



Transitioning from Adolescence to Adulthood

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LEARNING OBJECTIVES

1. Distinguish age-related tasks of developing self-sufficiency and pursuing independence of medication therapy management.
2. Assess barriers in health care transitions from adolescence to adulthood.
3. Analyze specific considerations for health care transition to adult care for special populations within the pediatric setting.
4. Develop a successful program to assist adolescents who are transitioning their health care to adult care.

ABBREVIATIONS IN THIS CHAPTER

AAP	American Academy of Pediatrics
HCT	Health care transition
SHCN	Special health care need

[Table of other common abbreviations.](#)

INTRODUCTION

Transitioning from pediatric to adult health care can be an especially daunting task for young adults and their families (White 2018). Providers of adult health care have identified numerous concerns with pediatric patients transitioning to adult health care. Specifically, pediatric patients may struggle with adherence to medication regimens, may have overall health care knowledge deficiencies, and may have limited self-care skills. Preparation should start at an early age with family involvement in discussions related to health care. As time progresses, adolescents should be allowed to communicate directly with the health care provider regarding the ongoing health care plan. Adolescents, their families, and health care providers must work collaboratively to develop seamless transitions in care that effectively foster long-term quality health care (Spencer 2018).

Unfortunately, most pediatric patients do not receive adequate preparation and transition from pediatric care to the adult health care setting. An estimated 83% of children between age 12 through 17 years with SHCNs do not meet national HCT performance measures. Similarly, 86% of children between the ages of 12 through 17 years without SHCNs are estimated to not meet national HCT performance measures. These measures are calculated to reach a composite score based on three factors. The first factor is the extent of time the pediatric patient had to speak alone with the health care provider during the most recent preventive visit. The second factor is the time spent by the pediatric health care provider with the pediatric patient working toward development of self-care skills. The third factor is whether the pediatric health care provider discussed the transition to an adult health care provider before the appropriate transition time (White 2018).

These deficiencies highlight the lack of time pediatric patients may have to speak directly with their physician or health care provider during clinic visits about transitioning into adult care. Consequently, this limitation may directly impact the quality of the adolescent's transition from

pediatric to adult care. Although the physician or health care provider should work with the adolescent to gain proficiency in self-care and the confidence to navigate a vastly different adult health care setting, they may not have adequate time to devote to this task (White 2018). From the perspective of the adolescent patient who is transitioning from pediatric to adult health care, three main domains of concerns may arise (Figure 1).

It is important to note that AAP provides a comprehensive guideline for pediatricians and families to follow called Bright Futures. This guideline is a schedule of screenings and assessments that are recommended at each well child visit from birth through adolescence. Well child examinations are recommended more often in the first few years of life; once a child reaches the age of 3 years, the guideline recommends an annual wellness visit each year through

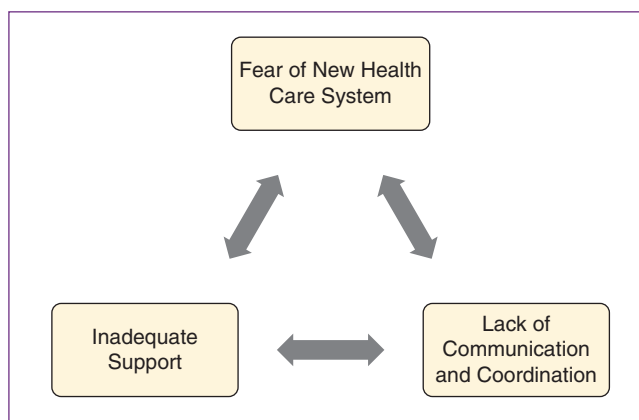


Figure 1. Potential concerns from the youth perspective for transitioning from pediatric to adult health care.

Information from: White PH, Cooley WC, Transitions Clinical Report Authoring Group, et al. Supporting the health care transition from adolescence to adulthood in the medical home. *Pediatrics* 2018;142:e20182587.

BASELINE KNOWLEDGE STATEMENTS

Readers of this chapter are presumed to be familiar with the following:

- For this chapter, the following definitions are used:
 - Child/pediatric patient: age 0 to 18 years
 - Adolescent patients: age 10 to 19 years
 - Young adult patients: age 18 to 26 years
- Basic understanding of health care use and the role of the pharmacist in improving associated outcomes
- Basic understanding of patient-centered medical home and the role of the pharmacist in quality improvement within this setting
- Chronic disease states impacting the pediatric patient population versus those more profoundly impacting the adult patient population
- Medication therapy management for pediatric primary care disease states, such as asthma and attention deficit and hyperactivity disorder
- Role and functionality of a pediatric pharmacist within an ambulatory care outpatient clinic and the patient-centered medical home

[*Table of common pediatric laboratory reference values.*](#)

ADDITIONAL READINGS

The following free resources have additional background information on this topic:

- White PH, Cooley WC, Transitions Clinical Report Authoring Group, et al. [Supporting the health care transition from adolescence to adulthood in the medical home.](#) *Pediatrics* 2018;142:e20182587.
- American Academy of Pediatrics, American Academy of Family Physicians, American College of Physicians, et al. [Supporting the health care transition from adolescence to adulthood in the medical home.](#) *Pediatrics* 2011;128:182-200.

21 years. Consistently following this guideline is thought to result in prevention of illness, tracking of improved growth and development, allowing the family to raise concerns and ask questions regarding their child’s health, and building long-lasting relationships that result in a more team-based approach to the care of the child (Hagan 2017).

