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## Introducing an Adult ADHD Toolkit for Application in Collaborative Care

### Acknowledgements

Thanks to the adult ADHD workgroup, ISAC members, and other providers involved in the creation of the toolkit for their support of this project.

## INNOVATION HIGHLIGHT

# Development of Adult ADHD Toolkit for Use in Collaborative Care

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<b>Introduction:</b>	Providers in collaborative care have been challenged to respond to rising patient complaints about attention deficit hyperactivity disorder (ADHD) in adulthood, and institutional guidance has been insufficient. To address this issue, an Adult ADHD Toolkit was created for providers in primary care and psychiatry. This article reviews how the toolkit was developed and what it contains, as well as future directions for its application.
<b>Methods:</b>	A workgroup of providers from different backgrounds developed materials for an adult ADHD toolkit based on a review of adult ADHD literature and clinical consensus.
<b>Results:</b>	The Adult ADHD toolkit summarizes a triage model for approaching patient complaints related to ADHD. It contains a handout for providers with tips for diagnosing and treating ADHD in adulthood, as well as in-depth information about assessing and managing the disorder. It also contains materials for patients.
<b>Discussion:</b>	The toolkit addresses common dilemmas encountered by providers and patients when evaluating and managing adult ADHD, a complex condition that requires an individualized treatment plan.
<b>Conclusion:</b>	More information is needed about the feasibility and implications of adapting the Adult ADHD Toolkit. Such information could help guide future efforts toward improving patient outcomes through a collaborative care model.
<b>Keywords:</b>	attention deficit hyperactivity disorder, adult, collaborative care, practice guidelines

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Collaborative care involves the integration of primary care and psychiatry. It is an effective treatment strategy for common mental health conditions, such as major depression and anxiety disorders.<sup>1</sup> Less well known is how patients and providers in collaborative care manage more complex conditions, such as attention deficit hyperactivity disorder (ADHD) in adulthood. Previously relegated to the child/adolescent population, ADHD is now widely embraced by the medical community as a condition that can persist into adulthood.<sup>2</sup> Characteristics of adult ADHD include inattention, disorganization, hyperactivity, and impulsiveness. ADHD affects approximately 4% of adults<sup>2</sup> and can have profound consequences, such as academic/occupational failure, legal

difficulties, relationship dysfunction, adverse health outcomes, and higher medical costs.<sup>3</sup>

The rising number of patients presenting for the evaluation of adult ADHD<sup>4</sup> has posed a challenge to providers, many of whom feel uneasy and ill-prepared.<sup>5</sup> A survey of 1,216 primary care physicians showed that 36% were not at all confident in treating ADHD in adulthood, and only 8% were very confident.<sup>6</sup> This issue is compounded by the limited availability of institutional and national guidelines for managing ADHD in adulthood.<sup>6</sup> The American Psychiatry Association, the largest psychiatric organization in the world, has no practice guidelines for ADHD<sup>7</sup>, and other existing guidelines emphasize treatment with stimulants at the expense of alternative treatment options.

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In fall 2016, the Integration Support Advisory Committee (ISAC) at MaineHealth, which is dedicated to enhancing collaborative care efforts

at Maine Medical Center (MMC), completed a needs assessment. This assessment indicated that primary care providers wanted help addressing adult ADHD. They wanted advice about best practices, screening tools, and knowing when to refer patients to behavioral health. In response, ISAC spearheaded the development of an Adult ADHD Toolkit that could be used by collaborative care providers in the MaineHealth system. This article reviews how the toolkit was created and what it contains, as well future directions for its application.

## METHODS

In winter 2016, ISAC assembled a workgroup of providers who volunteered to develop an Adult ADHD Toolkit. A facilitator organized and oversaw the project. The intent of the toolkit was to help providers manage the complexities of ADHD in adulthood and establish practice standards within a collaborative care model. The workgroup consisted of 8 MMC providers representing psychiatry, neuropsychology, psychology, social work, and primary care. Other specialties (e.g., pharmacy) were consulted as needed.

Between January 2017 and June 2017, the workgroup met 6 times to discuss the format of the toolkit, essential assessment and treatment recommendations, and the advantages/disadvantages of different rating scales for assessment and monitoring. The workgroup also established a triage model for addressing patient concerns, as well as definitions for the roles of collaborative care providers.

