The Community Health Clinic

A NEWSLETTER FOR THE CHC

VOL. 6, ISSUE 2 ◆ FALL 2021

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WE RECENTLY REVISED OUR WEBSITE!

Check out all the new content at **www.indianachc.org**

INTERACT WITH US ON SOCIAL MEDIA!

www.facebook.com/indianachc

www.instagram.com/communityhealthclinic

FAMILY STORY

HOPE FOR TOMORROW

My name is Renee Case and my husband, Josh, and I have two adopted special needs kids. Jacoby is 6 and Ivy is 4. Both of our kids have rare genetic disorders.

We adopted Jacoby not knowing any diagnoses. After a few months of noticing some developmental delays, we decided to pursue testing. When a geneticist was recommended, we chose to check out CHC, mostly because they were relatively "local" to us and we didn't have to travel to Riley. Dr. Z was absolutely amazing! She diagnosed Jacoby with a rare condition called Chromosome 16p13.11 Microdeletion Syndrome. The staff helped us realize that there were resources out there for Jacoby and we were on the road to getting Jacoby the best care possible!

Fast forward a few years and we were ready to adopt again. Only this time we specifically wanted a special needs child. After a bit of waiting, we found out about Ivy. She was in Texas and we knew she had an extremely rare condition called Trisomy 9 Mosaic, along with some other birth defects related to her syndrome. I immediately called CHC and Dr. Z very graciously walked me through what we knew medically. It wasn't a lot to go off of, especially since Ivy's condition is so rare. There are only about 350-400 known cases of T9M in the world. We felt confident and reassured in what Dr. Z explained to us and here we are almost four years later, with the most precious daughter!

CHC opened their arms up to us when we brought Ivy home, making us feel like a priority to get Ivy in ASAP. We had a lot of unknowns at first and we all worked together to make sure we knew as much as we could about Ivy's condition.

It's hard to imagine that we've been coming to CHC for almost six years now. In the beginning, you go frequently, so milestones, therapy, testing, etc. can be documented and information collected for each disorder. And then as your kids get older, the appointments become further apart. With most of our many specialists,

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ABOUT THE COMMUNITY HEALTH CLINIC

The Mission of the Community Health Clinic (CHC) is to provide excellent and affordable medical care consistent with the needs of the Amish, Mennonite and other rural northern Indiana communities with a focus on individuals and families with special health care needs. The CHC embraces, incorporates and promotes participation in research to advance medical knowledge and improve care.

The Community Health Clinic

The CHC was founded in collaboration with the local Amish and Mennonite communities. With the endorsement of the Free Will Committee, we established a Board of Directors in 2008. Careful planning and generous community support allowed us to begin to see patients in 2013, offering high quality care at a greatly reduced cost to our families. We are open to the public, with a particular focus on serving the Plain communities. Currently, more than three fourths of our patients are from the Amish or Mennonite churches. Much of our annual budget comes from donations and fundraisers from the local community.

In the last eight years, we have served over 3,600 patients, both children and adults, with rare genetic and metabolic disorders. Most of our patient families come from Indiana and Michigan, but we have served both Plain and Non-plain families from 15 different states and several foreign countries. Our clinic provides medical management of complex diseases and offers genetic counseling, dietary management, and newborn screening. We have very good working relationships with regional hospitals and health systems, routinely working with them to provide additional services to our patients in need. Our patient population in Michiana continues to grow, both near our clinic and in outlying communities as well. Throughout the year, we now see patients in outreach clinics as far north as Clare, Michigan and south to Paoli, Indiana.

The disorders that affect the Plain communities are not unique to them; what we learn through research and care of our patients benefits all. Education is a critical part of our mission for families and clinicians. The Community Health Clinic collaborates with physicians and medical researchers across the country and around the globe to share our expertise, learn from others, and help ensure a better future for all those affected by rare disorders. We are a community-supported clinic and grateful for your advocacy and support. We are truly blessed to do this privileged work.

Jared Beasley, MBA, RN
Executive Director

Zineb Ammous, MD, FACMG (Dr. Z)
Clinical Geneticist and Medical Director

Continued from Cover

it's a welcomed situation when you don't have to go as often; however, there are a few that you hate going so long in between. CHC is one of those! I bring the kids in once a year now and each time it's crazy to think about how big they have gotten, which milestones they are finally meeting and how life isn't as complicated as it was when they were each little.

I am forever grateful for the love and compassion the ladies at CHC have always shown us. They are one of our favorite teams that we look forward to seeing each March. Without them, and Dr. Z, we wouldn't have the final puzzle piece to our family. I don't know if I ever told her, but it was all because of Dr. Z's encouragement that we felt we could handle a child with the complex needs that Ivy has. And we have! Watch out...we are in it for the long haul!!