Young adults increasingly are recognized as an especially vulnerable population in the health care system. The underuse of health care in young adults may exacerbate the emergence and possible worsening of chronic health conditions and behavioral health conditions within this patient population. A successful HCT program must raise awareness among young adults, families, and health care providers of the continuity of care that must exist to appropriately transition an adolescent patient into the adult health care setting (Society for Adolescent Health and Medicine 2017).

The intent of this chapter is to distinguish tasks to develop self-sufficiency in medication therapy management in young adults, to assess and navigate barriers within HCTs for adolescents, to consider special populations within the pediatric setting that may experience additional hardships during this transition, and to discuss the development of a successful HCT program to assist with an adolescent’s transition to the adult health care setting. This chapter will also highlight the updates from the 2018 AAP Clinical Report, “Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home,” and the critical need for pediatric and adult health care providers to work collaboratively to ensure the best ongoing outcomes for the young adult population. This AAP Clinical Report draws on both American and international work and experience in implementing transitional algorithms into clinical practice and reviews new transitional research and data to assist in the transition phase (White 2018).

Creating an effective means of transitioning an adolescent to adult health care is an ongoing and evolving process. An emphasis should be placed on self-determination, self-management, and family or caregiver engagement (White 2018; Meleis 2010). In the United States, 25 million youth are between age 12 to 17 years (US Census Bureau 2016). The 2016 National Survey of Children's Health is representative of more than 20,000 youth between age 12 to 17 years (Lebrun-Harris 2018). The survey asked parents and/or caregivers if transition planning occurred for their child as they progressed from pediatric to adult health care. The core elements of this transition planning are the following: (1) the physician or health care provider discusses how the transition phase will evolve for the adolescent patient to transfer care to another health care provider who cares for adult patients; (2) the physician or health care provider actively engages with the adolescent patient to gain self-care skills and understand changes in health care when entering adulthood; and (3) the youth have sufficient time with the physician or health care provider during the last preventive visit to discuss concerns and the transition period from pediatric to adult health care. The survey revealed only 14% to 17% of youth received adequate transition planning. This survey also highlighted the need for physicians and health care providers to work with adolescent patients to gain adequate self-care skills to be able to transition to adult care and to manage their medications and overall treatment plans more independently. The survey was consistent for both adolescents with SHCNs and those without SHCNs, further supporting a gradual transition and encouragement of independence versus an immediate transition that may harbor fear and create unwanted barriers to a successful transition.

The pharmacist can play a major role in assisting the adolescent with self-care development as it relates to medication adherence (Table 1). Unfortunately, the pediatric population struggles with medication adherence. Rates of medication adherence in the pediatric population vary, but range from 11% to 93% depending on the age group and chronic disease state. Pediatric patients with rheumatoid arthritis, post-transplant therapy, cancer, and/or epilepsy have medication adherence rates that range between 50% to 60%, whereas 20% of pediatric patients with attention deficit and hyperactivity disorder are estimated to discontinue therapy within 4 months after initiation, and some as soon as after the first prescription fill (El-Rachidi 2017). One of the most nonadherent pediatric patient groups is adolescents (age 12 to 18 years), with adherence rates as low as 5% in some studies (El-Rachidi 2017). Nonadherence unfortunately may lead to unwanted health care expenditures because of emergency department use, hospital admission, or simply slower recovery time. Nonadherence may impact the patient, family, and health care system at large (El-Rachidi 2017).

Spending time with the patient, family, and caregivers is an essential component to reinforcing medication adherence. As a pharmacist or health care provider, making the time to

Table 1. Medication Adherence Barriers and Solutions

Barrier	Solution
Culture/ socioeconomic status	<ul style="list-style-type: none"> • Using drug manufacturer rebate programs • Taking advantage of any medication assistance programs • Assisting with transportation and other socioeconomic barriers impacting overall health care • Using generic medications • Creating an environment of cultural competence
Language	<ul style="list-style-type: none"> • Providing handouts in patient's native language • Providing translated handouts • Utilizing interpreters for communication with patient and family and/or caregivers
Stress and family conflict	<ul style="list-style-type: none"> • Educating all family members and/or caregivers • Creating and building medications into daily routine • Creating medication calendars, phone apps/reminders, plans to decrease missed doses
Scheduling	<ul style="list-style-type: none"> • Simplifying scheduling (once or twice daily as opposed to multiple daily doses) • Avoiding middle-of-day doses • Discussing alternatives with prescriber if adherence is an issue for the patient
Taste	<ul style="list-style-type: none"> • Mixing with food • Chilling medication(s) • Flavoring (if compatible) • Considering patient-preferred dosage form
Health literacy	<ul style="list-style-type: none"> • Counseling family and/or caregivers • Counseling patient • Providing written handouts to supplement education • Considering phone call follow-ups in between clinic visits • Encouraging teach-back method during education sessions to ensure understanding

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create a lasting and collaborative relationship may profoundly influence adherence if carried out consistently and tailored to meet the individual patient's requirements. Studies have shown that patients and their family and caregivers are able to immediately recall 50% of the instructions provided during a clinic visit. With the aid of a pharmacist providing verbal counseling, phone call follow-up, and written communication, this statistic may be improved (El-Rachidi 2017). It is important for the pharmacist to have a working knowledge and the ability to provide effective patient counseling to increase the likelihood that patients successfully adhere to their medication regimen. Effective patient counseling skills will further help in the development of the relationship between patient and pharmacist (Box 1). In addition, creating a nonjudgmental environment will encourage open and honest communication (Taddeo 2008). From the perspective of the adult and

Box 1. American Society of Health-System Pharmacists Guidelines on Pharmacist-Conducted Patient Education and Counseling

