text chat, but it also helps develop skills that can be used in synchronous communication. This may be a lower risk form of practice because the learner can take more time to develop their responses or even edit what they want to say.</p> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- May be expensive to develop</li> <li>- May have limited transferability for synchronous interactions</li> </ul>	<p>Learners are presented a storyline either through a video or a static situation. The provider can choose how they want to interact with the patient from a set of pre-written answers which lead to different outcomes.</p> <p>This type of simulation tends to be more engaging than traditional lectures while still modeling common scenarios that a practitioner may come across. It is also the least expensive execution of this exercise</p> <p><b>Limitations:</b></p> <ul style="list-style-type: none"> <li>- It is the least realistic form of practice which may reduce the transferability of the skills in a real appointment.</li> </ul>

### References

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