The Community Health Clinic's IMPACT

With your support, we provide compassionate, comprehensive and coordinated medical genetics care at greatly reduced cost to our families. We embrace, incorporate and promote participation in research to advance medical knowledge and improve care.

IN JUST EIGHT YEARS OF SERVICE...

Over **8,600** patient visits

3,600 clinic patients

5 clinical outreach locations north to Clare, Michigan and south to Paoli, Indiana

Newborn screening follow-up services coordination for 19 Indiana counties

9 patient-centered **research projects**

Millions of dollars in **healthcare savings** annually

10TH ANNUAL DUTCH DINNER

You are cordially invited to the Community Health Clinic's 10th Annual Dutch Dinner

SATURDAY NOVEMBER 6, 2021

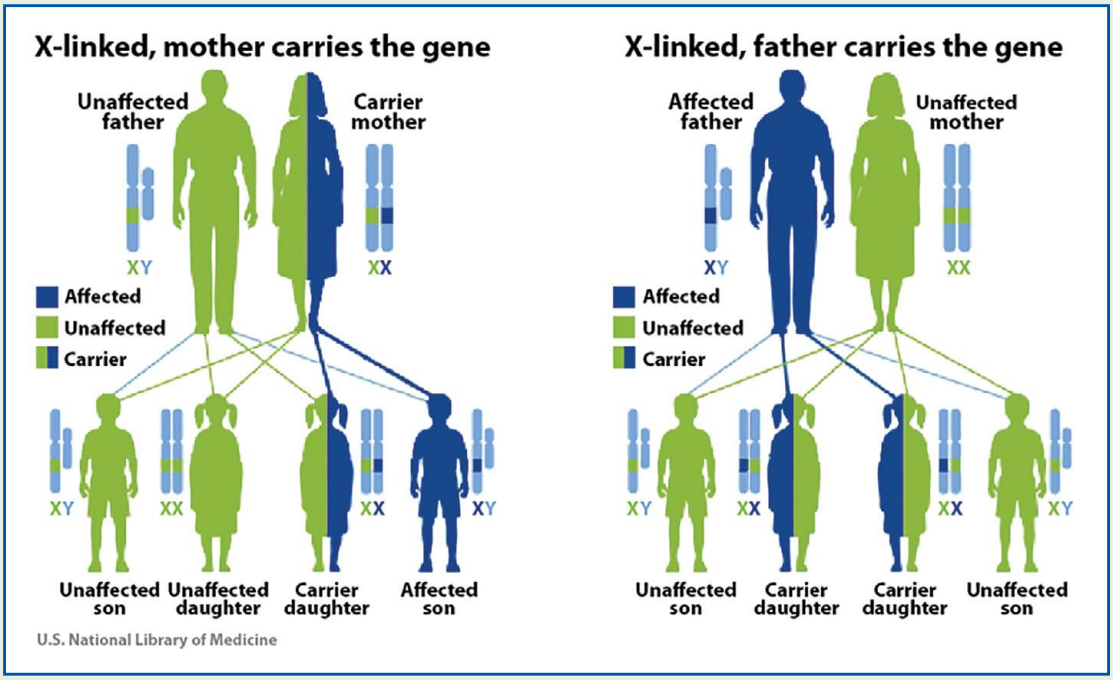
Sammlung Platz
758 Tomahawk Trail
Nappanee, IN 46550

The event starts promptly at 4:30 with appetizers, time for fellowship and music provided by area youth. Guests will hear personal reflections about the Community Health Clinic's local, state, and global impact, enjoy an authentic, family-style Amish dinner, and have the opportunity to ensure the clinic continues to help improve the lives of those affected by rare disorders.

Tickets and sponsorships are available now. Call 260-593-0108, email info@indianachc.org or visit IndianaCHC.org/events for reservations and additional information. Thank you for your consideration of support.

Newborn Screening for X-ALD

On July 1st 2021 Indiana added another disorder to the state newborn screening and started testing for X-linked adrenoleukodystrophy, known as X-ALD for short. This brings the total to over 60 conditions that all babies are screened for between 24-48 hours of life, including over 50 inborn errors of metabolism, sickle cell anemia, cystic fibrosis, hearing loss, critical congenital heart disease, severe combined immunodeficiency and spinal muscular atrophy.



