



**HI GLOBAL  
REGISTRY**

## **2025 Annual Report**

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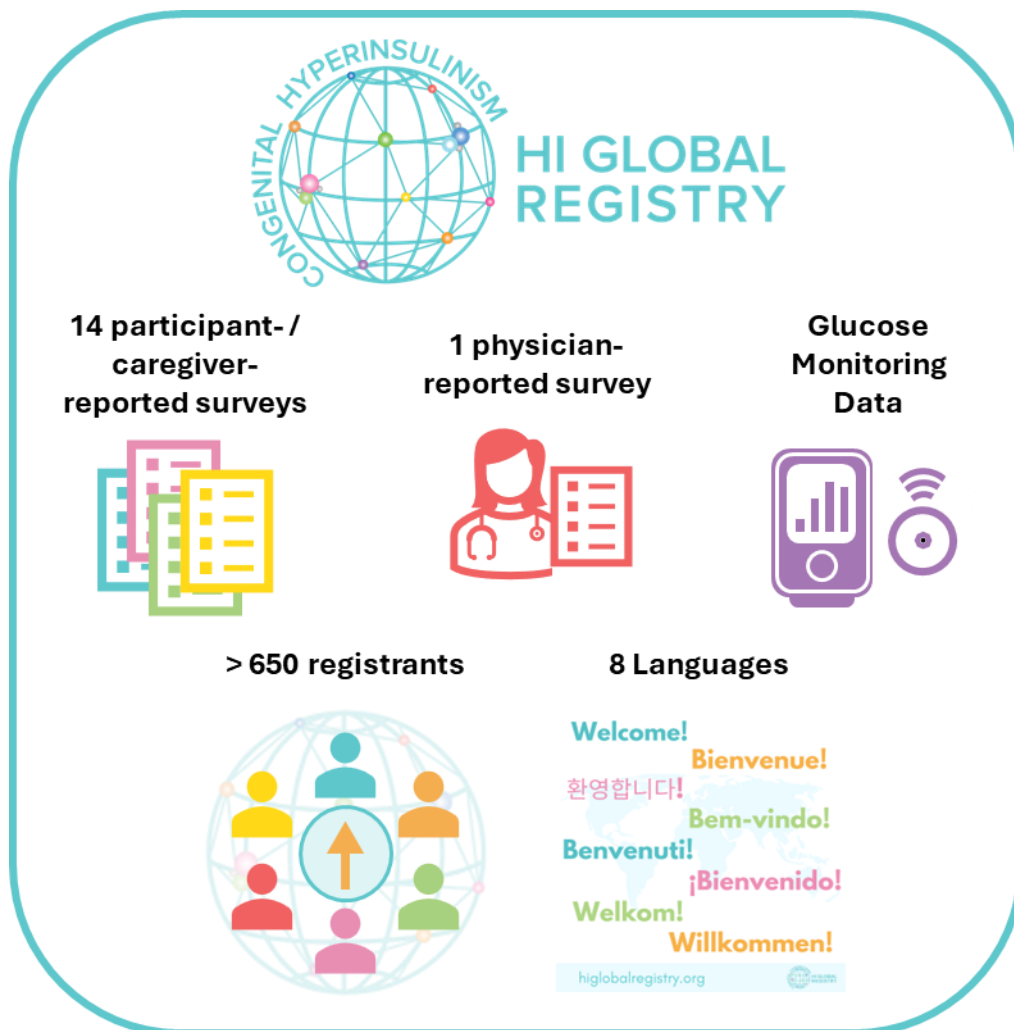
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## Introduction

This has been another busy year for the HI Global Registry! In 2025, we focused on making important improvements to three existing surveys (*Contact & Demographics*, *Glucose Monitoring* and *Medication Management*) and launching a brand-new survey (*Time to Say HI!*) to strengthen our longitudinal data collection. We also launched two new programs to support HIGR participants: the HIGR Participant Appreciation Program and the HIGR Ambassador Program. These additions have made a huge impact on registry participation and survey completion – read on to learn more!



This report provides an updated sample of insights from HIGR data since the launch of HIGR in October 2018 through November 2025, as well as more information about HIGR’s new features that have been added in the past year.

## The HI Global Registry (HIGR)

HIGR is a patient-reported database of information submitted by individuals with HI and their caregivers worldwide. HIGR is developed and implemented by Congenital Hyperinsulinism International (CHI) and governed by the HIGR Steering Committee, a group of internationally recognized HI patient advocates and experts. There are fourteen participant/caregiver surveys to collect information about the participant's experience with HI from the initial presentation to current management, plus one physician-reported survey.

### Participant-/Caregiver-reported surveys

- *Contact & Demographics*
- *MaxHIGR (participant permission form)*
- *Glucose Monitoring Management*
- *Diagnosis*
- *Other Medical Conditions*
- *Medication Management*
- *Diet & Feeding Management*
- *Development*
- *Surgical Management*
- *Pregnancy*
- *Birth*
- *Quality of Life – Participant (14+)*
- *Quality of Life – Caregiver*
- *Time to Say HI! (NEW FOR 2025!)*

### Physician-reported surveys

- *MaxHIGR Physician Form*

Two surveys, *Pregnancy* and *Birth*, are final after the first submission and do not require any updates. All other surveys can be updated at the respondent's discretion when there is a notable change in the participant's contact information, health, or medical management, such as a new address, a newly diagnosed health condition, or a change in treatment. Four surveys are designed to be taken longitudinally to allow researchers to track changes in responses over time. Respondents are prompted to complete *Time to Say HI!*, *Glucose Monitoring*, *Quality of Life – Participant*, and *Quality of Life – Caregiver* every six months, although they are welcome to complete these surveys at any time if desired.

As part of the move to the new platform, anyone who completed surveys prior to November 2023 was prompted to review all previously submitted surveys, including *Pregnancy* and *Birth*, to ensure that all questions were answered, including a few new questions that have been added. This is a one-time review that will not be necessary to do again in the future.

HIGR data is stored on the secure cloud-based Matrix Platform developed and hosted by Across Healthcare. Matrix is a shared platform connecting patients, caregivers, providers, and researchers to collect data, provide a community, and advance the goal of finding answers and discovering cures.

## Questions about HIGR?

Read our [Frequently Asked Questions](#) on the CHI website or reach out at [info@higlobalregistry.org](mailto:info@higlobalregistry.org)!

## The 2025 Annual Report

Every year, the HIGR investigators publish a report consisting of descriptive data across key HIGR surveys to provide insights for those who share their data and for other members of the HI community. All data shown is de-identified (all personal identifiers are removed) and aggregated (data is summarized across all individuals).

Each graph or table includes the number of participants (“n”) who provided information related to each data element. The variation in the number of individual responses is the result of three factors:

- 1) All surveys are optional, and participants/respondents can complete surveys at their own pace.
- 2) Between 2018 and November 2023, all survey questions were optional and respondents could skip questions for any reason. This led to a variable number of responses for every question. This has been updated as of November 2023 and most survey questions now require an answer, but respondents can select “Prefer not to answer” or “Unknown” if desired.
- 3) Many surveys use branching logic, where certain groups of questions are only displayed based on the respondent’s answers to previous question(s). This means that not all participants will be asked to complete all questions.

A common challenge in rare disease research is small sample sizes. Data from a small group of participants may not represent the experiences of the entire population with that condition. This becomes especially true when we start to look at specific sub-populations of the whole group, such as only participants with focal disease or only those with a specific genetic mutation. For this reason, readers are advised to take caution when interpreting data presented in this report, especially since HI has many different subtypes that can vary in severity.

This annual report is meant to foster an active dialogue about the data with the larger community of researchers, physicians, those with HI and their family members, regulators, drug developers, and other community stakeholders. The investigators openly invite comments and questions about the report and welcome ideas for engaging all key HI stakeholders. Broad and robust participation from all members of the HI community will serve to strengthen HIGR. You can contact the HIGR team at [info@higlobalregistry.org](mailto:info@higlobalregistry.org).

## The HIGR Research Team



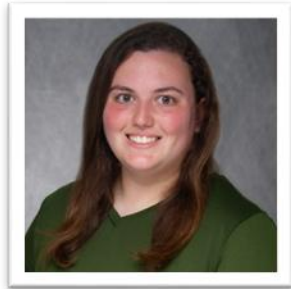
**Julie Raskin**  
Founder  
and CEO



**Tai Pasquini, PhD**  
Chief Research  
Officer



**Lauren Lopez, PhD**  
Registry  
Director



**Kristen Rohli, PhD**  
Research  
Manager

**Julie Raskin, Chief Executive Officer** is a leader in the rare disease community with 24 years directing nonprofit programs, and 13 years serving on nonprofit and educational boards of directors. Julie is one of the original HI parent founders of CHI. Under Julie’s leadership CHI has created an active worldwide community of patients, their families and caregivers, expert clinicians and researchers, and professionals in the biotech field – to fulfil CHI’s mission to improve the lives of people born with congenital hyperinsulinism (HI). During her tenure, CHI has developed and launched HIGR and the CHI Collaborative Research Network, secured funding for 14 pilot research grants, organized 32 global conferences and meetings, created disease awareness information in 25 languages, provided genetic testing for those suspected of having hyperinsulinism from 65 countries, provided patient experience expertise for six biotechs, and made it possible for patients in five countries to get medication/treatment that would not otherwise be available, and led the advocacy movement for the HI community. Julie also serves on the New Jersey Rare Disease Advisory Council.