1. Establish a relationship with the patient and/or family
 - a. Introduce yourself as the pharmacist
 - b. Explain the purpose of the counseling session and anticipated length of session
 - c. Obtain patient's and/or family's consent to counsel
 - d. Determine the patient's primary spoken language and need for assistance with communication
2. Assess patient and/or family knowledge and attitude (by open-ended questions)
 - a. Assess understanding of purpose of each medication
 - b. Assess patient expectations of medications and overall care
 - c. Assess understanding of how the patient will use each medication
3. Provide information orally and by demonstration to bridge any gaps in knowledge
 - a. If dispensing medication(s), open the medication containers to show color, size, shape, and markings of solid dosage forms
 - b. Show patient and/or family dosage marks on measuring devices of liquid formulations
 - c. Demonstrate the assembly and use of administration devices like nasal and oral inhalers
 - d. Provide written handouts in patient's primary language to supplement understanding
4. Verify patients' knowledge and understanding
 - a. Ask patient and/or family to demonstrate by teach-back method how they will use their medication(s) and/or device(s)
 - b. Observe patient and/or family medication use capability and accuracy
 - c. Assist with further clarification of appropriate use of medication and/or device as needed

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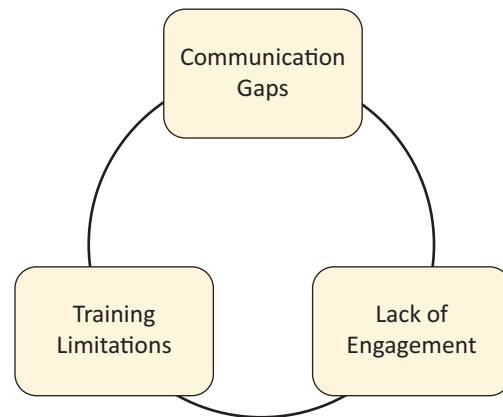


Figure 2. Potential concerns from the adult and pediatric health care provider perspective for patients transitioning from pediatric to adult health care.

Information from: White PH, Cooley WC, Transitions Clinical Report Authoring Group, et al. Supporting the health care transition from adolescence to adulthood in the medical home. *Pediatrics* 2018;142:e20182587.

pediatric health care provider, three main domains of concerns may arise (Figure 2).

When considering how to encourage an independent adolescent patient who is ready to transition to adult care, the pharmacist must also review potential barriers identified by health care providers themselves. Communication may be inadequate among pediatric providers and children's hospitals and providers of adult health care and general hospitals. The pharmacist may be called to serve as a liaison to bridge the gap in communication (Smith 2014). During this transition time, with the recognition that every patient is different, it is important for the pharmacist to use communication strategies that are individualized to meet the specific patient's requirements. Demand is growing for telemedicine and virtual communication in providing care for young adults. These strategies may also be considered in communicating during the transition process with both pediatric and adult health care providers. Teamwork is essential in creating an effective environment of communication whether in person, by telephone, or by telemedicine. Working to collaborate with other team members while engaging the patient in clinical decision-making may lead to a more successful transition from pediatric to adult care (White 2018).

Many adult providers may believe they are limited in providing the quality of care needed for pediatric patients who have multiple chronic disease states because of a lack of training within this specialty area. Traditionally, adult primary care providers manage many adult chronic conditions outside of the specialist setting. This approach differs vastly compared with the pediatric health care approach. In addition, pediatric chronic conditions can be complex in nature

and immensely different compared with adult chronic conditions (White 2018; Tanner 2017).

Lack of engagement in health care is another potential barrier to successful transition. Young adults may not realize the importance of quality health care and may not exhibit appropriate self-care skills if not correctly transitioned from pediatric to adult care. Adolescent patients may be dependent on family and caregivers as well and may be unprepared to advocate for their own health care needs. In addition, health care providers may underestimate or overestimate the baseline knowledge and understanding of medication therapy management, disease states, and overall health care of an adolescent or young adult patient (White 2018; Philbin 2017).

It is important to consider potential barriers both from the perspective of the adolescent patient and family and the perspective of the health care provider when determining how to effectively transition an adolescent patient to adult health care. Emphasis should be placed on a gradual and ongoing development of self-care skills throughout childhood to later aid in the transition from pediatric to adult care. Self-care skills can be as simple as an adolescent taking responsibility for filling his or her own pillbox or setting a reminder on an electronic device to take medications daily as directed. The pharmacist should recognize the opportunity to make an impact with medication adherence and further development of self-care skills through collaboratively working with the patient, family, and caregivers. Keeping in mind system barriers identified by the health care team, the pharmacist can work with the team to create transitions in care that encourage adequate development of self-care skills, transparent communication between pediatric and adult health care services, care coordination with supportive care services as clinically indicated, and engagement of the adolescent patient post transition to adult care (White 2018; Sobota 2017; Garvey 2016; Okumura 2010).

The pharmacist and health care team can play an integral role in preventing and overcoming potential barriers. Some of the greatest barriers to navigate are communication and care coordination gaps. Without streamlined guidelines and protocols in place to assist throughout the process of transition, the patient is not set up for the best outcomes. Many pediatric patients with chronic disease states are accustomed to seeing multiple subspecialists to assist in their overall care. It is the fear of many adult health care providers that an insufficient number of subspecialists are available for these patients to transition, and the adult primary care provider may not be comfortable caring for the needs of a young adult with multiple chronic conditions that are beyond traditional clinical practice (White 2018; Okumura 2010; Peter 2009).

