



# **Independent Study**

## **Participant Study Guide**

# Medication Administration Training (MAT) Independent Study

## Overview

Caring for children is a demanding yet rewarding profession. You work hard to develop a caring and trusting relationship with the children in your program. To offer the best care, you learn techniques and strategies to provide a nurturing and responsive environment. Part of this care may include giving medication to help children regain and/or maintain their health.

The MAT course is a competency-based course approved by the Virginia Board of Nursing (BON) and the Virginia Department of Social Services (VDSS) to train providers and staff who work in child day programs to safely administer medication to children. You will be tested to make sure you understand and can put into practice the information presented.

The course, which takes approximately eight (8) hours, is facilitated by an *approved* MAT trainer and includes video information as well as hands-on skills demonstrations.

The MAT course certifies providers and staff in child day programs to administer prescription medication in a child care setting using seven routes: oral, topical, inhaled, medicated patches, eye, ear and emergency injection of epinephrine using an auto-injector device.

Staff members who work in licensed or regulated child day programs and who give prescription medication to children are required by the Code of Virginia (§ 54.1-3408) to satisfactorily complete the training course.

NOTE: Child day programs as defined in § [63.2-100](#) and regulated by the State Board of Social Services or the Child Day Care Council, include: Child Day Centers, Religiously Exempt Child Day Centers, Family Day Homes, Family Day Systems, Voluntarily Registered Family Day Homes, and Certified Preschools.

There are two ways to obtain the MAT certification: in-classroom instruction or independent study. ***This guide is intended for providers who want to take the course by independent study.*** To take the course via in-classroom instruction, you must contact an *approved* MAT trainer. To find and contact an *approved* MAT trainer, go to [https://www.dss.virginia.gov/family/cc\\_providertrain/mat/index.cgi](https://www.dss.virginia.gov/family/cc_providertrain/mat/index.cgi) and click on *Find a MAT trainer Near You*.

## Prerequisites for Taking the Medication Administration Training (MAT) Independent Study (IS)

You must meet the following requirements before you can take Part Two of the MAT Independent Study (IS) course.

- Be 18 years old
- Be literate (able to read and write) in English
- Have a current first aid certificate that covers the ages of the children in your care
- Have a current CPR certification that covers the ages of the children in your care

**You MUST provide proof of identity (photo ID) and documentation of current first aid and CPR certifications when you arrive for completion of Part Two.**

## **MAT Independent Study (IS)**

The Medication Administration Training (MAT) Independent Study (IS) is comprised of two parts. The first part is a self-paced review of the MAT course content using materials such as handouts, video segments and independent exercises. The second part consists of hands-on practice time and testing with an approved MAT trainer.

### **Part One: Content**

The MAT course consists of eight modules, ranging from medication effects to safe medication administration. The material for each of these modules is available for download through the VDSS website or the Knowledge Center. You can access and use these materials at any time during the day or night.

The Study Guide and MAT Handouts can also be purchased from VDSS at [https://www.dss.virginia.gov/family/cc\\_providertrain/mat/index.cgi](https://www.dss.virginia.gov/family/cc_providertrain/mat/index.cgi) click on MAT Independent Study, Order Form.

### **Part Two: Practice and Testing**

Once you have reviewed all of the MAT course content in Part One, you must complete testing in order to receive the MAT certification. There are two different types of tests to complete; a written test and a skills test. This part of MAT Independent Study is completed with an *approved* MAT trainer. Before you are tested, you will have time to practice all of the skills reviewed in Part One with an *approved* MAT trainer and ask questions.

## **Part One**

You will study the MAT materials on your own, at your own pace. The MAT course consists of several different sections and includes the following:

- Introduction
- Module 1: Medication Overview
- Module 2: Handling of Medication
- Module 3: Standard Precautions related to Medication Administration
- Module 4: Safe Medication Administration
- Module 5: Preparation and Administration Techniques including the “Randomized Skills Demonstration”
- Module 6: Asthma
- Module 7: Emergency Care
- Module 8: Special Situations
- Conclusion

## **Completing Part One of the MAT Independent Study (IS)**

Be sure to read this study guide as you complete each of the training sections. Since each module builds upon information covered in the previous module, it is important to complete the modules *in order*. When starting a module, make sure you have all the handouts. Each module has at least one video segment; therefore, you will want to have access to your computer while reviewing the handouts.