Materials in the toolkit were original and generated based on a literature review and clinical consensus. Workgroup members examined selected publications, including articles in peer-reviewed journals,<sup>2,8,9,10,11</sup> textbooks by leaders in the field of ADHD,<sup>12,13</sup> and available national guidelines.<sup>14</sup>

The facilitator summarized workgroup discussions in the original draft of the Adult ADHD Toolkit. Later drafts were edited between June 2017 and April 2019 based on feedback from ISAC and workgroup members. An area of disagreement that arose while editing the toolkit was wording around stimulants being a superior treatment option. The members reached consensus on the matter, emphasizing the use of alternative treatments, the need for careful

screening and monitoring with stimulants, and the importance of using functional outcomes.

Currently, the toolkit is being implemented through in-service meetings with collaborative care providers at MMC. It is being distributed through printed copies and electronically via the MMC intranet.

## RESULTS

Collaborative care providers do not have to read the entire Adult ADHD Toolkit. Instead, they can use individual sections as needed. Summary materials are presented at the beginning, and more detailed information is in the appendix (Table 1).

The toolkit summarizes a triage model for approaching patient complaints related to ADHD. This model defines the role of primary care providers, behavioral health clinicians, and psychiatrists, and it depicts a decision tree that depends on the complexity of the patient's presentation. Higher levels of complexity require more ancillary support, and the toolkit offers examples of when to refer patients to behavioral health specialists. Psychiatry contact information is specified, and phone consultation with a psychiatrist is available at all complexity levels.

The toolkit also contains a handout for providers that describes essential tips regarding diagnosing and treating ADHD in adulthood. The handout has an evaluation checklist and information on differential diagnoses to rule out. The checklist includes establishing whether the patient's condition is chronic and onset in childhood, corroboration of the patient's history, use of validated rating scales (e.g., the Conners' Adult ADHD Rating Scales, Weiss Functional Impairment Rating Scale), and use of functional outcomes. Pharmacological and nonpharmacological treatment options are summarized (Table 2). A medication table with dosing instructions, Food and Drug Administration (FDA) indications, and Maine Medicaid preference status is included. Also, recommendations on safe prescribing practices for stimulants are given.

The toolkit also contains materials for patients. The Adult ADHD Info Sheet provides an overview of adult ADHD and information about signs and symptoms, causes, diagnosis, and treatment of the disorder. The Adult ADHD Resources Sheet lists

useful books, magazines, articles, websites, and podcasts.

The end of the toolkit contains an Appendix with more in-depth information about assessing and managing adult ADHD. This section offers further guidance on how to safely prescribe stimulants, what rating scales to use, and how to use the scales at different stages of treatment. It also contains information about approaching comorbidity with adult ADHD (e.g., mood disorders, anxiety disorders, substance use disorders, psychotic disorders), and an Assessment Worksheet that guides practitioners through a patient interview using pertinent adult-oriented questions.

## DISCUSSION

In developing the Adult ADHD Toolkit, concerted effort was put into tackling challenges commonly seen in adult ADHD (Table 1). To address concerns about the rise in nonmedical use of stimulants<sup>20</sup>, the toolkit underscores when stimulants are contraindicated, offers guidance on safe prescribing practices, and summarizes effective nonstimulant treatment options (Table 2). Nonstimulant treatments do not have secondary status in the toolkit. Rather, adult ADHD is a complex condition that requires an individualized treatment plan. Additionally, applying functional outcomes is recommended for monitoring a patient's course and supporting the treatment plan, especially when stimulants are prescribed.

In the child/adolescent population, patient complaints are typically accompanied by parents' and teachers' concerns. Conversely, in adult-focused practices, providers frequently rely solely on patient histories, which are often unreliable.<sup>8</sup> To account for this challenge, the toolkit stresses the importance of corroborating a patient's history. It also offers tips on accomplishing this task in a busy practice, such as using behavioral health clinicians and having informants complete rating scales designed for use in adult ADHD.

Several limitations exist related to the Adult ADHD Toolkit. For example, the literature contains limited quality research on ADHD in adulthood. Given the absence of head-to-head trials, knowing when and how to integrate pharmacological and nonpharmacological treatments is unclear. To overcome gaps in knowledge about best practices, the workgroup relied on consensus of each member's clinical experience. A potential consequence of this approach is that the opinions

of the workgroup may have been influenced by personal and group misconceptions of clinical norms. Additionally, because patient input was not sought in developing the toolkit, the toolkit may be suboptimal from a patient's perspective. While more conservative recommendations around prescribing stimulants were established to minimize public-health risk, some patients and providers may view these recommendations as restrictive.

