



How Health System Specialty Pharmacy Can Support Pediatric Diabetes Patients

THE BENEFITS OF AN INTEGRATED CARE MODEL
IN A COMPLEX DISEASE STATE

KEY CONCEPTS

- More than 350,000 children and adolescents under the age of 20 in the U.S. are living with diabetes. These patients are a highly vulnerable and complex patient population who require constant monitoring.
- Between medication, durable medical equipment, and lifestyle management needs, the path to diabetes self-management is often challenging for the patient and the patient's family.
- A pharmacy liaison who handles prior authorizations, financial assistance, and medication coordination can help to alleviate the overwhelming responsibilities of family and caregivers of pediatric diabetes patients, providing them with greater peace of mind.
- As a part of the larger care team, health system specialty pharmacy (HSSP) can support pediatric diabetes patients from the point of diagnosis to daily diabetes self-management.

INTRODUCTION

With the concerning rise in new diagnoses of pediatric diabetes (PDM), there is a growing need to support patients as they navigate the complexities of the space. According to the American Diabetes Association, today more than 350,000 children and adolescents under the age of 20 are living with diabetes in the U.S.¹ Researchers predict that total cases of PDM will exceed 550,000 by 2060.² While Type 1 diabetes is the dominant form among pediatric patients, there has been a stark rise in the number of youth (<20 years old) with Type 2 diabetes which is expected to increase by a whopping 673% over the next 35 years.³

Pediatric patients with diabetes are a high-need, complex population who require constant monitoring to maintain healthy blood sugar levels. For newly diagnosed PDM patients, often the responsibility of care is placed not only on the patient but on the entire family as they help their child adapt to a new lifestyle.

Managing a combination of pharmacy and durable medical equipment (DME) components, in addition to attending multiple endocrinology and diabetes education appointments, rapidly becomes overwhelming for patients and parents alike. Additionally, the PDM diagnosis itself can come with severe risk factors, including heart and kidney



>350,000

CHILDREN + ADOLESCENTS

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complications that may also need to be addressed. Pediatric patients face unique social and emotional challenges when it comes to living with a diabetes diagnosis. Because they are still growing and developing and often highly active, monitoring and checking blood sugars, taking insulin injections, and adjusting according to the day's activities can be a significant and inconvenient interruption to the day.³ For families facing uncertainty as to how they will juggle these moving pieces on their own, health system specialty pharmacy (HSSP) can remove significant barriers through streamlined coordination of refills, timely completion of prior authorizations (PAs), and in-depth investigation of financial assistance options. Pharmacy liaisons are integrated within the clinic working alongside other key members of the patient's care team (doctors, nurses, and social workers) and therefore have comprehensive insight into the support patients need. Since 2019, Shields has supported PDM through its specialty pharmacy care model and is committed to servicing the whole patient by addressing both medication and diabetic DME needs.

↑673%

Anticipated increase in pediatric patients with Type 2 diabetes over the next 35 years



"On average, Type 1 patients are commonly diagnosed between two different age ranges: **age 4 to 7 or 10 to 14.**"



"Many patients utilize technology such as continuous glucose monitors (CGMs) or insulin pumps to lessen the burden of self-injection and constant sticks."

THE NEEDS AND CHALLENGES OF PDM PATIENTS

Type 1 diabetes is an autoimmune disorder that destroys insulin-producing beta cells in the pancreas such that it cannot naturally produce any insulin on its own. The cause of Type 1 diabetes is unknown, but risk factors can include genetics, family history, race, and certain viruses. On average, Type 1 patients are commonly diagnosed between two different age ranges: age 4 to 7 or 10 to 14.⁴ Patients living with Type 1 diabetes are fully insulin dependent and rely on multiple daily insulin injections to manage their blood sugar levels. Pediatric patients living with Type 2 diabetes are often initially diagnosed with insulin resistance, which may progress to insulin dependency. While metformin is still the first line of therapy for pediatric patients with Type 2 diabetes and normal renal function, there has been an increase in prescribing of GLP1's and SGLT2's in the pediatric population as their labels have expanded to include pediatric patients.

Often it is a hospitalization event that reveals a new diabetes diagnosis, and it is during the discharge process that the patient and family begin to receive education around taking insulin and checking blood sugar levels. Constant monitoring, often by the patient's guardian, is necessary to prevent life-threatening episodes of hyperglycemia, hypoglycemia, or diabetic ketoacidosis.

Technology in PDM

When it comes to taking insulin, injections can be frightening to young children, not to mention disruptive to a child's school and activity schedule when multiple injections and testing are required throughout the day. Many patients utilize technology such as continuous glucose monitors (CGMs) or insulin pumps to lessen the burden of self-injection and constant finger pricks. Leveraging this technology also enables caregivers and providers to monitor their child's activity and glucose levels.