# MODULE REVIEW

## Introduction

This section provides an overview of the MAT course and who is required to take the training.

Instructions

1. Review Handout Intro.1 **Medication Administration Training (MAT) Course Overview** and Handout Intro.2 **Glossary**.
2. Watch the "Introduction" video segment.

## Module 1: Medication Overview

This module provides an overview of medication usage. Topics include desired and undesired effects of medication, the seven different routes of medication administration covered in the MAT course and categories of medication such as prescription, over-the-counter, generic and brand name medication.

At the end of this module, you will be able to:

- identify reasons why children are given medication
- identify differences between mild side effects, adverse effects and allergic reactions; and how to respond to each effect
- list the seven (7) medication routes covered in the MAT course
- identify the three (3) medication routes you would need additional training to administer
- define and identify common over-the-counter medication
- define and identify common prescription medication
- define and identify common brand name medication
- define and identify common generic name medication

## Instructions

1. Review Handout 1.1 **Medication Effects**.
2. Watch the "Medication Effects" video segment.
3. Review and complete Handout 1.6 **Case Scenarios**.
4. Review Handout 1.7 **Case Scenarios ANSWER KEY** for the correct answers.
5. Review Handout 1.2 **Medication Routes** and Handout 1.3 **Overview of the Medication Routes Covered in the MAT Course**.
6. Watch the "Medication Routes" video segment.
7. Review Handout 1.4 **Types of Medication** and Handout 1.5 **Package Insert**.
8. Watch the "Medication Categories" video segment.

## **Module 2: Handling of Medication**

This module covers the handling and preparation needed before administering medication. Topics include permission, instruction and medication label requirements needed before giving any medication and correct documentation. This module also covers accepting medication from a parent, proper storage and safe disposal of medication.

At the end of this module, you will be able to:

- identify the permissions needed to administer prescription medication to children in your care
- identify the permissions needed to administer over-the counter medication to children in your care
- identify the items needed for medication instructions from the licensed authorized prescriber
- identify the required prescription medication label elements
- identify the meaning of common abbreviations
- identify the reasons for keeping a record of medication administration
- identify the necessary items that must be documented for each medication administration
- identify components of a safe process for receiving medication from parents
- state the optimal conditions for storing most medication
- state how to safely store medication requiring refrigeration
- identify how to keep controlled substances secure
- explain how to safely handle unused, expired or discontinued medication

### **Instructions**

1. Review the following handouts: Handout 2.1 **Administration Tools and Medication Label Requirements**, Handout 2.2 **Common Medical Abbreviations**, Handout 2.3 **Permission Requirements for Short-Term and Long-Term Medication Administration**, Handout 2.4 **Written Medication Consent Form**, Handout 2.5 **Log of Medication Administration** and Handout 2.6 **Best Practice Techniques for Medication Documentation**.
2. Watch the “Permissions, Instructions and Documentation” video segment.
3. Using Handouts 2.8 – 2.10, review and complete Handout 2.7 **Participant Exercise #1**
4. Review Handouts 2.8, 2.9 and 2.10 **Answer Keys** for the correct answers.
5. Review and complete Handout 2.12 **Permissions and Instructions Case Scenarios**.
6. Review Handout 2.13 **Permissions and Instructions Case Scenarios- Answer Key** for the correct answers.
7. Review Handout 2.11 **Handling, Storage and Disposal of Medication Checklist**.
8. Watch the “Handling, Storage and Disposal” video segment.
9. Review and complete **Module 2 Participant Independent Exercise #1 – Consent Form**.
10. Review and complete **Module 2 Participant Independent Exercise #1 – Reviewing a Completed Form**

## **Module 3: Standard Precautions Related to Medication Administration**

This module discusses standard precautions to be considered when giving medication including proper glove use and hand washing.