Even if a patient can successfully transition to an adult primary care provider and subspecialists, another concern during this transition period is loss of both medical and prescription insurance coverage. Assistance with understanding insurance coverage for prescription medications is an especially important area for pharmacist intervention and

assistance. Pharmacists may be able to identify indigent care coverage during times when an adolescent patient is transitioning care while uninsured. A pharmacist may also be able to identify medication assistance programs for individual drug products for patients without insurance or for patients who are insured but may benefit from copay cards or discount savings cards. Fortunately, the Affordable Care Act has allowed more young adults up to the age of 26 years to stay on their parents' insurance plans. In addition, in situations of low income or other socioeconomic disparities, individuals younger than age 30 years may qualify for Medicaid coverage. Regardless of insurance coverage, this period is a major opportunity for pharmacist intervention and an opportunity to make a meaningful impact on the overall transition of an adolescent patient into adult care (White 2018; Suh 2014; Hunt 2013; Okumura 2010; Peter 2009).

The support of both pediatricians and adult clinicians is of utmost importance as well throughout the transition process. During early childhood, family members, and caregivers should discuss patient care with the provider. During the development and aging of the pediatric patient, it is of utmost importance to allow an adolescent patient to begin to discuss health care goals, medication therapy regimens, and self-care skills with the health care provider directly. This approach will allow for the development of autonomy over time and create a seamless transition, in contrast to not providing the means of support needed to make a successful transition. It is especially important to encourage these practices at the right stage in a child's health care journey because young adults tend to not realize the importance of health care and instead focus on broader life circumstances that have more of an immediate impact on their daily life (White 2018).

For the pharmacist, it is important to provide the adolescent patient with the opportunity to have some autonomy with the medication regimen, as clinically appropriate. In considering the child's age and ability to understand and perform teach-back techniques during medication teachings, as well as the support system in place for the child at home, the pharmacist can assist in making an individualized plan to allow for more autonomy and self-management of the adolescent or young adult's medication therapy regimen. It is important to consider ongoing follow-up with young adults and ways to aid with medication reminders, such as phone applications and alarms, to ensure ongoing success in building autonomy and quality self-care skills (White 2018).

Likely, one of the greatest fears an adolescent or young adult patient may experience in leaving pediatric care is leaving the familiar and comfortable setting the pediatrician often provides to the patient and family. The idea of leaving a safe and familiar environment can lead to anxiety and fear of what is unknown. Adolescent patients often have been seen and cared for by the same pediatrician for a significant portion of their lives. Making the transition to a new and unfamiliar practitioner can be especially intimidating. In addition,

accessibility to pediatric providers may be different, and the adult provider may make changes in therapy regimens to match more standard clinical adult practice guidelines. The family and caregivers who continue to assist in the care of the young adult may also perceive that the adult providers do not sufficiently consider their opinions and insights to the same degree as the pediatric care providers. These initial negative perceptions are especially important to consider while an adolescent transitions to adult care because pharmacists and health care providers can ease the fears and concerns of both patient and family by simply listening and validating the importance of each of their opinions and concerns (White 2018; McLaughlin 2014; O'Sullivan-Oliveira 2014).

Young adults are recognized as an especially vulnerable patient population. They are highly susceptible to emerging or worsening chronic health conditions and traditionally have minimal primary health care use, but high emergency department use. Young adults also have high rates of behavioral health risks. It is crucial for health care providers to recognize this vulnerability and partner with young adults, their families and caregivers, and pediatric providers to allow for a successful transition. The transition from pediatric care to adult care generally coincides with a time when many life changes are happening for the young adult. This life stage is typically a turning point for many young adults to pursue higher education, enter the workforce, or enlist in the military. Often, health care may be low on the list of the patients' priorities, but with the aid of health care providers in the transition process, the underuse of primary care can be avoided (Spencer 2018; Society for Adolescent Health and Medicine 2017).

Special consideration should be given to young adults and adolescents with known developmental and intellectual disabilities, including autism spectrum disorders. These patients often face specific challenges in navigating the adult health care system and its self-directed nature. Although it is important for these children to aspire to independence, it is also important to ensure the individual has the support needed to make the best personal health care decisions. Often, a young adult with an intellectual disability may require a legal guardian or family member to continue to assist in health care decision-making and provide the utmost support to ensure quality outcomes for the patient (Anderson 2018; Nathenson 2017; Van Schalkwyk 2017; Walsh 2017). An adult guardian is appointed through court proceedings that involve the discussion of whether to make the guardian responsible for the decisions of the young adult's health, safety, support, care, and place of residence. The process may vary among states, but it is generally initiated by the interested party filing a petition with the court for guardianship and explaining why it is necessary (Autism Speaks 2018).