**Tai Pasquini, Chief Research Officer** is a rare disease patient advocate and researcher. As CHI’s Chief Research Officer, she serves as the Principal Investigator for HIGR and manages the Centers of Excellence program, CHI’s research program, and the Collaborative Research Network. Tai currently serves on the Massachusetts Rare Disease Advisory Council. Tai completed a PhD in Health Policy from the University of Massachusetts Amherst and her dissertation focused on issues of access and financing for rare disease patients and families. Previously, Tai worked at the National Organization for Rare Disorders (NORD) and taught undergraduate classes on the US Healthcare System and public health communications. She holds a Masters in Public Administration and a Bachelor of Arts in Communications, Legal Institutions, Economics, and Government from American University.

**Lauren Lopez, Registry Director** has a strong background in biomedical research and over 10 years of research experience spanning basic, translational, and clinical research. Lauren received her PhD in Cellular & Molecular Physiology from the University of Liverpool, UK in 2017, and moved to the US to complete postdoctoral research in kidney disease. She discovered her passion for serving the rare disease community during her role as a Senior Scientific Affairs Manager at AllStripes Research, and she is excited to now use her skills and experience to benefit the hyperinsulinism community. As the Registry Director, Lauren manages all aspects of the HI Global Registry including recruitment, data curation, analysis, and publications.

**Kristen Rohli, Research Manager** has been active in pancreatic biology research since 2016. Kristen earned her bachelor's degrees in Biochemistry and Psychology from Louisiana State University, where she conducted research on the relationship between obesity and Type 2 diabetes at Pennington Biomedical Research Center. In 2024, Kristen completed her PhD in Genetics at the University of Iowa, focusing on organelle function and the cellular environment within pancreatic beta-cells. Kristen joined Congenital Hyperinsulinism International in 2024 as the Research Manager where she is applying her expertise to further the understanding of the genetic factors associated with HI.

## Congenital Hyperinsulinism International (CHI)

CHI is a leading nonprofit dedicated to improving the lives of children and adults living with HI. CHI provides information, resources, and support to the HI community worldwide. CHI advocates on behalf of patients for better treatments and access to care. CHI is dedicated to increasing awareness of the disorder as it leads to more timely diagnosis and the best outcomes for patients. CHI supports medical research for improved therapies, potential cures, and timely diagnosis. CHI works globally because we are stronger as an international community. Cooperation across borders fosters essential advances in medicine. HIGR is one of several foundational programs established by CHI to support the global HI community. To learn more about CHI, please visit <https://congenitalhi.org/>.



### Foundational Programs to Support the Global HI Community

Awareness & Education

Natural History Studies and Registries

Community Connection

Centers of Excellence Program

Research

## HIGR Objectives

HIGR functions as a natural history study, meaning HIGR collects specific health-related and quality-of-life information from its participants over time to understand how HI is diagnosed, how it is treated, and how it impacts health and life. HIGR is conducted under a research protocol drafted by the HIGR Steering Committee (a group of international researchers, clinicians, and advocates) and approved by an Institutional Review Board (IRB). The IRB, also known in some countries as an ethics committee, is a group of people who perform independent reviews of research studies. The IRB for HIGR is the North Star Review Board. If you have questions, concerns, or complaints not addressed by the HIGR team, you can contact the IRB at [info@northstarreviewboard.org](mailto:info@northstarreviewboard.org), or toll-free at (877) 673-8439.

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***The ultimate goal of HIGR is to advance the global understanding of HI and drive research toward better treatments and, ultimately, a cure.***

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### **The primary objectives of HIGR are:**

- To provide a convenient online platform for participants (or caregivers) to self-report cases of HI in order to document the natural history and outcomes of individuals with HI.
- To improve knowledge of global prevalence of HI and any associated comorbidities.
- To better understand the role of timely diagnosis of HI on patient developmental outcomes.
- To better understand patient health outcomes of different HI treatment options, settings, and provider types.
- To identify both positive and negative effects related to different HI treatment options.
- To support the evolving standards of care for HI patients using natural history and outcome information from a global perspective.

### **The secondary objectives of HIGR are:**

- To document the obstacles to accessing HI care, supplies, and medications.
- To measure the impact of HI and its management on patients' and caregivers' quality of life.
- To aid CHI and/or other country or region-specific HI patient organizations in identifying like genotypes or similar conditions to further connect HI patients/families within the larger HI community.
- To accelerate and facilitate HI clinical study development by identifying eligible research participants quickly and efficiently.
- To serve as an aggregated, de-identified resource to researchers seeking to study the pathophysiology of HI retrospectively in order to design prospective trials related to improving HI patient outcomes.
- To support the work of the CHI Collaborative Research Network by providing natural history data and providing a platform for future research studies.

## HIGR 2025 – A Year in Review

**Updates to three surveys.** We have learned so much about HI during HIGR’s first six years, and uncovered areas where additional knowledge is essential! As shown on the right, we made some important updates to HIGR surveys to capture more detailed information on topics that still require further research.

**Improved longitudinal data collection via a new survey.** Previously, all HIGR

participants were encouraged to update HIGR surveys whenever anything relevant changed in their life. This is understandably

a difficult task, as updating HIGR may not be the first thing that comes to mind when starting a new medication regime or when first diagnosed with a new medical condition! We have streamlined this process for the HIGR community by adding a new 6-month check-in survey, Time to Say HI! This survey prompts the user to think if anything has changed related to each survey topic. If so, a new version of the appropriate survey will be assigned and the new information can be updated. This will strengthen our longitudinal data, as not only will we receive updates every 6 months, but we’ll also collect data when things *haven’t* changed too, which is often equally as important!

Contact & Demographics	Glucose Monitoring
Current HI Care Team	Impact of hypoglycemia on daily life
Past interactions with Centers of Excellence & clinical trials	CGM use and satisfaction
How did you hear about HIGR?	Hypoglycemia awareness and frequency of emergency response
<b>Medication Management</b>	Concerns about hyperglycemia
Non-HI medications	History of CGM use
Improvements to questions about medication dosing	Sleep quality & anxiety compared to pre-CGM use
Reasons for stopping each HI medication	
Clinical trial medications	



**HIGR Ambassador Program.** One of our most exciting additions this year was the launch of our new Ambassador program in February. This is a group of 12 highly-engaged individuals within the HI community who are passionate about HI advocacy and the power of HIGR to advance research for HI. The group is made up of 2 adults with HI and 10 parents of children with HI from 7 different countries. The HIGR Ambassadors each advocate for HIGR in their own way, including writing blogs, sharing social media posts, and directly spreading the word within their individual HI communities. Learn more here:

<https://congenitalhi.org/the-hi-global-registry-ambassador-program/>

**HIGR Participant Appreciation Program.** At CHI, we understand how precious time is for each of our HI participants and their families, and we are so grateful to everyone who takes the time to complete HIGR surveys and contribute to HI research. This year, we were honored to be able to launch the Participant Appreciation Program, which provides a gift as a token of our appreciation to everyone who completes HIGR surveys, and additional gifts to those who continue to update their surveys each year and choose to share data from their glucose monitoring device(s). Please reach out directly to HIGR staff ([info@higlobalregistry.com](mailto:info@higlobalregistry.com)) to learn more about the HIGR Participant Appreciation Program.

## HIGR Data Requests and Data Sharing

HIGR data continues to grow as a valued source of scientific information within the HI research community. Since the 2024 Annual Report, we have received 11 requests for HIGR data for research projects. These included:

- A study on the natural history of the growth-related effects of HI
- Data to support the benefits of continuous glucose monitors (CGMs) for a whitepaper publication from the CHI Collaborative Research Network (CRN)
- Data on glycemic control in people who take diazoxide



**11**  
Data Requests!



In August 2025, the HIGR research team, along with some members of the CHI Collaborative Research Network (CRN), published a study on the real-world experiences of people who have taken diazoxide to treat HI. This study used a mixed methods approach, combining more traditional quantitative data on diazoxide use from HIGR with the richness of qualitative data from one-on-one interviews with people with HI and their caregivers. You can read this publication and all other on our website: <https://congenitalhi.org/publications-and-podcasts/>

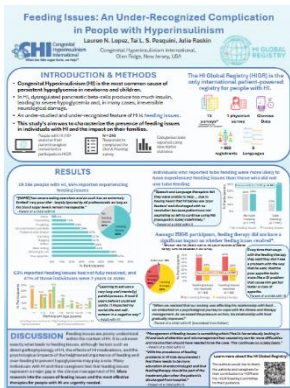
This publication strongly resonated with the HI community. One HI nurse shared with CHI that some of her patients brought the article with them to appointments, sparking new discussions about HI management with their care team.