At the end of this module, you will be able to:

- identify the correct gloving procedure and correct glove disposal
- identify the steps of appropriate hand washing for administering medication

### **Instructions**

1. Review Handout 3.1 **Glove Use for Medication Administration** and Handout 3.2 **Sanitizing Surfaces Contaminated by Blood or Body Fluids**.
2. Watch the "Safety Precautions for Medication Administration" video segment.
3. Review Handout 3.3 **Hand Washing**.
4. Watch the "Hand Washing" video segment.

## Module 4: Safe Medication Administration

This module discusses the general principles of giving medication to children in a child day care setting. Topics include age appropriate medication administration techniques, how to deal with ill or uncooperative children, what steps to take if you cannot give an ordered medication, using the Five Rights and Medication Phases to accurately administer medication and avoid medication errors.

At the end of this module, you will be able to:

- identify age appropriate techniques to use when giving medication to a non-mobile infant as well as a mobile infant
- identify age appropriate techniques to use when giving medication to a toddler
- identify age appropriate techniques to use when giving medication to a preschooler
- identify age appropriate techniques to use when giving medication to a school age child
- identify techniques that are not appropriate to use when administering medication to children
- explain the appropriate action to take if a medication is not taken in the complete form
- explain what to do if an infant or child will not take the medication
- list the Five Rights of Medication Administration
- state the appropriate times to check the medication consent form and the log of medication administration for the Five Rights when administering medication to children
- state how to correctly administer “as needed” medication for a specific condition or change in condition(s) as instructed by the child’s health care provider
- identify the conditions necessary for safe medication administration

### Instructions

1. Review Handout 4.1 **Do’s and Don’ts for Administering Medication to Children** and Handout 4.2 **Special Situations**.
2. Watch the “Giving Medication to Children, including Ill and Uncooperative Children” video segment.
3. Review Handout 4.3 **The Five Rights of Safe Medication Administration**.
4. Watch the “Five Rights of Medication Administration” video segment.
5. Review Handout 4.4 **Deciding Where You Will Administer Medication** and Handout 4.5 **Medication Administration Phases**.
6. Watch the “Medication Administration Phases” video segment.
7. Review and complete **Module 4 Participant Independent Exercise #2- Scenario** using **Module 4 Participant Independent Exercise #2 – Written Consent Form** and **Module 4 Participant Independent Exercise #2 – Log of Medication Administration**
8. Review **Module 4 Participant Independent Exercise #2- Scenario ANSWER KEY**, **Module 4 Participant Independent Exercise #2 – Log of Medication Administration ANSWER KEY** for the correct answers.

## Module 5: Preparation and Administration Techniques

This module describes the step-by-step process for giving medication by specific routes.

At the end of this module, you will be able to:

- demonstrate the ability to correctly administer medication by one of the following routes: oral, topical, medicated patches, inhaled, eye or ear medication
- demonstrate how to measure the correct dose using one of the following: a liquid medicine cup, dosing spoon, or oral medication syringe
- identify the reasons why medication related equipment and supplies must be kept clean
- explain the cleaning techniques for medicine cups, dosing spoons, oral medication syringes, medication droppers, pill crushers or metered dose inhalers