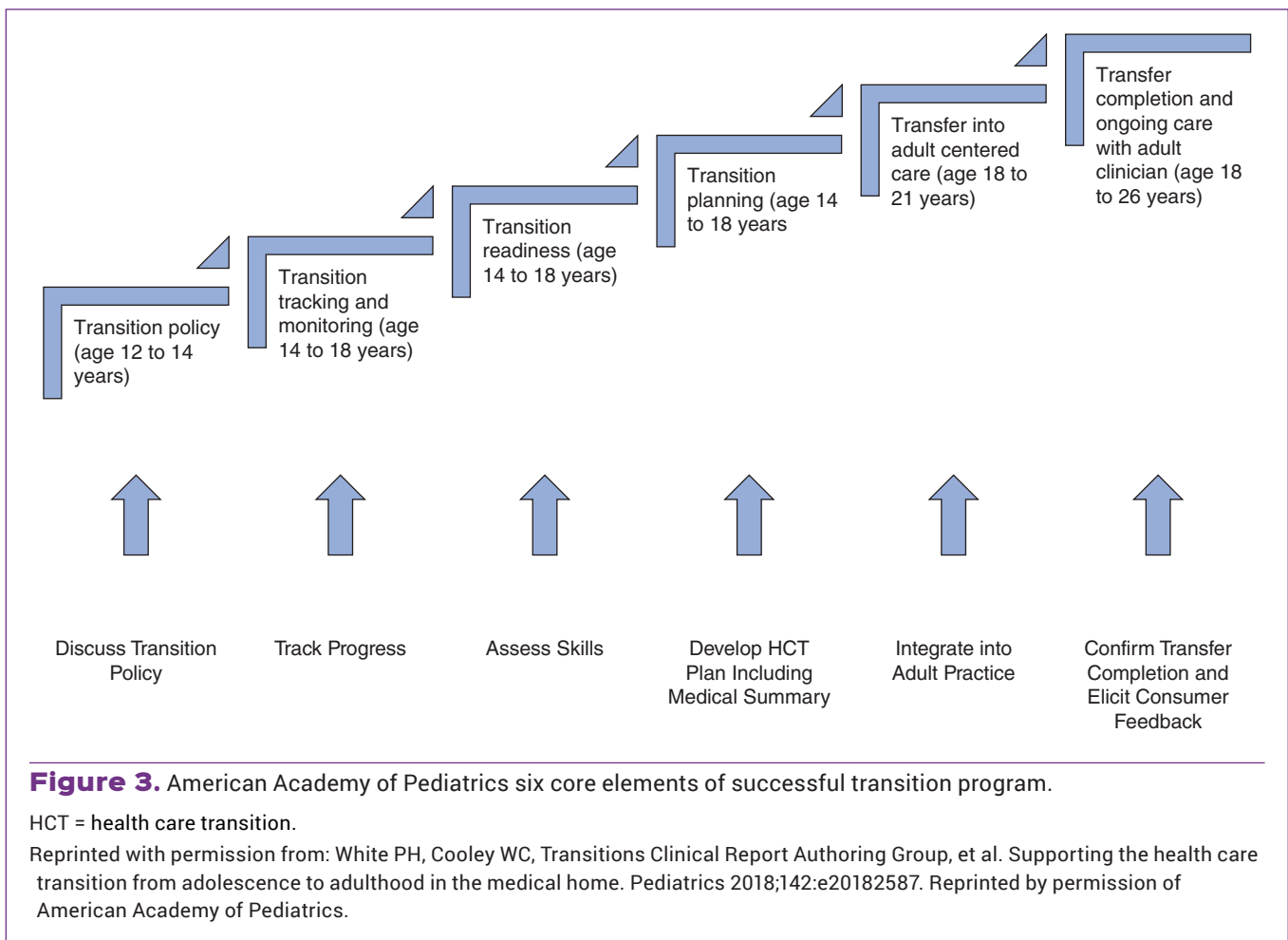
Mental health is another area of concern because mental health conditions may peak during young adulthood. There is an ongoing shortage of both pediatric and adult mental and behavioral health specialists to address this growing

problem. It is important to consider that mental health conditions may impede an individual from making the best health care decisions and may place an individual at higher risk for poor health care, social, economic, and personal outcomes. Transition planning is especially important to consider for adolescent patients with a mental health diagnosis and should include active preparation, outreach, and support for self-advocacy. A pharmacist in this setting may need to spend more time discussing medications related to mental and behavioral health with the patient. Individualized plans for tracking adherence and establishing consistent follow-up with the patient are a necessity. Follow-up with the patient may occur during clinic visits, by phone call follow-up, or through telemedicine if available. Collaboration between health care providers, family members, mental and behavioral health clinicians, and community support also lends itself to positive outcomes and assisting in bridging the gap between pediatric and adult care (McManus 2017).

Young adults with medical complexity pose a specific concern. These adolescents tend to have more hospitalizations, require more individualized care, and consult more subspecialists to assist in the overall management of their care. Young adults with medical complexity and their families have often grown close to their pediatric care providers and accustomed to the standards of care provided by them and particularly by a children's hospital. It is especially important to consider transition discussions between both outpatient and inpatient providers for this patient population. Establishing clear communication between both outpatient and inpatient pediatric and adult providers allows for ongoing quality patient care and individualized care that these patients with medical complexities require. Clear communication and transition will also allow for increased comfortability and acceptance of changing from pediatric to adult care (Kuo 2016).

Social complexity—either alone or in combination with medical conditions—can lead to disparities in care for several populations, including the following: ethnic and racial minorities; immigrant and refugee populations; those with linguistic and cultural differences; lesbian, gay, transgender, bisexual, and queer self-identifying individuals; and youth living in poverty, those who are homeless, or those who are in foster care (Rogers 2017). The transition process for these patients may be improved by engaging culturally similar peers, using family navigators or community health workers (if available), and involving schools and community centers throughout the process (White 2018). These even more subspecialized pediatric populations and minorities are especially vulnerable and often have limited access to quality health care services, leading to persistent disparities in health care access and use (Chan 2019). It is important to try to individualize plans for these patients to ensure the most effective means of transition (Bisgaier 2011).

Certain populations, despite reaching adulthood, may still partially or completely be cared for by pediatric providers. Patients with congenital heart conditions and pediatric



cancers/malignancies will likely continue to receive their care from pediatric providers. Pediatric physicians who have Board Certification in Adult Congenital Heart Disease may offer care to a patient well beyond 18 years of age. The American Congenital Heart Association provides a directory of clinics and providers to assist patients in finding the quality care that this special pediatric population requires (American Congenital Heart Association 2020). When it is deemed appropriate to transition these patients from pediatric to adult care, a significant amount of time, communication, and discussion surrounding the transition must occur between pediatric and adult health care providers to ensure success (White 2018).