***“Combining HIGR data with in-depth interviews facilitated understanding of day-to-day life, which can help implement measures to better support families managing HI.”***

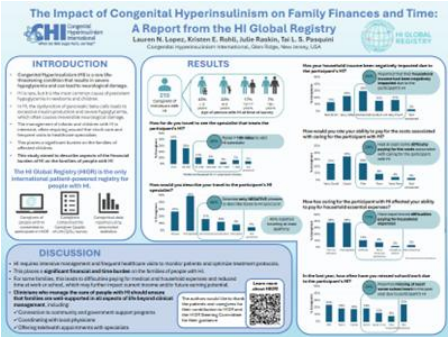
*Pasquini et al., Frontiers in Endocrinology (2025)*

The interview participants for this study provided a rich depth of information about their experiences and unfortunately not all quotes could be included in the journal article. However, these are now being shared via a blog series on the CHI website, the first of which, *Rest is Rare Too: Trying to Find Sleep through the Uncertainty of Nighttime Lows*, is already available.

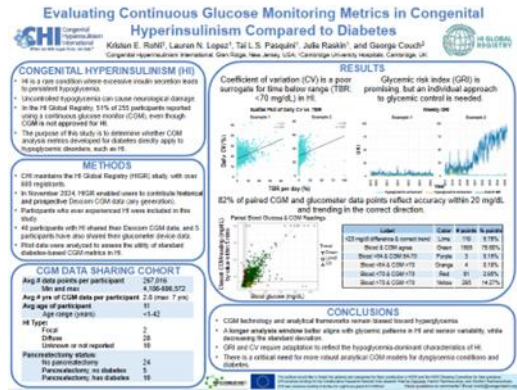
In addition to publications in academic journals described above, conferences and meetings are another way that researchers can share their findings. Preliminary or early-stage results are often shared via posters that are presented during informal poster sessions at conferences. These provide an opportunity for researchers to talk about their work in one-on-one or small group discussions with other researchers. This year, HIGR data was shared with HI families, pediatric endocrinologists, adult endocrinologists, CGM technology scientists, and other academic clinicians and researchers at six different events. HIGR data was presented during many of the talks at the CHI Family Conferences in Copenhagen, Denmark and Philadelphia, PA, USA. Data was also presented as posters at four academic conferences. A summary of the posters is shared below, and the full posters can be found on the CHI website: <https://congenitalhi.org/scientific-posters/>



**Poster Title:** Feeding Issues: An Under-Recognized Complication in People with HI  
**Presenter:** Lauren Lopez, PhD, CHI Registry Director.  
**Conference:** Joint Congress of the European Society for Paediatric Endocrinology (ESPE) and the European Society of Endocrinology (ESE) (May 2025; Copenhagen, Denmark)  
**Key Message:** Many individuals with HI and their caregivers feel that feeding issues represent a major gap in the clinical management of HI. More research into the causes of feeding issues and the most effective therapies for people with HI are urgently needed.



**Poster Title:** The Impact of Congenital Hyperinsulinism on Family Finances and Time: A Report from the HI Global Registry  
**Presenter:** Kristen Rohli, PhD, CHI Research Manager.  
**Conference:** Annual Meeting of the Pediatric Endocrine Society (PES) (May 2025; National Harbor, MD)  
**Key Message:** For some HI families, the financial and time burden of HI leads to difficulties paying for medical and household expenses, and reduced time in school or work. Clinicians who manage the care of people with HI should ensure that families are well-supported in all aspects of life beyond clinical management. [Updated from the 2024 poster]



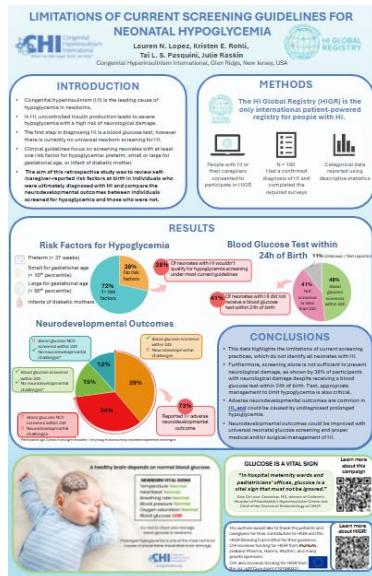
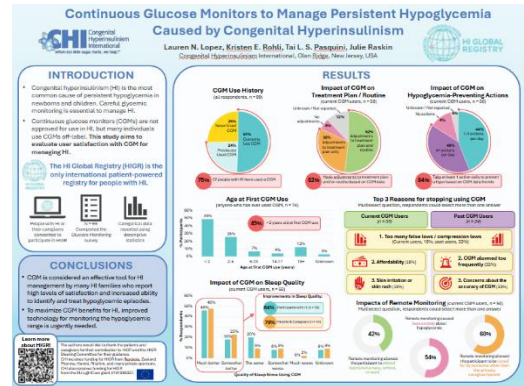
**Poster Title:** Evaluating Continuous Glucose Monitoring Metrics in Congenital Hyperinsulinism Compared to Diabetes  
**Presenter:** Kristen Rohli, PhD, CHI Research Manager.  
**Conference:** Diabetes Technology Meeting (October 2025; Burlingame, CA, USA)  
**Key Message:** CGM technology and analytical frameworks remain biased toward hyperglycemia. There is a critical need for more robust analytical CGM models for dysglycemia conditions and diabetes.

**Poster Title:** Continuous Glucose Monitors to Manage Persistent Hypoglycemia Caused by Congenital Hyperinsulinism

**Presenter:** Lauren Lopez, PhD, CHI Registry Director.

**Conference:** Diabetes Technology Meeting (October 2025; Burlingame, CA, USA)

**Key Message:** CGM is considered an effective tool for HI management by many HI families who report high levels of satisfaction and increased ability to identify and treat hypoglycemic episodes.



**Poster Title:** Limitations of current screening guidelines for neonatal hypoglycemia

**Presenter:** Julie Raskin, MA, CHI Chief Executive Officer.

**Conference:** Hot Topics in Neonatology 45th Annual Conference (December 2025; Washington D.C., USA)

**Key Message:** Adverse neurodevelopmental outcomes are common in HI and could be caused by undiagnosed prolonged hypoglycemia. This data highlights the limitations of current screening practices, which do not identify all neonates with HI.

## Request Access to HIGR Data

Researchers can add patient-powered data to their HI research! Qualified researchers who sign a Data Use Agreement (DUA) may request access to de-identified data from HIGR.

Researchers can contact the CHI research team to explore ways that HIGR data could be used to support and enhance research studies in HI: [info@higlobalregistry.org](mailto:info@higlobalregistry.org)

## Community Engagement

HIGR is a patient-powered research tool, and patient-powered research tools are only as strong as the patients who power them! The continued participation of people with HI and their families is now more important than ever. We know from the data that participants have provided in HIGR that HI is a complex condition, and people with HI often experience changes in symptoms and their management over time. It is so important to make sure that your voice and your experiences are updated and included in HIGR reports.



Examples of social media posts from various engagement campaigns throughout 2025.



*"I am happy to share my CGM and glucometer data with CHI and I encourage other patients to share theirs. I'm hoping that with a larger volume of data, a new pattern might appear that could spark an additional area of research that could lead to a cure."*

### Your participation is what strengthens HIGR and HI research!

This year, many members of the HIGR community contributed to our campaign to encourage others to share their glucose values with HIGR, by sharing their thoughts on the importance of this data to HI research.

Our HIGR Ambassadors also created a lot of highly engaging and impactful content through blog posts this year, including [Marie-Claire's thoughts on the CHI Family Conference in Philadelphia](#), [Martina's family's journey with HI and finding her community in Italy](#) (also translated into Italian), [Anna's reflections as an adult with HI](#), [Felecia's daughter's journey from HI to diabetes and the power of sharing through HIGR](#), and so many more!

Read all of the blog posts on the CHI website: <https://congenitalhi.org/blog/>

# HIGR Data Report

## Recruitment

HI occurs worldwide, and a recent study estimated the prevalence of HI to be 1 in 28,000 live births in most countries. As of November 3, 2025, HIGR has enrolled 691 participants from 62 countries. This represents a 16% increase in registrants from last year! Of the 691 registered participants, 86% have consented to participate in research, including adults with HI who had the capacity to consent to research themselves (17%), and adults and children who were consented by a caregiver (83%). Currently, 82% of all consented participants have completed at least one survey. This is a huge improvement from 68% in 2024! Additionally, the percentage of new participants who completed at least one survey rose from 56% in 2024 to 92% in 2025.

The majority of participants are from North America (53%), but participation in Europe increased this year to 26% of all registrants (up from 24% in 2024). (Figure 1). Since the last Annual Report in 2024, 79 new individuals consented to participate in HIGR. The majority of new participants were from North America (44%) and Europe (34%).