### Instructions

1. Review the following Handouts: Handout 5.1 **Oral Medication Administration: Tablets and Capsules**, Handout 5.2 **Oral Medication Administration: Crushed Tablets**, Handout 5.3 **Oral Medication Administration: Sprinkles**, Handout 5.4 **Oral Medication Administration: Liquids Medication Cup**, Handout 5.5 **Oral Medication Administration: Liquids Dosing Spoon**, Handout 5.6 **Oral Medication Administration: Liquids Oral Medication Syringe**, Handout 5.7 **Oral Medication Administration: Liquids with a Dropper** and Handout 5.8 **Oral Medication Administration: Applying Medication to the Gums**.
2. Watch the “Administering Oral Medication” video segment.
3. Review the following handouts: Handout 5.9 **Topical Medication Administration: Creams, Gels, Lotions and Ointments**, Handout 5.10 **Topical Medication Administration: Aerosols**, Handout 5.11 **Medicated Patch Administration**, Handout 5.12 **Inhaled Medication Administration: Nasal Drops**, Handout 5.13 **Inhaled Medication Administration: Nasal Sprays**, Handout 5.14 **Inhaled Medication Administration: Oral Metered Dose Inhaler** and Handout 5.15 **Inhaled Medication Administration: Oral Metered Dose Inhaler with Spacer**.
4. Watch the “Administering Topical, Medicated Patches and Inhaled Medication” video segment.
5. Review Handout 5.16 **Eye Medication Administration: Drops**, Handout 5.17 **Eye Medication Administration: Ointment** and Handout 5.18 **Ear Medication Administration: Drops**.
6. Watch the “Administering Eye and Ear Medication” video segment.
7. Included in your handouts is a **Participant Pre-Demonstration Competency Practice Scenario**. Using the **Participant Pre-Demonstration Practice - Scenario**, **Participant Pre-Demonstration Practice - Consent Form**, **Participant Pre-Demonstration Practice – Log of Medication Administration**, **Participant Pre-Demonstration Practice – Trainer Chart**, and the applicable video segment, complete this exercise. This information will help you prepare for the skills demonstration competency. If you have any questions about this pre-demonstration practice, talk with your MAT trainer when you go to Part Two of the MAT Independent Study.
8. Watch the “Sample Skills Demonstration” video segment when you are ready to prepare for your randomized skills demonstration (Part Two of the MAT Independent Study).

## Module 6: Asthma

This module provides you with information you need to safely and effectively care for a child who has asthma. Topics include an overview of asthma, the use of an asthma care plan and the basics on how to use and care for a nebulizer machine.

At the end of this module, you will be able to:

- identify asthma “early warning signs”
- identify common asthma triggers
- identify measures to prevent an asthma episode
- state reasons for using a nebulizer machine
- identify how to appropriately set-up a nebulizer machine using manufacturer’s instructions
- identify how to administer medication using a nebulizer machine by following the manufacturer’s instructions
- identify the appropriate process for cleaning a nebulizer after each use

### Instructions

1. Review Handout 6.1 **Asthma Facts** and Handout 6.2 **Treatment Options for Children with Asthma**.
2. Watch the “What is Asthma” video segment.
3. Review Handout 6.3 **Example of a Care Plan for a Child with Asthma** and Handout 6.4 **Asthma Action Plan**. These handouts represent two examples of asthma care plans you might see. There are many additional asthma care plans available. Which ever plan you use, remember that the plan needs to have the information you need to safely care for the child and meet his care needs.
4. Review Handout 6.5 **Medication Administration Using a Nebulizer** and Handout 6.6 **Care of a Nebulizer Machine**.
5. Watch the “Nebulizer Treatments” video segment.
6. You will have time to practice using a nebulizer machine during Part Two; however, you will not be required to demonstrate this administration technique.
7. Review **Module 6 Participant Independent Exercise #3 – Asthma Handout** and **Module 6 Participant Independent Exercise #4 – Asthma Quiz**. The information in these two handouts is included for your reference only and you will not be tested on it.

## Module 7: Emergency Care

This module discusses emergency care. Topics include unintentional medication poisoning, stocking a first aid kit, keeping non child-specific over-the-counter medication, recognizing anaphylaxis, and how to administer an epinephrine auto-injector device in the event of a severe allergic reaction.

At the end of this module, you will be able to:

- explain the potential danger of unintentional medication ingestion and exposure
- identify how to prevent unintentional poisoning from medication in the child care setting
- describe the appropriate actions to take in the event of an unintentional medication poisoning
- identify the symptoms of anaphylaxis
- state when they need to call 9-1-1 or other first responder in their area
- identify the permissions needed to administer an epinephrine auto-injector device
- identify how to appropriately store an epinephrine auto-injector device, specifically an EpiPen® or EpiPen Jr.®
- demonstrate how to correctly administer an epinephrine auto-injector device, specifically an EpiPen® or EpiPen Jr.®