Childhood cancer patients are another population that may continue to receive care from a pediatric provider through young adulthood. Cancers in adults significantly differ from those seen in children and possibly young adults as well. For this reason, health care providers often will discuss the most appropriate team to manage and follow the patient based on the type of cancer, treatment desired, and which team is most suited to care for the malignancy. However, it is still of the utmost importance to successfully transition a pediatric oncology patient to adult care when the time is appropriate. This approach can ensure that ongoing follow-up occurs as

these patients will be at increased risk of secondary malignancy and potentially long-term health care related concerns from their malignancy and subsequent treatments (Frederick 2017; Sable 2011).

It is worth mentioning that some academic medical centers have started joint pediatric and adult residency training sessions that address transitioning young adults with congenital or childhood-onset conditions to adult care. In addition, some internal medicine residents see young adult patients during continuity clinic visits. These ideas and programs may create an environment in which a comprehensive process of transitioning young adults from pediatric care to adult care is standard of practice (White 2018).

Figure 3 outlines the AAP six core elements of successful transition programs. This program has evolved over time and through quality improvement projects, an extensive literature review, input from pediatric and adult clinicians, and experts in young adult and family transitions. This evolution has led to positive change. The core elements are not a model for care, but instead a suggested, structured process that is customizable to the individual provider, patient, and practice site. The process should involve a period of discussing the transition process, followed by tracking and assessing the ongoing

progress and readiness for transition, and finally ensuring the actual transition to adult care is successful. It is important to elicit feedback from pediatric patients, families, and both pediatric and adult providers regarding the transition from pediatric to adult care. This approach ensures ongoing improvements are made to the health care system's process of transition (White 2018; AAP 2011).

In transitioning a young adult from pediatric to adult care, programs that have been successful often find a way to use an adult model of care when caring for young adult patients in pediatric clinics. This approach may help the patient to develop better decision-making skills, provide a supportive environment to develop self-management skills, incorporate adult consent and confidentiality policies, expose the young adult to how adult practices operate, and clarify how to access routine and after-hour care. This approach also places the young adult who is near transition from pediatric to adult care at the center of the care. The primary responsibility falls on the shoulders of the young adult, but the patient also has the option to involve other health care team members. Clinicians, including pharmacists, should reserve one-on-one time with young adult

patients during their medical visits to better prepare the young adult for managing their own health care within the adult practice setting. This use of time improves adherence, increases overall engagement in health care, and enhances the relationship between the patient and provider (White 2018).

In considering the AAP six core elements, there is an opportunity for pharmacists to intervene and make a potential impact in the transition of the pediatric patient to the adult health care setting. The pharmacist can individually track patient progress with medication administration, adherence, and self-management. Tracking can occur during individual patient clinic visits or during phone follow-ups and can be documented in the patient chart or other means of ongoing tracking. The pharmacist can assess the skill sets surrounding medication administration and technique during clinic visits and provide education and ongoing assistance throughout the transition process. The pharmacist can assist to ensure the ongoing receipt of medications by confirming that patients can communicate with their pharmacy for refills and by providing help with medication assistance program enrollment as needed. Consistent communication between

Patient Care Scenario

A 17-year-old boy (S.J.) is evaluated in the clinic today for his annual wellness check. He has a current diagnosis of attention deficit and hyperactivity disorder, for which he takes methylphenidate extended-release 36 mg by mouth once daily. He also has mild depression treated with sertraline 50 mg by mouth once daily. You are meeting with S.J. for the first time, and your goal is to discuss medications and overall medication therapy management. Before entering the patient room, the physician tells you S.J. has missed several doses of his sertraline over the past month, and she is concerned about his adherence and his overall health related to his depression.

Which of the following is the best way that you as the pharmacist can assist S.J. in being more adherent to his medication therapy regimen?

ANSWER

Establishing why S.J. is missing his antidepressant doses and helping him create a daily alarm on his phone reminding him to take his medication (Answer B) is the best choice because it will allow him to address why he is missing his medicine and to identify a solution to the problem. The pharmacist can then follow up with S.J. or his family by phone call or during his next clinic visit to see how the reminder system is working for him. Discussing the importance of adherence and minimizing missed doses to prevent adverse effects (Answer A) is not the best option because it does not address the cause of nonadherence or offer any solutions, although it does provide

A. Discuss with S.J. the importance of taking his antidepressant as prescribed and minimizing missed doses to prevent adverse effects.

B. Establish the reason why he is missing doses of his antidepressant and help S.J. create an alarm on his phone to remind him each day to take his medication.

C. Identify the reason S.J. is missing doses of medication and select a medication that is more conducive to his schedule, so he is less likely to miss doses.

D. Recommend that S.J. stop the antidepressant today and partake in a drug holiday to see if he may be able to go without the antidepressant now.

an important counseling point regarding the selective serotonin reuptake inhibitor. Identifying why doses are missed and switching to a drug that matches the patient's schedule (Answer C) is not the best option because most antidepressant medications can be taken at any time of the day and are often adjusted based on adverse effects. Recommending an antidepressant drug holiday (Answer D) is not the best option unless you, the patient, his family, and the physician agree that medication therapy is not warranted, in which case it would be appropriate to taper the selective serotonin reuptake inhibitor.

1. White PH, Cooley WC, Transitions Clinical Report Authoring Group, et al. Supporting the health care transition from adolescence to adulthood in the medical home. *Pediatrics* 2018;142:e20182587.

