HI. I'm Dr. Anthony Rostain, Professor of Psychiatry and Pediatrics at the University of Pennsylvania School of Medicine, and Director of the Adult ADHD Treatment and Research Program.

Learning Objectives
After completing this module you will be able to discuss strategies for follow-up care for the adults with ADHD including how to:

- Monitor clinical outcomes and adverse effects
- Titrate medications to achieve optimal improvement
- Improve patient adherence
- Address common misconceptions about ADHD medications.

Multi-Modal Treatment Approach for Adult ADHD

- Psycho-education
- Patient Self-Education re: ADHD (e.g. books, videos, DVDs, online resources)
- Environmental restructuring
- Coaching (life skills, organization, time management)
- Problem-focused Support Groups
- Medications
- Cognitive-Behavioral Therapy / Supportive Psychotherapy / Insight-oriented Therapy
- Couples / Family Therapy (as needed)
- Social Skills Groups
- Vocational Counseling

Role of the Primary Care Provider in Management of Adult ADHD
- Provide ongoing patient education, support and encouragement
- Identify target objectives for intervention
- Manage medications
  - Selection of initial and subsequent agents
  - Document clinical response
  - Monitor side effects
- Refer patient for psychosocial treatment
- Maintain long term contact

Role of the Primary Care Provider in Management of Adult ADHD

Now I want to talk about the role of the primary care provider in the management of adult ADHD, because I believe you have a very critical role to play. First of all providing ongoing patient education and support and encouragement is really vital here because many of our patients are very demoralized and confused about what can help them. You can play a very important role in getting the patients started in treatment. Another important role is to identify the target objectives for intervention. What specifically does the patient really want to see improve. Once you identify those target goals, select the right medication, document what is going on with that medication, monitor side effects and if necessary change the medication approach as the case may be. It is also important to refer the patient for psychosocial treatment. Above and beyond all else, it is essential that you maintain long term contact because this is going to be one the most important facets of successful treatment outcome.

FDA Approved ADHD Medications for Adults

- Oros Methylphenidate (Concerta®)
- Mixed amphetamine salts (Adderall XR®)
- Dexmethylphenidate (Focalin XR®)
- Lisdexamfetamine Dimesylate (Vyvanse ®)
- Atomoxetine (Strattera®)

You should be familiar with these different medications and when you select one of them, you should be able to inform your patient what the expected results will be and also what some of the problems they might encounter.

Guidelines for Medication Management of Adult ADHD

- Identify target symptoms – strive for remission
- Select appropriate treatment response measures
- Obtain data from multiple sources (e.g. spouse)
- Monitor side effects closely
- Titrate upwards until target response is achieved and/or side effects are causing concern
- Check for treatment adherence
- Switch or add other agents as indicated

Maintenance and Follow-up Care for Adults with ADHD: A Guide for Primary Care Providers
by Anthony L Rostain, MD, MA

Transcript from webinar from Adults with ADHD: Making Exam Room Decisions

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and you need to titrate the medication upward in a consistent way until you achieve either target symptoms remission or intolerable side effects that might lead you to have to switch medication. Another important facet of medication management is checking for treatment adherence, which we will discuss in a little more detail later. As I have mentioned before you may need to switch agents or combine agents as the case may be.

Sources of Outcome Data for Adult ADHD Pharmacotherapy

- Clinical Interview: Patient reports
- Standardized Self Report Measures
  - Conners’ Adult ADHD Rating Scale (CAARS)
  - Brown Attention Deficit Disorder Scale (BADDS)
  - Barkley Symptom Rating Scale
  - Adult ADHD Self-Report Scale
- Medication Response Log (individualized)
- Corroborative information

Why you need to take a long time to do this is that they can be difficult to measure. When you are first starting to use these, they are all the more important to keep in mind that if a patient isn’t responding well to your first medication there are different strategies you can use to improve the outcome.

Ratings Scales for Adults

Now it is also helpful to have patients fill out their own individualized medication response log. This is something they can keep with them and bring to each visit and you can track them on a day to day basis rather than just on an episodic basis. What are the side effects that they are having to get a better understanding of what the medication is doing for them.