**691 individuals across 62 countries have registered with the HI Global Registry (HIGR)**

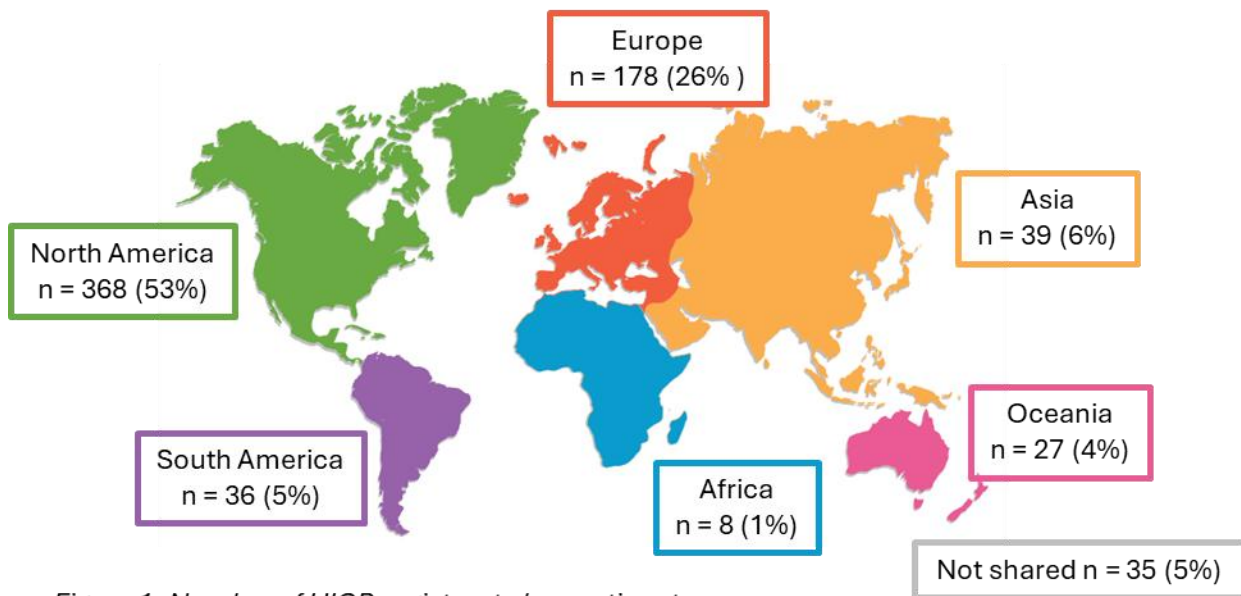


Figure 1. Number of HIGR registrants by continent.

HIGR was translated into six new languages in March 2024 (French, German, Italian, Korean, Portuguese, and Spanish) and a seventh language in November 2024 (Dutch). Since the launch of additional languages, 21% of new registrants (15% of all HIGR participants) chose to complete surveys in a non-English language.

## Characteristics of HIGR Participants and Diagnosis

There is a wide range of ages among HIGR participants, from just a few months old to over 70 years old, however the majority of HIGR participants are children. Most new HIGR participants who joined in 2025 are young children, however 22% of new participants in the past year were over the age of 18 (Figure 2).

Of the 360 participants who completed the *Diagnosis* survey, 178 (49%) indicated diffuse disease, 35 (10%) reported focal HI, and 15 (4%) reported atypical HI (Figure 3).

HI can be classified as either focal, diffuse, or atypical, but this form of classification is not universally known for all individuals with HI. HI type may be reported as unknown because 1) the appropriate testing has not been performed to determine the HI type, or 2) because the participant or their caregiver is unaware of the HI type, even if their physician knows.

For individuals who responded “Unknown” or “Other”, members of the HIGR research team have been able to confirm active HI based on critical characteristics such as HI medication use or physician confirmation via MaxHIGR report.

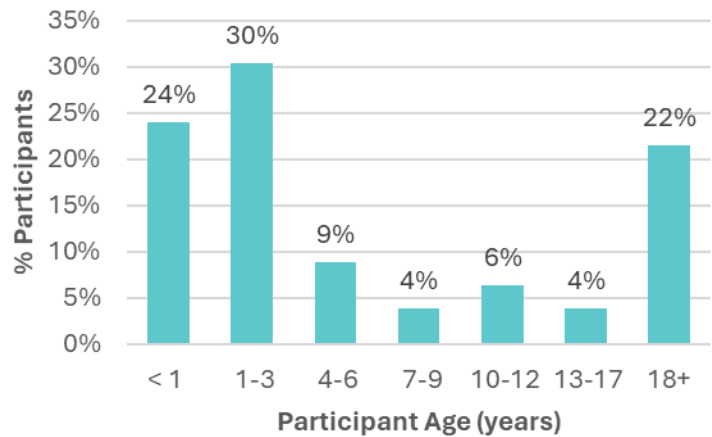


Figure 2. Participant age at time of joining HIGR (new participants in 2025 only, n = 79)

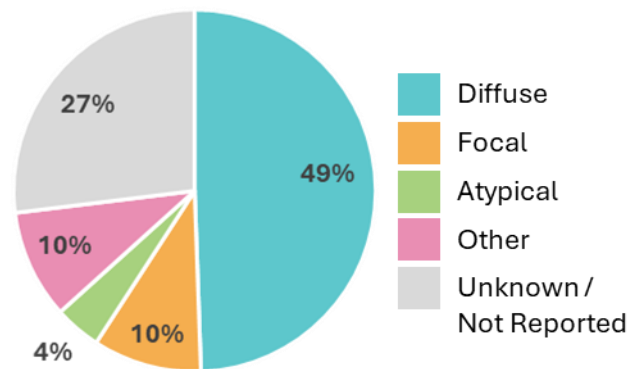


Figure 3. HIGR participants by HI type (n = 360)

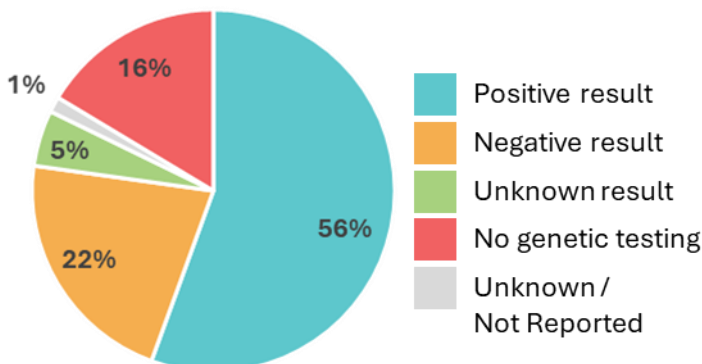


Figure 4. Genetic testing performed and results (n = 360)

## Genetic Testing

Of the 360 participants who completed the *Diagnosis* survey, 82% reported that they received a genetic test, and 16% did not receive a genetic test. 56% of all participants reported a positive result for a gene associated with HI across one or more genetic tests. 22% received a negative result after one or more genetic tests, and 5% had a genetic test but did not know or did not report the result (Figure 4).

Of the 296 participants who reported receiving a genetic test, 65% reported that the results of the **first test** were positive for a gene associated with HI (Figure 5). Of the 33% who had a negative or unknown result from the first test, 44% reported that additional genetic testing was performed. 7/43 (16%) received a positive result after additional genetic testing; 84% did not receive a genetic diagnosis after additional testing. There are many reasons why additional testing may have been performed. In some places the first round (or tier-1) genetic testing only includes a small number of genes, but if the results are negative the medical professionals may perform more testing looking at less common HI genes. In other cases, initial testing might have occurred before new genes related to HI were identified, which could justify additional tests.

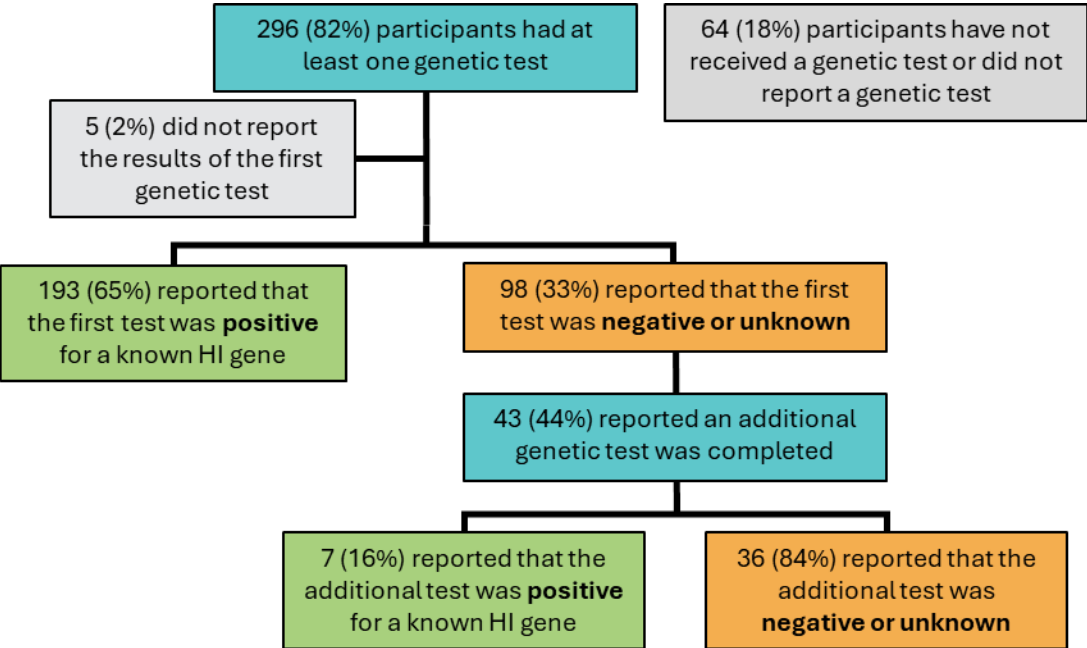


Figure 5. Flow chart showing percent positive genetic testing, for the first genetic test and any additional genetic tests.

**Medication Management**

283 people reported their medication use in the *Medication Management* survey. Figure 6 displays the percentage of participants who have taken each medication to treat HI, either in the past or currently. The table below the bars displays the total number and percentage of participants who have ever taken each medication. Individuals may be taking multiple medications, so the percentages will not add up to 100%.