2. Young S, Adamou M, Asherson P, et al. Recommendations for the transition of patients with ADHD from child to adult health care services: a consensus statement from the UK adult ADHD network. *BMC Psychiatry* 2016;16:301.

the pediatric pharmacist and adult pharmacist creates an opportunity for ongoing collaboration between pharmacists providing care for the patient. In addition, the pharmacist may act as a liaison between the patient, provider, and family members to ensure the best quality of care is provided for the patient during the transition from pediatric to adult primary care. The pharmacist has the means to bridge the gap between pediatric and adult care through collaboration, open communication, and ongoing medication therapy assistance.

The pharmacist serves in a specific capacity for the patient's transition of health care from pediatric to adult providers. To incorporate these ideas into practice, it is important to identify the health care team and who the pharmacist will work with to create a successful transition model. The pharmacist then must identify the role of the pharmacist in the transition process and how it will be integrated into the ongoing transition of a young adult patient from pediatric to adult care. Patients with more comorbidities and complex medical needs may often need more follow-up and assistance with medications. In discussing with the health care team the role the pharmacist plays in enhancing the quality of care and transition of the patient, it is important to mention the specific ways a pharmacist may contribute to the transition process. The pharmacist can not only serve as the medication expert and medication educator, but can also assist with care coordination and enhancing team communication. During clinic visits and phone call follow-up,

Practice Points

Transitioning an adolescent patient from pediatric to adult health care can present various challenges. As a group, AAP, American Academy of Family Physicians, and American College of Physicians have published a comprehensive clinical report outlining clinical practice findings and suggested means of successfully transitioning an adolescent patient to adult care, including these following key points:

- Self-care skills and independence should be gradually developed over time and collaboratively between health care providers, the patient, family members/caregivers, pharmacist, and other members of the health care team.
- Health care providers should be equipped with the knowledge to anticipate and manage the potential barriers that exist to transitioning an adolescent patient to adult care.
- Individual populations exist within the pediatric setting that pose their own challenges and considerations. It is important to consider the innate vulnerability of the adolescent population, the medical complexities of each child, the mental and behavioral health of each child, and the overall social complexities.
- The AAP six core elements of creating a successful HCT program can be used as a guide to create an individualized practice model that is tailored to each health care system and clinical practice as it relates to successfully transitioning adolescent patients to adult care. It is important to elicit feedback from patients, family members and caregivers, and health care providers to improve the quality of each program over time.

documentation of discussions and teachings can be shared with other members of the health care team. In addition, working with nurses, care coordinators, physicians, social workers, and additional health care providers to close the gaps in care that exist for this patient population provides a specific role for a pharmacist. Reviewing the current practice model, identifying areas of opportunity to improve the transition process, and then working to incorporate the pharmacist more readily into the overall process may enhance the quality of care and overall experience of the young adult patient.

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Self-Assessment Questions

Questions 1-5 pertain to the following case.

C.G. is an 11-year-old girl you chronically follow and assist in medication therapy management. She has a diagnosis of mild persistent asthma and is seen in clinic today for a routine asthma checkup. The physician mentions to you that during today's visit, she would like you to spend some time with C.G. and her mother discussing her asthma medications. She also mentions she is going to begin to discuss long-term plans for C.G. regarding her asthma and how this will impact her care potentially into adulthood. The physician mentions to you that English is the mother's second language which may pose a unique challenge during your medication teachings.

1. The physician asks you to meet with the patient to discuss your role in long-term goals and plans for C.G. regarding her asthma. Which one of the following would be the best approach to discussing long-term goals related to medication therapy management of C.G.'s asthma?
 - A. Do not discuss long-term goals of medication therapy management at all as the patient is too young and only has mild persistent asthma.
 - B. Explain to C.G. and her mother the long-term goals of medication therapy will center around preparing C.G. to have adequate self-care skills to successfully administer and utilize medications.
 - C. Highlight to the mother the main long-term goal she needs to focus on now is minimizing asthma related hospitalizations.
 - D. Explain to C.G. and her mother that there are no long-term goals to discuss regarding medication therapy management as most children grow out of their asthma prior to adulthood anyway.
2. With whom is the most appropriate person(s) to spend time with during today's clinic visit, to ensure adequate understanding of inhaler technique?
 - A. Mother only
 - B. Mother and C.G.
 - C. C.G. only
 - D. Education is not warranted during today's visit
3. The physician mentioned English is the mother's second language. What is the best option to complete the medication teaching to ensure understanding during today's clinic visit?
 - A. Phone an interpreter to assist in education and provide supplemental educational handouts.
 - B. Educate the mother and child as you do any other child, making no changes.
 - C. Provide supplemental educational handouts in mother's native language.
 - D. Ask the physician to complete the teaching since she speaks fluent Spanish.
4. When meeting with C.G. and the mother, health care goals are discussed. You state that asthma is a chronic condition that C.G. may experience well into adulthood. Which one of the following is the most important topic to discuss with C.G. today?
 - A. Goals in minimizing smoke and air pollution exposure to reduce risk of asthma exacerbations
 - B. Goals in ensuring medication compliance for long-term asthma control
 - C. Goals in reducing exercise throughout her lifetime since she has a diagnosis of asthma
 - D. Goals in prevention of additional chronic comorbidities
5. C.G. has been receiving fluticasone 44mcg inhalation aerosol—2 puffs twice daily with a spacer for the past 3 months. The mother tells you they have missed doses of fluticasone at least a few times in the past month and she is not sure if C.G. understands how to properly use her inhaler with the spacer attachment. The mother also states C.G. goes to stay with her grandmother periodically and they often forget to pack her inhaler. Based on this information, which choice below best defines C.G.'s current adherence to her medication regimen and what is the best option for further assistance during today's clinic visit?
 - A. C.G. is non-adherent and assessment of technique is warranted.
 - B. C.G. is non-adherent and additional education and assessment of technique is warranted.
 - C. C.G. is adherent and deserves a pat on the back for her hard work.
 - D. C.G. is adherent, but could do better when she stays with her grandmother.