Medication Response Form

This is an example of the Medication Response Form that I mentioned earlier. You can see the patients keep track of their own and can bring in and show you how they are doing. It asks the patient on a scale from 1 to 10 how well they think there concentrating, etc. And of course you can modify this for other target symptoms. So if impulsivity, or moodiness or irritability are a target for the treatment you can add those and substitute them for the different column heads on the form. This is just a way to get started.

Inadequate Response to Treatment

- Patients should be reassessed to make certain that the diagnosis is accurate; comorbid disorders should be reconsidered and treated as appropriate
- Sometimes a patient with an “inadequate response” has not received appropriate dose adjustment or treatment of side effects
  - Newly diagnosed patients may take 2 to 3 months to be stabilized on medication; physicians should plan and educate the patient accordingly
  - Frequent 20-minute office visits may be needed during titration

Inadequate Response to Treatment

Now if the patient is not responding the first important step is to be sure that you have an accurate diagnosis and that you are not missing something. Another important aspect is to look closely at the possibility of comorbid disorders. So for example, if the patient is highly anxious and taking medication, their anxiety is still very high and their ADHD symptoms are not responding, you might want to focus more on the anxiety before you get somewhere with ADHD. The same is true with treating depression with ADHD. So going back to the basics and looking at the patients profile be sure that there are not other comorbid conditions that need to be treated is a good first step. Another cause of inadequate response, which we see a great deal of, is insufficient dosing. It is really important to realize for some patients, it will take up to two to three months to figure out whether or not they are responders. Now you might need frequent office visits. Anywhere from 10 to 20 minutes should be sufficient, but having frequent contact during this time is very helpful to decide whether or not the medication you selected is the right one. It also facilitates adherence.

ADHD Treatment Algorithm

This is a treatment algorithm developed for children and adolescents. We do not have an algorithm of this type yet developed for adults with ADHD, but it gives you an idea of how to approach the different decisions and options you have for treatment outcomes. And this is actually quite similar to what we use at the University of Pennsylvania and other Practitioners across the country. You start with a stimulant and if that stimulant works, great. If it’s not working well, you might try a different stimulant; all the while making sure the patient is going for psychosocial treatments as needed. If the stimulants don’t work you might try atomoxetine, if atomoxetine doesn’t work you might try buproprion or tetracyclic (off label) or you might combine atomoxetine with a stimulant. You might use an alpha-2 agonist (off label). The point I am making with this slide is most of all think through that with each trial of medication you still have other options. There is hope and the patient should be told that there are many different ways to achieve a good outcome to reducing their ADHD symptoms.

Treatment Response

Now what about treatment response? Well what we know from studies is that some patients get wonderful response from treatment, and some get a partial response, and some don’t get any response at all or develop side effects. It is sort of the rule of thirds and it is important to keep in mind that if a patient isn’t responding well to your first medication there are different strategies you can use to improve the outcome.

Adjusting Medication

Now sometimes you are not only going to have to adjust the dose you may have to add different types of medications. So for example if you are giving a long acting stimulant during the day you might give an immediate release
it is really important, especially now, that we learn about the effects of ADHD treatment on medical conditions. For example, it is necessary in patients with cardiovascular problems and hypertension to monitor blood pressure and pulse prior to starting ADHD medication. If there is hypertension, address that before you start the ADHD treatment. Stimulants can be used effectively in patients with hypertension but you need to be careful so you are not counteracting the role of the anti-hypertensive.