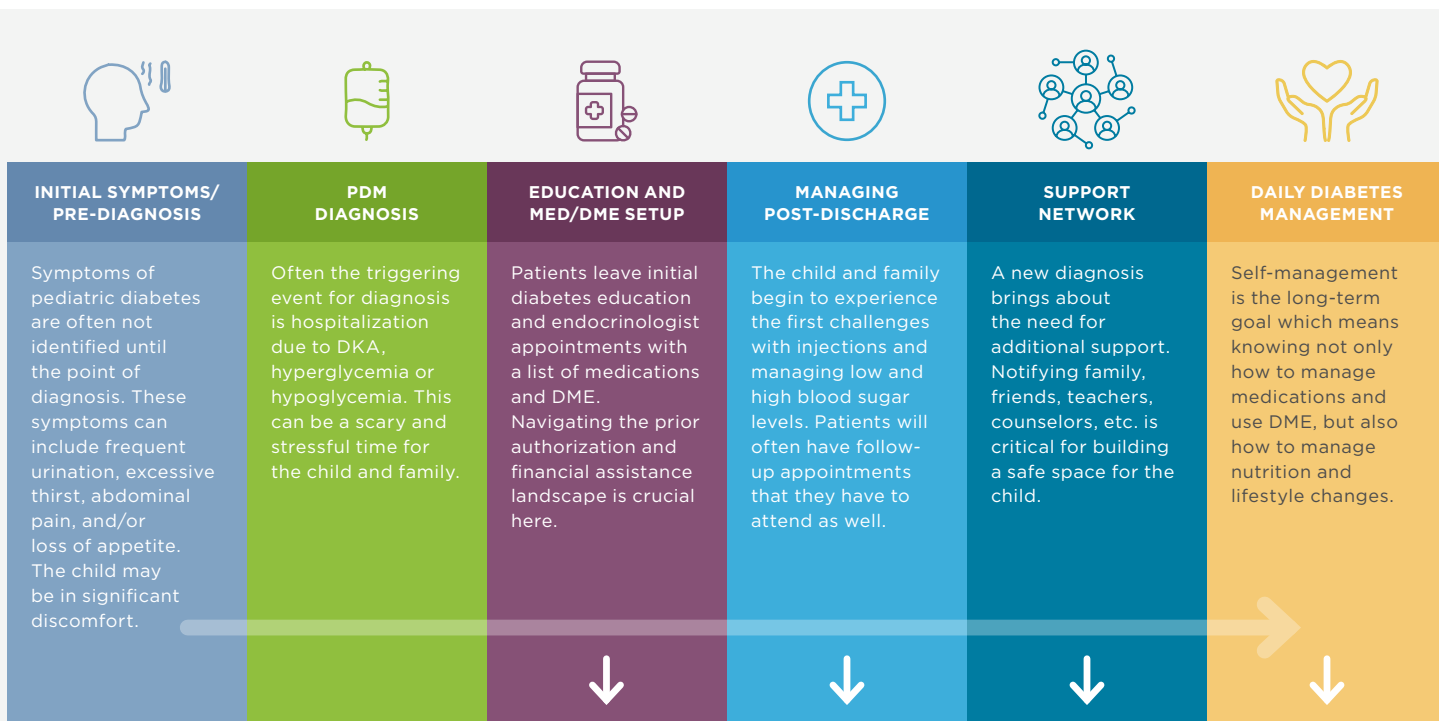
Adoption of technology such as insulin pumps and CGMs has increased significantly over the past few years for pediatric patients living with diabetes.^{5,6} One study showed that CGM use amongst patients with Type 1 diabetes increased from less than 1% to 47% in children and adolescents under the age of 18 over the past decade.⁶ In some cases, patients prefer a closed-loop insulin delivery system, which requires both a CGM and an insulin pump. While this technology can be life-changing, it can also be difficult to obtain due to high administrative burden. Working through DME providers can be challenging, especially for those who are new to using DME, because of complex PAs and extended wait times.

Relieving Pharmacy Burden

Leveraging HSSP helps to remove some of the burden of diabetes management from parents and patients, giving relief to families as they manage the other demands of their day-to-day lives. The Shields Care Model deploys liaisons—who are pharmacy technicians by background—to sit in clinic and engage directly with patients, caregivers, and providers to address any pharmacy-related challenges. Whereas in the traditional pharmacy space PA turnaround times are often long and financial assistance options go unexplored, Shields pharmacy liaisons provide individualized support to patients to ensure PAs are completed quickly and all financial assistance options are investigated. As a direct point of contact within the clinic, liaisons can also triage urgent questions or concerns to the appropriate clinician. Additionally, liaisons proactively call each patient's caregiver monthly to help coordinate medication refills and deliveries.

The Shields Care Model supports patients holistically, meaning that the specialty pharmacy aims to fill everything for each patient, including the patient's primary diabetes medications, any DME, any additional specialty medication they may be on, and any ancillary or maintenance medications. Shields also works to ensure medication synchronization for patients who have multiple scripts in order to reduce the number of calls and streamline deliveries.