The process of creating the Adult ADHD Toolkit presented an opportunity to begin asking and answering important questions about the clinical management of mental health conditions in collaborative care. For example, how can guidelines be optimally developed and disseminated across medical departments? A common request during in-service meetings has been whether the toolkit can be integrated into the electronic medical record (EMR). While this request is being evaluated, it is complicated by the use of different EMRs in the primary care and psychiatry specialties at MaineHealth.

Another question regarded whether implementation of the toolkit would affect provider perceptions of adult ADHD and/or prescribing practices. Answering this question could reveal how more complicated mental health conditions can be safely and effectively addressed within a collaborative care model. It can also help to flesh out more specific provider strengths and weaknesses related to adult ADHD. A quality improvement project underway at MaineHealth aims to answer this question.

## CONCLUSIONS

ADHD in adulthood is more prevalent than ever and associated with a variety of negative outcomes for individuals and society. Collaborative care offers a unique opportunity to coordinate management of this complex condition between providers. The Adult ADHD Toolkit provides a framework to discern adult ADHD and assist with treatment planning for patients with complicated histories. The toolkit intends to help providers balance patient requests with safe and efficient practices. Because the toolkit cannot guarantee specific outcomes, discretion must be used in applying it to individual patients. More work is needed to determine the process for successfully implementing the toolkit, and whether it is useful and effective for providers and patients. If so, wider implementation of the toolkit will be considered.

**Table 1:** Adult ADHD Toolkit Summary

<b>Table of contents</b>	<b>Topics addressed</b>
Introduction	Intent and limitations of the toolkit Psychiatry contact information
Triage Model	Collaborative care provider roles Characteristics of low, moderate, and high complexity cases When to refer a patient for additional care
Assessment and Treatment Overview	Basic assessment, treatment, and monitoring tips Differential diagnosis of ADHD in adulthood What rating scales to use and when Treatment options with a supportive evidence base How to use functional outcomes How to know when treatment is working
Medication Table	Medication dosing, FDA approval, and Medicaid coverage When to prescribe a nonstimulant vs. stimulant
Adult ADHD Info and Resources Sheets	General information about adult ADHD and resources for patients
Appendix	Detailed assessment, treatment, and monitoring tips Pros and cons of rating scales applicable to adults Pertinent adult-oriented questions to use in an evaluation Treatment planning for more complex cases Safely prescribing stimulants

**Table 2.** Treatment Options for Adult ADHD

Nonstimulant medications <sup>9,12,14</sup>	Nonstimulants are effective and can help with comorbid psychiatric symptoms, such as depression and anxiety. They can be used as monotherapy or with stimulants.
Stimulant medications <sup>9,12,14</sup>	Given the potential public health and individual risks, stimulants should be considered only after a thorough evaluation that rules out potential complications and contraindications. There are two categories of stimulants, methylphenidate- and amphetamine-based, which have similar efficacy and tolerability. If a patient does not benefit from a stimulant in one category, a stimulant from the other category can be trialed.
Patient education <sup>15</sup>	Patient education is an essential part of managing adult ADHD. Independent of medication, duration of treatment, and outcome, the strongest predictor of patient satisfaction appears to be education received from providers.
Psychotherapy <sup>9,10,12,13</sup>	Psychotherapy is an effective treatment strategy, especially for patients who prefer psychotherapy, have an inadequate response to medication, or present with psychiatric comorbidity. Psychotherapists can help patients use adaptive problem-solving techniques and offer cognitive reframing for symptoms of depression, anxiety, demoralization, procrastination, and perfectionism.
Vocational counseling <sup>16</sup>	Vocational counseling can help patients identify work strengths and weaknesses, find available job opportunities, address workplace challenges, and restructure their work environment to improve job performance.
Exercise <sup>17</sup>	Regular exercise provides physical and mental health benefits, and it helps to increase levels of brain-derived neurotrophic factor, a protein involved in learning and memory.
Diet <sup>11,14</sup>	Elimination diets may benefit patients with food sensitivities related to artificial coloring, gluten, dairy, nuts, and other offending ingredients.
Nutraceuticals <sup>11,12,18,19</sup>	Promising nutraceuticals include omega-3 fatty acids, pycnogenol (pine bark), valerian, passion flower, and ginseng.

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**Conflicts of Interest:** None

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