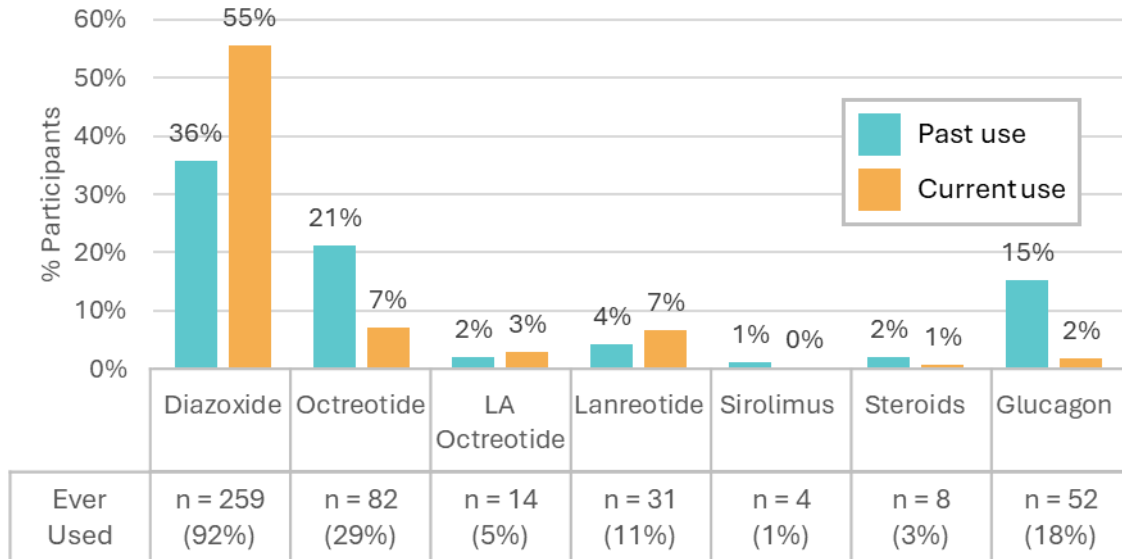


Figure 6. Medications used to treat HI currently and in the past (n = 283). Diazoxide use includes trial use.

Figure 7 shows the age of participants who are currently taking diazoxide or a somatostatin analog (SSA; octreotide, long-acting octreotide, or lanreotide). 259 participants (92%) reported taking diazoxide at some point (including trial use), and 157 (55%) were currently taking diazoxide at the time of completing the *Medication Management* survey. 59 participants (38%) who reported they were currently taking diazoxide were under 5 years old. 98 participants (35%) reported taking an SSA at some point, some participants reported taking more than one type of SSA, and 45 (46%) were currently taking an SSA at the time of completing the medications survey. 20 participants (44%) who reported that they were currently taking an SSA were under 5 years old. 12 participants reported currently taking both diazoxide and an SSA.

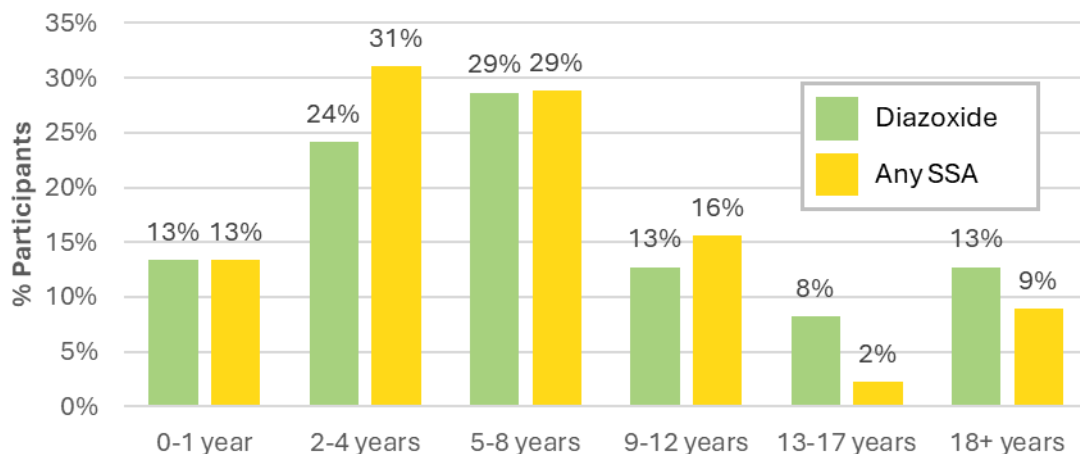


Figure 7. Age of current diazoxide (n = 157) and somatostatin analog (SSA) (n = 45) users. SSAs include octreotide, long-acting octreotide, and lanreotide.

Diazoxide and SSAs are all associated with multiple side effects. 85% of 204 participants who had ever taken diazoxide reported that they had experienced at least one side effect of diazoxide. Figure 8 shows the most common side effects of diazoxide. The most frequently reported side effects for diazoxide users include increased body hair (91%), loss of appetite (45%), facial changes (28%), swelling (27%), and stomach pain or upset stomach (26%). Less commonly reported side effects of diazoxide ( $\leq 20\%$ ) include increased heart rate, skin rash, hyperglycemia, changes in sense of taste, headache, pulmonary hypertension, dizziness, and fluid in the lungs. Other than the available response options, participants also reported severe nausea, vomiting, fluid retention, scrotal swelling, thrombocytopenia (low platelet count), and congestive heart failure. 41% of 157 individuals who currently use diazoxide and also completed the *Glucose Monitoring* survey reported continued hypoglycemia at least once per week while on diazoxide.

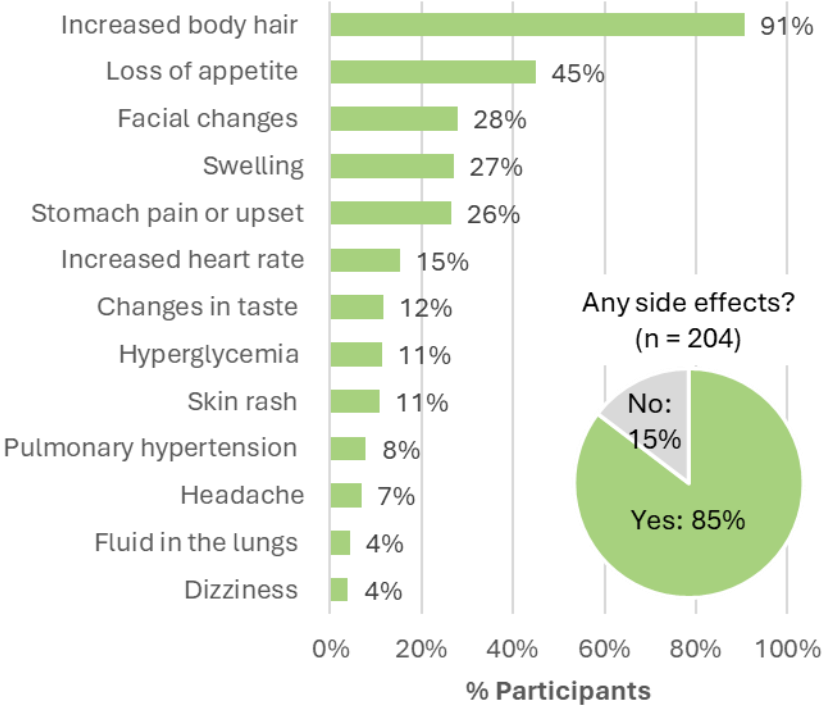


Figure 8. Reported side effects of diazoxide (n = 204). Inset pie chart: Presence of any side effect (n = 239).

64% of 81 participants who had ever taken an SSA reported that they had experienced at least one side effect of an SSA. The most commonly reported side effects for SSA users include changes in stool (63%), stomach pain or upset (37%), gallstone/ gallbladder sludge (33%), hyperglycemia (30%), and nausea (28%). Less commonly reported side effects ( $\leq 25\%$ ) include growth suppression, injection site problems, dizziness, and headache (Figure 9). 61% of people on an SSA reported continued hypoglycemia. 76% of 45 individuals who currently use an SSA and also completed the *Glucose Monitoring* survey reported continued hypoglycemia at least once per week while on the SSA.

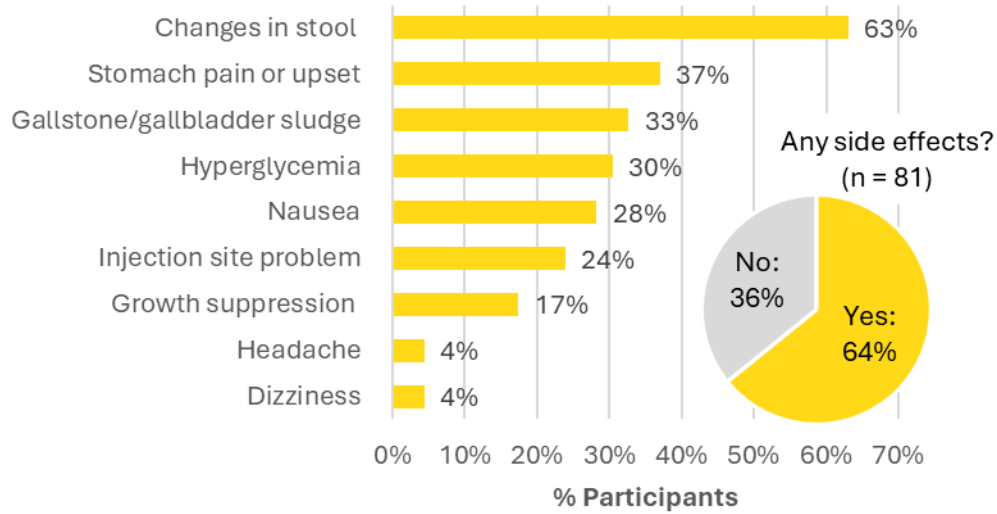


Figure 9. Reported side effects of SSAs (octreotide, long-acting octreotide, lanreotide) (n = 52). Inset pie chart: Presence of any side effect (n = 81).