Because liaisons are integrated within the clinic and conduct proactive outreach on a regular basis, they are able to develop strong, supportive and long-lasting relationships and help to alleviate that social and emotional burden which many patients and their families face. From the point of pre-diagnosis to learning how to self-manage their diabetes daily, PDM patients will encounter numerous obstacles. The HSSP integrated care model can directly address many of these critical challenges.

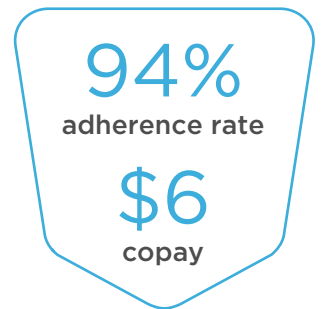


SHIELDS HEALTH SOLUTIONS CARE MODEL

- Liaison support is introduced.** Prior authorization and financial assistance and refill/delivery support is initiated.
- Pharmacists** can provide clinical intervention and support particularly in the early stages.
- Liaisons are a direct point of contact** and a critical part of the patient's support network. They can answer and triage questions.
- Specialty pharmacy** staff are in touch with the patient's caregiver monthly.

Impact of the Health System Specialty Pharmacy Model in PDM Programs

Health system specialty pharmacy support of PDM clinics can drive significant clinical and financial outcomes. As patients start to become educated about their condition, liaisons can begin the background work of ensuring the medication is covered and any financial assistance concerns are addressed. Among our partners with PDM programs, the average PA turnaround time is 2 days and average per script copay considering everything the patient is filling is \$6. Liaisons have helped to secure nearly \$149K in financial assistance in the last year across our PDM programs. Post-discharge, the monthly refill call process keeps families and patients informed and on track, prioritizing medication adherence, as evidenced by the 94% average PDC for our partners with PDM programs.



Patient Story

Our experience at the time of Veronica's diagnosis was a whirlwind. We were celebrating her 6th birthday the day before she was diagnosed at Nemours with Type 1 diabetes. I noticed Veronica was drinking a lot of water and frequently waking at night to use the restroom which was very out of character for her. Since Type 1 diabetes runs in my family and my husband has Type 2 diabetes, I was familiar with how to test her fasting blood sugar by finger prick, and when it came back at 270, I instantly knew. I made a sick visit appointment to her pediatrician, and they sent us to Nemours for further testing and for insulin education. We were admitted to the ER and told we'd need to spend at least 3 days there.

Some of our greatest challenges in the beginning was Veronica's fear of needles and helping her through that. We were given a Dexcom which was life-changing in being able to see her blood sugars throughout the day and being able to keep a closer eye as to what was going on. It's been a hard adjustment for all of us. Sleepless nights for my husband and I as we check blood sugars. Every day is a science experiment because so much affects blood sugars.

After Veronica's diagnosis, one of our biggest challenges was securing the Dexcom G7 sensors

from our local pharmacy. We often faced stock shortages or partial refills, leaving us waiting days for the remaining sensors. Additionally, the pharmacy's limited hours—closing early and not being open on weekends—made it even harder to manage. Many times, we were on hold for ages, anxiously waiting to speak with pharmacy technicians, and worried about running out of essential supplies.

Discovering the Nemours Specialty Pharmacy was a turning point for us. Knowing they could ship everything we needed directly to our home brought immense relief. NaKeisha, our pharmacy liaison, has been nothing short of amazing. She proactively calls to inform us about upcoming refills, and once we confirm what we need, the items are shipped promptly—often arriving the same or the next day. They've never had any issues with availability, and everything arrives at our door, including insulin, which is still cold from the ice packs.

In the daily struggles of managing type 1 diabetes, the Nemours Specialty Pharmacy program has significantly reduced our stress about timely refills. Any service that can ease the burden of living with a chronic illness makes life a little more bearable, and for that, we are truly grateful.

-Parent of a Nemours Pediatric Patient

CONCLUSION

Health system specialty pharmacy is well-suited to address the many challenges that PDM patients and their families face. Clinic-integrated pharmacy liaison support provides the child and their caregivers with peace of mind knowing that there is someone advocating on their behalf within the health system as they navigate a multitude of appointments and pharmacy needs. By ensuring patients have coverage and financial access to the proper medications and DME, HSSP helps set patients up for success as they work towards improved daily diabetes self-management.

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ABOUT SHIELDS HEALTH SOLUTIONS

Shields is the premier specialty pharmacy accelerator in the country. The Shields Performance Platform, an integrated set of solutions, services and technology, is intentionally designed to elevate payer and drug access for specialty pharmacies, elevate health outcomes for complex patients, and elevate growth throughout the entire health system. As the foremost experts in the health system specialty pharmacy industry, Shields has a proven track record of success including access to over 80 percent of all limited distribution drugs (LDDs) and most (health insurance) payers in the nation; and a clinical model proven to lower total cost of care by 13%. In partnership with more than 80 health systems across the country through national-scale collaboration, Shields has a vested interest in delivering measurable clinical and financial results for health systems.



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