**Managing Common Side Effects: Tics**

- Stimulant-exacerbated tics
  - Examine severity of tics
  - Rechallenge to examine if tics are stimulus-induced
  - Switch to atomoxetine, alpha-agonists, or atypical or typical antipsychotics (pimozide FDA approved)
- Combination therapies
  - Atomoxetine plus stimulant
  - Clonidine plus methylphenidate (3 studies)
- Physical plus other treatment

**Combining Agents**

- Stimulants may be combined with atomoxetine when patients do not respond adequately to either medication alone
- Clinical trials have been conducted on the following combination therapies:
  - Atomoxetine and methylphenidate
  - Clonidine and methylphenidate
  - Desipramine and methylphenidate

**Functional Remission**

- Particularly with adult patients, medication may result in remission of symptoms, but functional improvement remains
  - Patients may still lack organizational skills, social skills, academic and workplace skills; their adaptive behavior remains a problem

**Psychosocial Treatment**

- Patients may benefit from specific training in organizational skills
  - Cognitive behavioral therapy has been used to treat ADHD—either alone or in combination with medication

**Managing Comorbid Conditions: Hypertension and ADHD Treatment**

- Evaluate blood pressure/pulse prior to initiating ADHD treatment
- Address hypertension before treating ADHD
- Once hypertension is controlled, treat ADHD and monitor blood pressure
- Stimulants have a clinically insignificant effect on blood pressure in treated, normotensive adults

**Comorbid Medical Conditions: Heart Disease and ADHD Treatment**

- Possible causes for concern
  - History of palpitations or arrhythmia
  - Recent myocardial infarction
  - Syncope, episodes, dizziness
  - Multiple risk factors, such as smoking, high body mass index, hypertension, metabolic syndrome
- Maximum cardiac medications and address risk factors; patients with ADHD may find it difficult to make necessary lifestyle changes
- Introduce ADHD medication at a low dose and titrate up slowly
- Monitor symptoms, blood pressure/heart rate regularly
- Longer-term effects of ADHD medications on cardiovascular status

**Comorbid Medical Conditions: Diabetes and ADHD Treatment**

- Studies of stimulants and nonstimulants on blood sugar regulation in diabetes mellitus unclear
- Longer-term studies do not show glucose dysregulation associated with stimulant or nonstimulant treatment in nondiabetic children, adolescents, and adults
- Stimulants and nonstimulants to a lesser extent may cause appetite suppression and reduced binge eating
- ADHD patients may find lifestyle modifications difficult
- Get ADHD stabilized before trying to get tight control of diabetes
- Monitor for symptoms or evidence of glucose dysregulation with ADHD treatment

**Managing Common Side Effects: Insomnia**

- For stimulant-induced insomnia
  - Melatonin
  - Clonidine
  - Tricyclic antidepressant
  - Trazadone
  - Mirtazapine
  - Antihistamine (acetely)

**Managing Comorbid Conditions: Diabetes and ADHD Treatment**

- It turns out that diabetes is a growing concern but stimulants do not appear to cause any major disruption in the regulation of glucose. Now one problem we find with stimulant usage is that individuals may not be eating properly, so if the patients does have diabetes, you have to be sure that they are not changing their dietary practices too drastically once you introduce the stimulant. So, again educating the patient and making sure that blood sugar regulation is being followed properly is an important preventive step to avoid hypoglycemia.
Organizational Strategies

- Self-help
  - Adding structure and routine to daily activities
- Organizational strategies (PDAs, combination phones) and software (e.g. Outlook) for scheduling
- Setting call phone alarms as reminders for daily activities
- Coaching
  - Time management
  - Motivational enhancement

Organizational strategies are available now from a number of sources. There are some self-help groups around. There are new organizing technologies using cells phones, PDAs, etc. This can help the patient organize their lives with time management and can enhance the motivation of patients to complete difficult tasks. Your Adult ADHD Toolkit contains some very nice handouts and patient education materials that address organizational strategies.

Improving Adherence — I, II, III

Improving Adherence — I

To address the question of adherence, from many studies and from our clinical work over years, we know the most important variable in improving patient adherence is the strong therapeutic relationship between the primary care provider, the patient, and with the support network. The treatment team and the family all need to be onboard supporting the patient and helping them stay committed to treatment. Regular follow-up also helps and we tend to sometimes overlook the importance of just a very brief contact. If they don’t want to come into your office, you can arrange a phone call or an e-mail message if you choose to communicate with your patients that way. But regular feed back and discussion keeps the patient engaged in the treatment process and is more likely then to adhere to the medication plan.