## Surgical Management

Of the 312 participants who completed the *Surgical Management* survey, 25% reported that they had one or more pancreatectomies to treat HI. Of those who had a pancreatectomy and also reported HI type (n = 150), 62% had diffuse disease and 32% had focal disease (Figure 10).

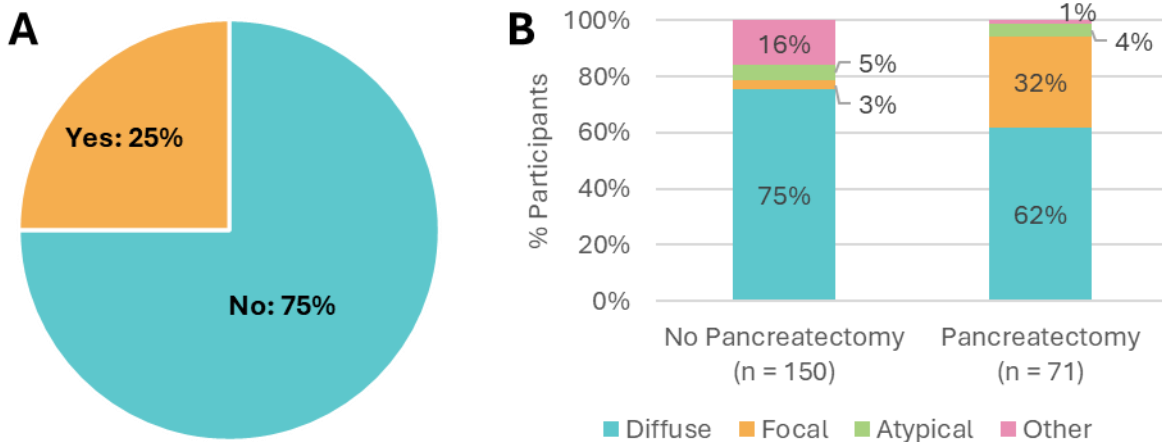


Figure 10. Presence or absence of pancreatectomy to treat HI (n = 312) and surgical status by HI type (n = 221).

## Glucose Monitoring

Figure 11 presents the reported frequency of low and high blood glucose. Over 200 participants reported how frequently they experience blood sugars below 70 mg/dL (3.9 mmol/L, 0.7 g/L) and above 180 mg/dL (10 mmol/L, 1.8 g/L). Note that n = 78 participants who reported that HI had resolved and/or that they had been diagnosed with diabetes have been excluded from this analysis. Of the remaining participants, 64% report experiencing lows at least once per week, and 29% experience highs at least once per week.

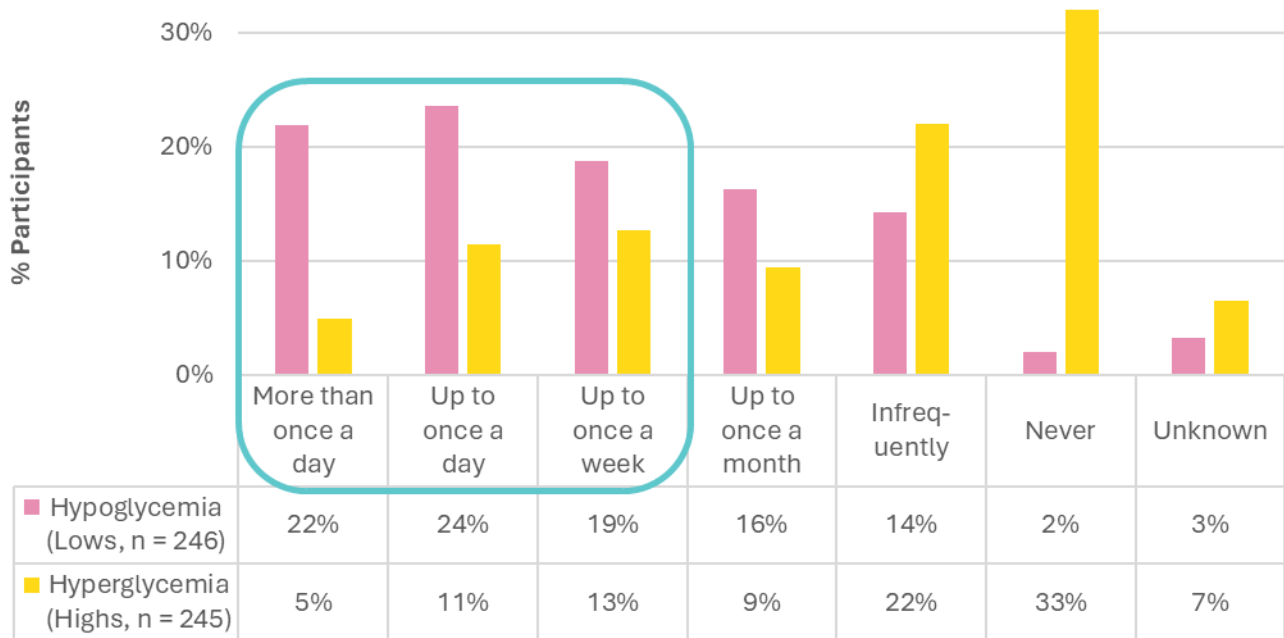


Figure 11. Frequency of hypoglycemia (lows, n = 246) and hyperglycemia (highs, n = 245).

## Feeding Issues

Figure 12 shows the history of feeding issues reported by 310 participants who completed the *Diet & Feeding* survey. 58% of participants reported having experienced feeding issues.

181 participants specified the feeding issues they had experienced. The most common feeding issues reported were poor appetite (68%), refusing to eat (61%), and slow eating (46%). Reflux, vomiting, gagging, problems with texture, and uncoordinated oral skills were each reported by over 25% of the participants (Figure 13).

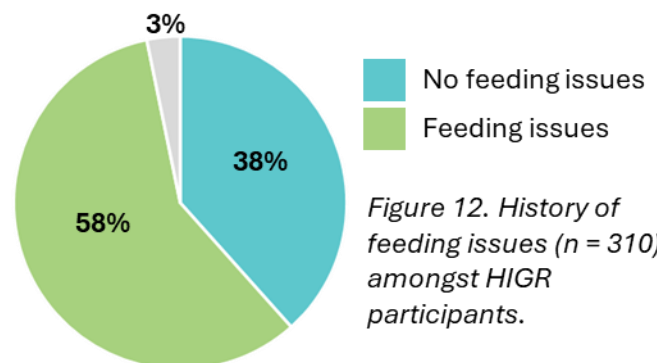


Figure 12. History of feeding issues (n = 310) amongst HIGR participants.

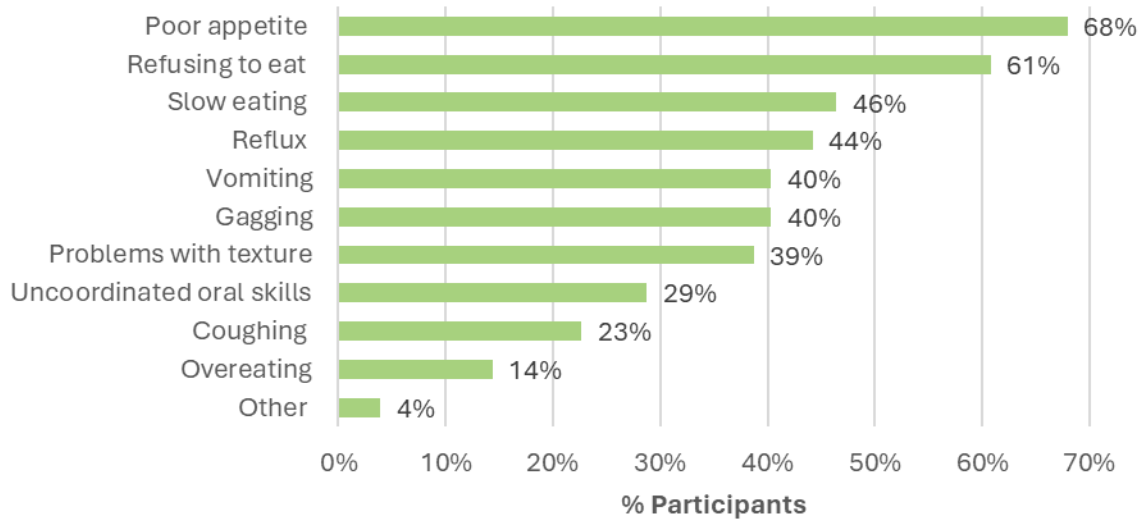


Figure 13. Feeding issues ever experienced (n = 181).