Questions 6-8 pertain to the following case.

C.G. is now 15 years old and returns to the clinic for her annual well check. You have not seen C.G. in over 2 years as she has been lost to follow up. She has numerous emergency department visits related to her asthma, highlighted in her electronic medical record. She is joined in clinic today by her aunt, as her mother has passed away. The physician again comes to you and would like you, the pharmacist, to spend some time with C.G. answering questions regarding her asthma and educating C.G. again on appropriate inhaler technique and use of her asthma medications

6. Which of the following is likely the most pressing concern to address regarding the barriers to transitioning C.G. from adolescent to adult care at this time?
 - A. Patient has been lost to follow up over the last 2 years.

- B. Patient has been seen in the emergency department numerous times.
 - C. Patient's mother has passed away since last clinic visit over 2 years ago.
 - D. Patient's aunt is now caring for C.G.
7. Which one of the following barriers is most likely to pose a risk for C.G. considering her age and presentation today in clinic?
- A. Vulnerable adolescent population
 - B. Socioeconomic factors
 - C. Low health literacy
 - D. Lack of transportation and family support
8. During today's clinic visit, the physician discusses what the transition phase to adult care may look like to continue to prepare C.G. for this transition in just a few years. Which of the following is of greatest concern for C.G. regarding the transition from pediatric to adult care?
- A. C.G. likely has no fears surrounding this transition phase
 - B. Health care providers and family being overly involved
 - C. Proximity of the adult health care system is much closer to C.G.'s home
 - D. Lack of transparent and efficient communication among health care providers
9. C.G. is now 18 years old and coming into clinic today for her last wellness check prior to transitioning to adult care. C.G. and her aunt have been working with the physician, the care coordinator for the pediatric clinic, the care coordinator for the adult clinic she will be transitioning to soon, and you (the pharmacist in the pediatric clinic). Which one of the following core elements would most likely ensure C.G.'s successful transition from pediatric to adult care?
- A. Assessment of self-care skills
 - B. Establishing long-term goals
 - C. Utilization of the emergency department
 - D. Discussion of preventative health measures

Questions 10 and 11 pertain to the following case.

C.G. has now transitioned to adult care and will no longer be seen in the pediatric clinic. She still has a diagnosis of persistent asthma and is prescribed daily maintenance medications to provide adequate control of her chronic disease state.

10. You, as the pediatric pharmacist, can do several things to assist the pharmacist in adult family medicine who is now taking over in assisting with C.G.'s asthma as she has transitioned to adult care. What option below would be most important to emphasize with the adult family medicine pharmacist with C.G.'s transition to adult care?
- A. Provide and discuss with the family medicine pharmacists a summary of your education sessions and ongoing follow up of C.G. regarding her asthma control.
 - B. Direct the adult family medicine pharmacist to the electronic documentation you have been charting in C.G.'s EMR.
 - C. Discuss with the adult family medicine pharmacist how C.G.'s mother passed away recently and she has never been the same person since then.
 - D. Provide the family medicine pharmacist with an email address to contact you as to answer any further questions regarding C.G.
11. Which one of the following is the most important potential barrier for the adult care provider to address during C.G.'s transition to adult care to establish a quality relationship between adult care provider and patient?
- A. Outstanding gaps in communication that have naturally occurred during the transition process
 - B. Anticipation of lack of engagement by C.G. in her overall health care
 - C. Training limitations by the adult provider in managing adolescent/young adult patients
 - D. Anticipation of lack of interest by C.G. in the overall control of her asthma
12. How may the pharmacist best assist with transitioning the pediatric patient to adult care?
- A. Providing the patient with several handouts to read through at home
 - B. Providing ongoing medication education and follow up regarding adherence
 - C. Providing the patient with a list of adult providers when they are 16 years old
 - D. Providing the patient with limited guidance as they transition to adult pharmacy care
13. As the transition process occurs overtime, what is the best area of opportunity for the pharmacist to integrate themselves into the overall care of the patient and provide greater ease of transition for the patient from pediatric to adult care?
- A. There are unfortunately limited opportunities of integration into health care practices for the pharmacist to readily integrate themselves.
 - B. Telling the patient and/or family/guardian exactly what to do as to best transition from pediatric to adult care.
 - C. Ensuring access to medications through enrolling patients in medication assistance programs or identifying drug coupons or cost savings measures to assist medication access.

- D. Telling the patient and/or family/guardian that the transition process will be long and difficult, and they should expect things not to go smoothly.
14. The care of some pediatric chronic disease states like congenital heart disease and pediatric malignancies may be complex. Which of the following statements below is most appropriate?
- A. Pediatric patients with congenital heart disease should only be seen by pediatric providers.
 - B. Pediatric patients with congenital heart disease should be seen by pediatric providers until they reach the age of 18 when they should transition to an adult provider.
 - C. Pediatric patients with congenital heart disease may be followed by the pediatric provider into adulthood and should be followed especially closely during any transition to adult care.
 - D. Pediatric patients with congenital heart disease may be followed by adult or pediatric providers, it does not make any difference.
15. Following the transition of a pediatric patient to adult care, who is likely to provide the most valuable feedback to gain a better perspective of the success of the process/transition program?
- A. Patient and pediatrician
 - B. Pediatrician and other members of the health care team
 - C. Patient and family only
 - D. Patient, family, pediatrician, and adult provider