Improving Adherence — II

Another important tool for improving adherence is using long acting medication. If one of the major problems is forgetfulness, having a patient take three pills a day is not going to work for most patients. So long acting medications reduce the complexity of the treatment plan and we see better adherence rates for these agents. Also getting somebody involved in giving support and coaching improves adherence, as do repeated education sessions. So don’t think the very first time you speak to your patient about ADHD that, that’s it. We tend to reinforce key points about ADHD at each visit and encourage patients to look how they are organizing their lives and handling time.

Lack of Follow-up

- Patients with ADHD may not return for treatment once the immediate crisis has passed
- They may be impulsive or forgetful and may neglect follow-up
- They may not consider their treatment issues or important treatment side effects
- Additional problems in their lives compete for attention
- Encourage dialogue to learn about the reasons for lack of ongoing follow up
- Use contracts for patients who are inconsistent with follow-up do not refill medications unless patients keep to the contract

Lack of follow-up

Now what about not following up, this is a really important primary care concern. The best thing to do in this situation is to just set up a dialogue to try find out what’s the reason behind the lack of follow up. Very often patients just don’t follow-up because they are just so forgetful they just forgot they had an appointment or they may think they are a little better, everything is fine and they don’t need to come back to see you anymore. Most often our patients seem to tell us, when we ask them, they don’t come back for a follow up because too many other things are going on in their lives—maybe they are too busy, maybe they are too overwhelmed. So we found that using contracts and giving the patient the understanding that for you to continue providing care and refilling the medication, they need to be willing to provide you with on-going information. Office visits or phone calls allow you to maintain an understanding of how they are doing and how they are responding.

Misuse of Stimulant Medication

Misuse of stimulants is a concern for everybody. In fact this fear of patient diversion, and of patients selling their medications or misusing leads many primary care providers to avoid using stimulants. It turns out that the long acting stimulants have much less abuse potential and most of our patients can be trusted. Those that have substance abuse problems, those that have other conduct disorder histories, we might have to think more carefully how to go about helping them with their ADHD. Far and away the majority of our patients use their medications appropriately. If you hear about abuse it is very important to directly confront this issue. This is most worrisome in the college age and young adult patients who are often times using the medications for purposes that they were not indented. Education and monitoring closely are essential. As far as misuse goes, this comes in two forms: (1) either overusing the medication—staying up too long and/or to lose weight; or (2) under using medication which can lead to a less than optimal response. Therefore, each time you meet with a patient, it is very important to discuss how they feel about the medication, how they are using the medication, or the problems they are encountering with the medication.

Distorted Beliefs About Medications

A lot of patients have distorted beliefs. For example, some of them think this is a magic pill and everything will be solved. Inevitably these patients are disappointed to learn that this can solve some problems like helping them to focus, but it won’t do their homework for them, or it won’t solve there marital conflict, or it won’t get there tax returns finished. So, too many expectations might lead the patient to become disappointed. You might inquire about how they feel about the medicine and what are they hoping it can do. You can then give them a more realistic view about the medication. Another common misconception about the medication is that somehow taking it makes them an addict or somehow they doing something like they are cheating. Maybe they are thinking it is a cognitive steroid. Once again it is important to educate the patients and address their concerns in the following way. “You have a condition known as ADHD. This is a medication that helps you condition be less impairing for you and it levels the playing field. It is not that your cheating and it’s not that you’re an addict. These are very well controlled clinical tools for you to use and for us to monitor together.”

Summary

So let me summarize by saying first of all, the primary care provider plays a vital role in the ongoing care of adult patients with ADHD. Secondly, patient care means proving education, support and encouragement as well as providing target objectives for intervention. Thirdly, a systematic approach to medication management includes selecting treatment response measures, obtaining data from multiple sources, adjusting dosage, monitoring side effects, and checking for treatment adherence. Finally, it is vital to maintain frequent contact and to continue an open dialogue in order to maximize treatment outcomes.

Thank you very much.