Figure 14 shows the reported age of participants when feeding issues resolved. Of 65 participants who reported that feeding issues had resolved, 25% resolved within the first year of life, and 78% resolved in early childhood (6 years and under). Of the 105 participants who reported that feeding issues were not fully resolved, 57% were aged six years old and younger, 27% were aged seven to 12 years, and 16% were 13 years and older.

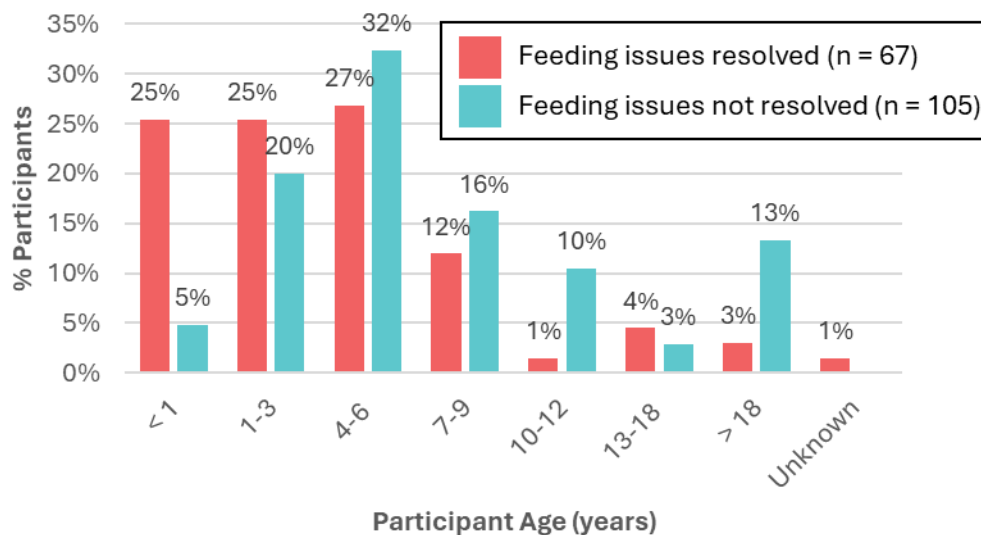


Figure 14. Age of participants when feeding issues fully resolved (red; n = 65), and current age of participant at report of feeding issues not fully resolved (blue, n = 105)

## Neurological Disorders

Of the 253 individuals who reported on other medical conditions, 97 (38%) reported that the participant was diagnosed with one or more neurological conditions. Of the 97 participants with a diagnosed neurological condition, the most common was epilepsy (40%), followed by attention-deficit/hyperactivity disorder (ADHD, 37%), learning disability (36%), autism spectrum disorder (ASD, 30%) and intellectual disability (18%) (Figure 15). This is likely an underestimate of the prevalence of neurological disorders within individuals with HI due to the younger age of most HIGR participants. Of those who reported no neurological disorders, around half were aged six years old or younger.

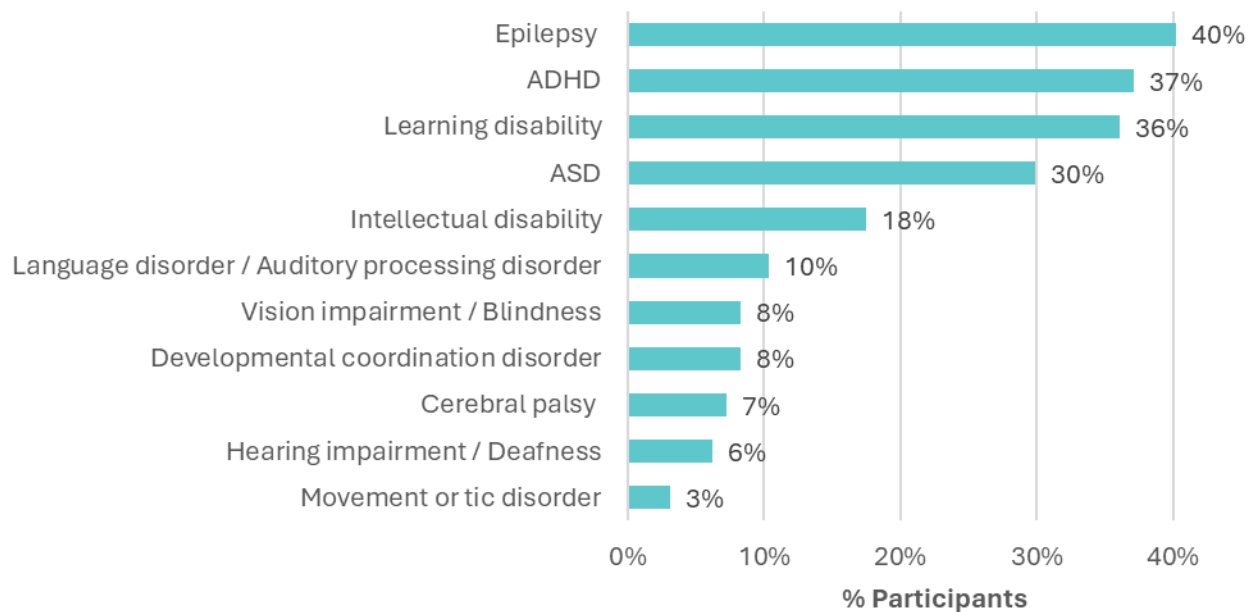


Figure 15. Neurological conditions reported by participants (n = 97).

Neurological condition labels have been shortened. Options presented to survey respondents were: Epilepsy; Attention-deficit/Hyperactivity disorder (ADHD); Learning disability (in reading, written expression, mathematics, or other specified impairment); Autism Spectrum Disorder (ASD); Language disorder / Auditory Processing Disorder; Intellectual disability; Cerebral palsy; Vision impairment / Blindness; Hearing impairment / Deafness; Developmental coordination disorder; Movement or tic disorder.

## Developmental Delay

Of 309 participants who completed the *Development Survey*, 148 (48%) participants reported that they had experienced delays in reaching developmental milestones (Figure 16). Figure 17 shows the percentage of participants who reported delays in each milestone area listed. Please note that many participants reported delays in more than one milestone area. Areas that most participants were delayed in were gross motor and language skills. 70% reported that they had experienced delays in gross motor milestones, such as sitting, crawling, or walking. 61% reported delays in language, speech, or communication milestones. Around one-quarter of respondents indicated that the participants had experienced delays in an area that was not listed in the survey, and the majority of these (72% of respondents who selected “other” and 19% of the total group) described feeding issues. While feeding is not typically categorized as a developmental milestone, the prevalence of comments in this section highlights the importance of feeding issues to the community of HIGR participants.

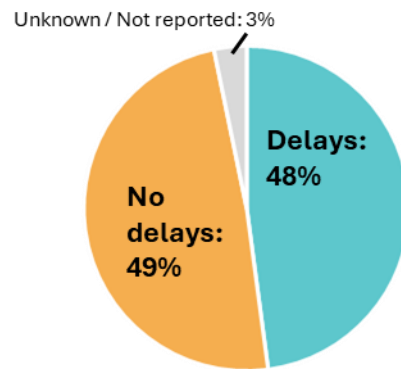


Figure 16. Presence of delays in reaching developmental milestones (n = 309)

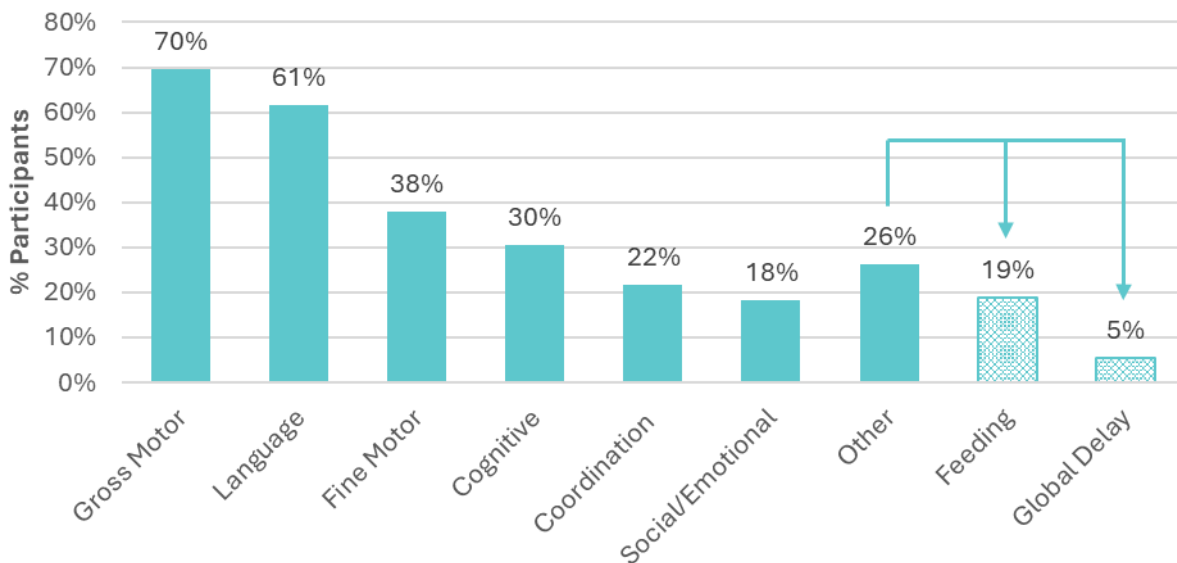


Figure 17. Developmental areas with reported delays in milestones (n = 148). Feeding and global delays represent common themes described in open text for the “Other” category.