### Instructions

1. Review Handout 7.1 **Prevention of Unintentional Medication Poisoning**.
2. Watch the “Unintentional Medication Poisoning” video segment.
3. Review Handout 7.2 **Symptoms of Anaphylaxis**.
4. Watch the “Anaphylaxis” video segment. **IMPORTANT! EpiPen® directions/packaging has changed since the production of this video.** The new EpiPen® has a red flag that appears in the clear window, indicating that the correct dose has been received. The new EpiPen® comes in a hard plastic container with either a yellow or green screw-top. After the medication has been given and the needle has been exposed, the auto-injector device should be inserted completely back into the storage tube **without** bending the needle back. The storage tube provides built-in needle protection after use.
5. Review Handout 7.3 **EpiPen® Use and Storage**. MAT certified child care providers may give epinephrine via an auto-injector device if the situation warrants it. Currently EpiPen® is the only product available that is a true “auto-injector”. If a parent supplies you with another type of epinephrine injector device, talk with your MAT trainer or your program’s licensing inspector to find out if it is considered an auto-injector device or not. If it is not considered an auto-injector device you would need to get additional training on the proper use of the device. Please be aware that the epinephrine product Twinject™ is part auto-injector and part injection. You **will** need additional training, as noted in the child’s Individual Health Care Plan, before you can give Twinject™ medication in a child day program.
6. Watch the “Treatment: Use of an Epinephrine Auto-Injector Device” video segment.
7. Review Handout 7.4 **First Aid Kit**
8. Watch the “First Aid Kit” video segment.

## **Module 8: Special Situations**

This module discusses special situations that may arise when administering medication to children in a child care setting. Topics include medication errors, children with special health care needs and things to consider regarding medication administration on a field trip.

At the end of this module, you will be able to:

- identify medication errors
- identify the steps to follow if a medication error occurs
- explain the appropriate action to take if a medication is not given
- define “child with special health care needs”
- explain the appropriate steps to developing an individual health care plan
- identify any additional training the staff may need
- identify the process for administering medication off the program site
- explain how to safely transport medication including medication requiring refrigeration when off the program site
- explain how to document medication given off the program site
- identify the components that should be included in the program’s field trip plan as it relates to medication administration

### **Instructions**

1. Review Handout 8.1 **Medication Errors** and Handout 8.2 **Medication Error Report Form**.
2. Watch the “Medication Errors” video segment.
3. Review Handout 8.3 **Children with Special Health Care Needs** and Handout 8.4 **Individual Health Care Plan for a Child With Special Health Care Needs**.
4. Watch the “Children with Special Health Care Needs” video segment.
5. Review Handout 8.5 **Checklist for Administering Medication on a Field Trip**.
6. Watch the “Field Trips” video segment.

### **Conclusion**

This section explains the provisions of the MAT certificate and additional requirements.

### **Instructions**

1. Review Handout Conclusion.1 **Next Steps**.
2. Watch the “Conclusion” video segment.

## Completing Part Two of the MAT Independent Study (IS) Practice and Testing

After completing Part One, you are ready to complete Part Two of the MAT Independent Study course. Part Two is the practice and testing portion of the training and must be completed in order to receive the MAT certification. Part Two **must** be completed with an *approved* MAT trainer.

Part Two is completed with an *approved* MAT trainer and consists of both practice time and skills testing. You will work with a MAT trainer to schedule approximately **3 hours** of time. One hour of this time will be used to review MAT concepts and to practice administering medication using materials provided by the trainer. The remaining time will be for completing the written test and skills tests. **IMPORTANT! If you need to retake any of the tests, you will need to schedule more time with the trainer.**

Remember, there **is a cost** to take Part Two of the MAT Independent Study; therefore, it is important that you talk with the trainer about fees for this testing and any payment requirements **prior** to scheduling Part Two. Additionally, you will need to provide **documentation of current certification in first aid and CPR** to the MAT trainer **before** beginning Part Two.

To find an approved MAT trainer, go to:

[https://www.dss.virginia.gov/family/cc\\_providertrain/mat/index.cgi](https://www.dss.virginia.gov/family/cc_providertrain/mat/index.cgi) and click on “Find a MAT Trainer Near You”. Enter the name of the city/town in which you would like to attend training and click on “search.” You will receive a list of approved MAT trainers who have indicated that they are willing to provide training in your locality; trainer contact information; and, fees charged per participant. MAT trainers are **not** employees of the Virginia Department of Social Services. You must contact the MAT trainer of your choice directly.