## 2025 Special Data Highlight: Continuous Glucose Monitoring Use & Satisfaction

In the past year, HIGR has enabled the collection of glucose monitoring data from Dexcom continuous glucose monitors (CGM) and a number of compatible glucometers, in addition to revising the *Glucose Monitoring* survey to improve data collection on topics such as impact of hypoglycemia on daily life, CGM use and satisfaction and CGM history. This year's special data highlight will present some of the new data from the revised Glucose Monitoring survey and preliminary CGM data analysis metrics.

Of 99 participants who completed the new *Glucose Monitoring* survey by September 2025 and did not report diabetes, 51% currently use a CGM (Dexcom or another brand), 24% have previously used a CGM, and 25% have never used a CGM. Of those who had ever used a CGM, 49% were 2 years or younger at first use.

Of those who reported currently using a CGM, 82% reported that adjustments were made to their treatment plan (e.g., changing medication dose, timing of medication, prescribed feeding schedule, etc.) and/or routine (e.g. changing the feeding schedule, having a snack before activity, avoiding certain activities, etc.) based on information they have received by using the CGM (Figure 18). 84% reported that they take at least 1 hypoglycemia-preventing action (e.g. eating food and/or taking medication to prevent a low) every day, with 40% reporting an average of 4 or more hypoglycemia-preventing actions every day (Figure 19).

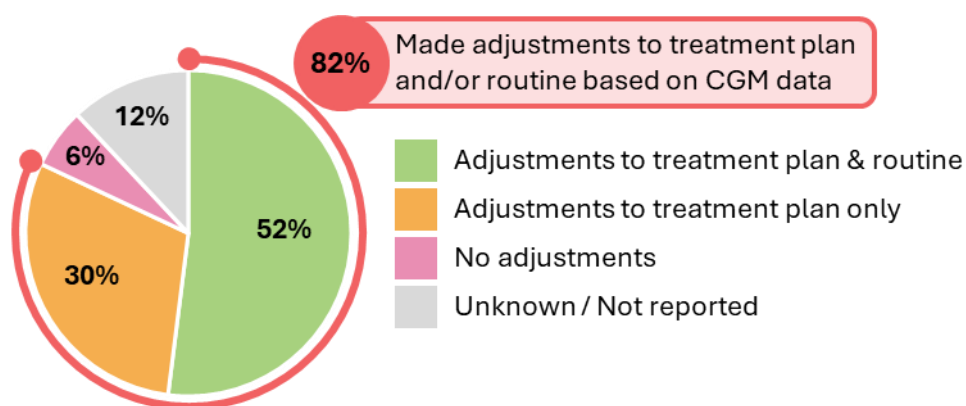


Figure 18. Impact of CGM on treatment plan and/or routine. Current CGM users; n = 50.

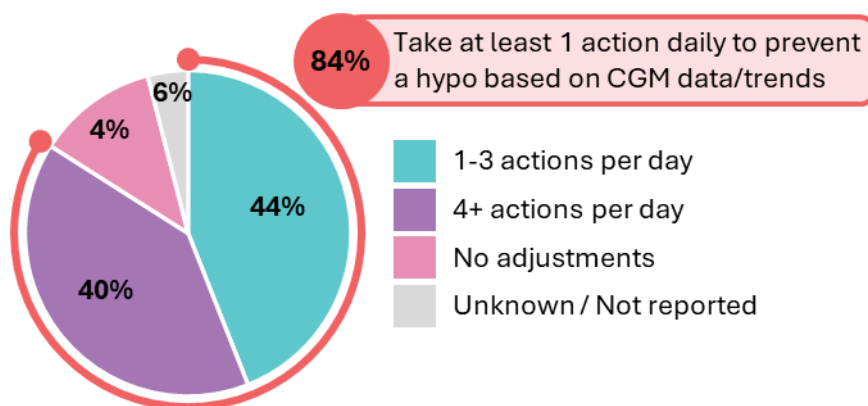


Figure 19. Impact of CGM on hypoglycemia-preventing actions. Current CGM users; n = 50.

Most current CGM users reported beneficial impacts on sleep quality for both the participant with HI and the parent or caregiver (Figure 20). There were many positive impacts of the ability to monitor the participant’s glucose levels remotely, including allowing the participant to be cared for by someone other than the primary caregiver/parent, and causing less anxiety about hypoglycemia. This data was recently presented as a poster at the Diabetes Technology Meeting in Burlingame, CA. The poster can be viewed on the CHI website.

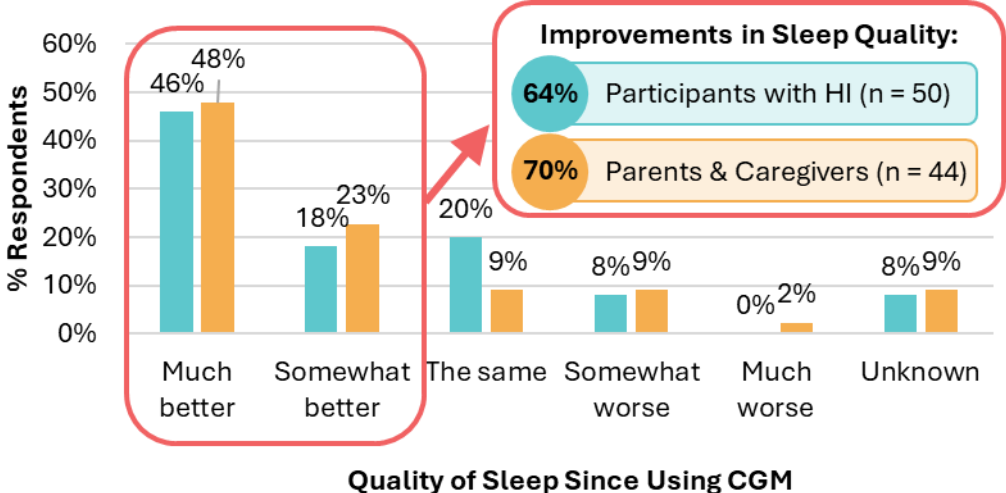


Figure 20. Impact of CGM on sleep quality. Current CGM users; n = 50.

As of November 2025, 47 individuals have chosen to share CGM data for HI research, totaling over 13 million data points! Collecting this data from as many individuals with HI as possible is critical to advance our understanding of CGM use in HI. To our knowledge, HIGR is one of very few research studies collecting and analyzing CGM data in people with HI outside of clinical trials. Based on the experiences shared by people in the HI community, it is our understanding that people with HI experience hypoglycemia and hyperglycemia differently than people with diabetes. We need to understand more about these patterns in HI to help improve CGM technology and develop new treatments for people with HI. Importantly, access to CGM for people with HI can be very challenging. By collecting data from people who use CGM off-label in HI, we can advocate to expand CGM approval for HI.

The HIGR team recently conducted a pilot study exploring the CGM data. Standard CGM analysis metrics are designed for use in people with diabetes, and it is unclear whether these metrics are applicable for people with HI too. The standard window of time for CGM data assessment is 14 days, but we found that a 30-day window better aligns with glycemic patterns in HI and sensor variability. The Glycemic Risk Index (GRI) is a score that evaluates glycemic control in people with diabetes by combining the risks of both hypoglycemia and hyperglycemia into a single number. We evaluated this in CGM data from people with HI and found that it will likely need to be adapted for the HI community to reflect the hypoglycemia-dominant characteristics of HI. This study was also presented as a poster at the Diabetes Technology Meeting in Burlingame, CA and the poster can be viewed on the CHI website.

## Closing Statement

This has been another year of impressive growth for HIGR! This year we have added one new survey to improve longitudinal data collection and made updates to three existing surveys to enhance data collection in new topics. The addition of the HIGR Ambassador Program and the HIGR Participant Appreciation Program, combined with ongoing outreach and engagement, led to significant improvements in survey completion rates. In 2026, we will focus on further expanding awareness of HIGR, continuing to improve existing surveys, and conducting research studies using HIGR data.

## Acknowledgments

The HIGR team would like to take the opportunity to thank everyone who has made it possible to conduct this important research and present its findings. This work would not have been possible without the dedication of HIGR participants and their families, who have generously given their time to complete surveys and contribute their data. We are very grateful to the entire HI community for its continual support of HIGR and for helping us raise awareness of this critical initiative. The authors would also like to thank the CHI Board of Directors for supporting HIGR and its growth, and Dr. George Couch, an HI parent and researcher, for his invaluable support with CGM data analysis.

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### *HIGR Steering Committee*

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The investigators wish to express our appreciation to the HIGR Steering Committee, who volunteer their expert advice and guidance to ensure the success of the HIGR research program.

- Sandra Melo (Portugal)
- María Paz Oviedo (Paraguay)
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- Dr. Paul Thornton (USA)

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### *HIGR Sponsors*

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