## Competency Tests

You must successfully complete both the written and skills tests in order to receive the MAT certification. The written test consists of 95 multiple-choice and true/false questions. The test is an “open book” test, which means you can use all of your handouts to take the test.

**Be sure to bring your own copies of the MAT Handouts when you get tested.** You must score at least 80% to pass the written test. The written test includes one or more questions marked with a star★. These are considered critical test questions and **must** be answered correctly in order to receive a passing score. If you do not correctly answer a critical question, you will automatically fail the test regardless of the % score. If you fail the written test on your first try, you will be allowed a second opportunity to pass another version of the written test.

You must complete **three** skills demonstrations. The skills demonstrations will test your ability to safely give medication using techniques covered in the MAT course. The three demonstrations include:

- A demonstration of your ability to follow the medication administration process, including preparing to give the medication, giving the medication and writing down that you gave the medication. You will randomly select **one** of the following routes to give medication to show the trainer you understand how to give medication safely: oral, topical, inhaled, medicated patch, and eye or ear following the Five Rights of Medication Administration

- A demonstration of your ability to measure liquid medication using either a medication cup, a dosing spoon or an oral medication syringe
- A demonstration of how to give an epinephrine auto-injector device in the event of a severe allergic reaction

The MAT trainer will review all of the necessary steps prior to the start of testing. Once you begin, the trainer will observe you complete each of the three (3) skills demonstrations. As with the written test, you can use all of your handouts while doing the skills demonstrations. You will be allowed two opportunities to correctly demonstrate your ability to safely administer medication using one of the routes of medication administration covered in the course, to safely measure liquid medication using one of the three (3) common dosing devices, and to safely administer an epinephrine auto-injector device. If after two attempts you do not successfully complete each of the three skills demonstration, you will not pass the MAT course and you cannot receive the MAT certification to administer medication to children in child day programs.

## Preparing for the Tests

You will be prepared to take the written test after you have reviewed and studied the handouts and video. Remember, you can use all of the handouts while taking the written test.

When preparing for the randomized skills demonstration, watch the video segment “Sample Skills Demonstration” video segment at the end of Module 5. This video segment shows a child care provider completing two of the skills demonstrations. In addition, review the “Pre-Demonstration Competency Practice” handouts used in Module 5. This information will help you prepare for the skills demonstration competency.

You will use handouts 4.5 (Medication Administration Phases) and handouts 5.1 – 5.18 (routes of medication administration) when completing the randomized skills demonstration with the MAT Trainer. Reviewing these handouts with the trainer prior to testing will help you prepare for the skills demonstration. Since the trainer is unable to coach or prompt you once the skills testing begins, be sure to ask the trainer any questions before you begin the skills testing.

To prepare for the liquid measuring skills demonstration, which measures your ability to correctly measure liquid medication using common dosing devices (medicine cup, dosing spoon and oral medication syringe), practice these skills with the MAT Trainer during practice time to ensure that you can use each type of dosing device correctly.

To prepare for the EpiPen® auto-injector skills demonstration, review Handout 4.5 (Phases of Medication Administration) and Handout 7.3 (EpiPen® Use and Storage) and practice giving this medication with your trainer during the practice time.

## MAT Training Certificate

Once you successfully complete the written and skills tests, you will receive a MAT certificate that indicates that you successfully completed the MAT course and demonstrated competency in the administration of medication in a child day program.

The MAT training certificate:

- certifies you to give medication in a child day program setting ONLY

- is good for three (3) years.
- identifies that **English** is the only language in which you can accept permission and instructions from the child's parent and health care provider. You cannot accept medication permission and instructions in any other language. This includes package inserts or related materials.

**REMEMBER: You MUST provide proof of identity (photo ID) and documentation of current first aid and CPR certifications when you arrive for completion of Part Two.**

### **Contact the MAT Program**

A MAT Program representative is available during regular business hours to answer general questions related to MAT Independent Study.

**Email:** [mat@dss.virginia.gov](mailto:mat@dss.virginia.gov)