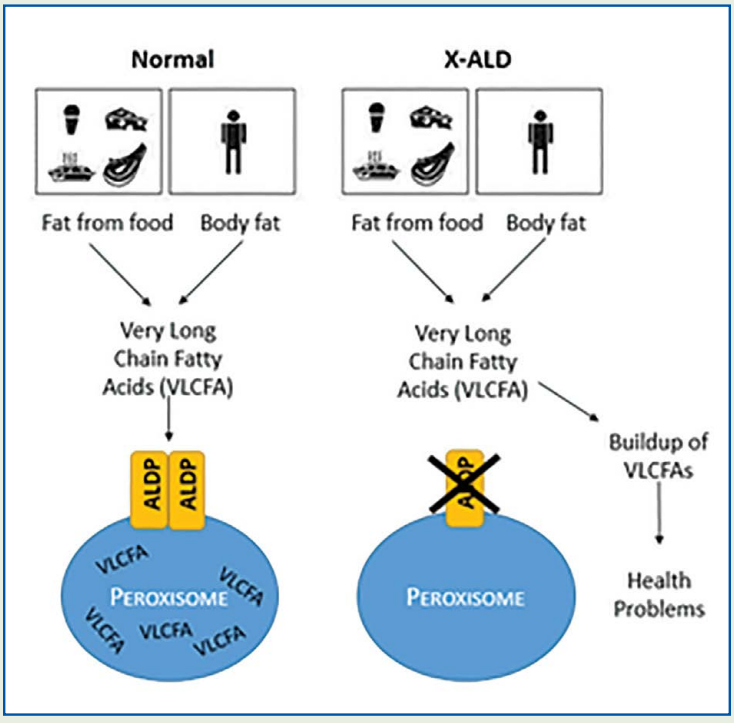
X-ALD is a genetic disorder that affects parts of the nervous system and the adrenal glands. Individuals with this disorder typically have a progressive loss of the fatty covering (myelin) that surrounds nerves in the spinal cord and brain. This fatty covering is important to help the nerves relay messages to and from the brain. Loss of the fatty covering results in symptoms such as vision loss, muscle weakness, stiffness or spasms, loss of coordination, and loss of bladder function. The adrenal glands are small glands located on top of the kidneys. In X-ALD the outer layer of the adrenal glands may be damaged which causes a shortage of certain hormones and leads to symptoms such as muscle weakness, fatigue, nausea, and loss of appetite.

There are three main types of X-ALD: a childhood cerebral form, an adrenomyeloneuropathy (AMN) type, and adrenal insufficiency only type. The forms vary by symptoms and age of onset. In a person with the childhood cerebral form, symptoms typically start between ages 4-8. The loss of the fatty covering on the nerves leads to symptoms such as problems concentrating, seizures, vomiting, vision loss, trouble eating, learning disabilities, and trouble coordinating movements.

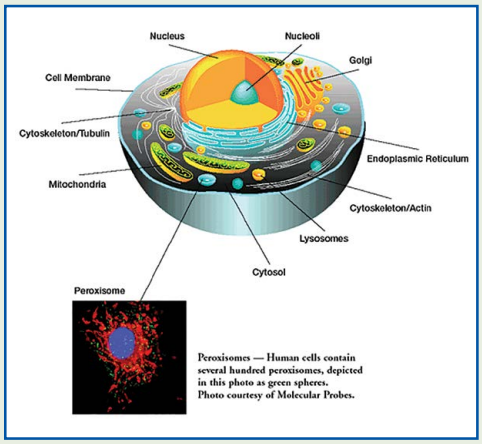
The adrenomyeloneuropathy (AMN) type is the most common type of X-ALD. This form of the disease presents nervous system and adrenal problems. Symptoms usually start in early to mid-adulthood and include worsening stiffness and weakness in the legs, pain in the hands and feet, muscle spasms, urinary disorders, and changes in behavior and thinking ability.

Symptoms of the adrenocortical insufficiency only type of X-ALD can start anytime between childhood and adulthood. This type does not have the neurological problems of the other types. Symptoms include decreased appetite, darkening skin due to increased melanin, muscle weakness, and vomiting.

X-ALD is caused by a change or mutation in the ABCD1 gene. This gene is located on the X chromosome, hence the name



X-linked adrenoleukodystrophy. The X chromosome is one of the sex chromosomes. Each man has one X chromosome and one Y chromosome; every woman has two X chromosomes. Since men



only have one X chromosome they only have one ABCD1 gene. If the ABCD1 gene has the disease causing variant, this man will have X-ALD. If a woman has one ABCD1 gene that has the change, she is considered a carrier. Most carriers will not have symptoms since they still have one working ABCD1 gene. However, around 20% of female carriers do have symptoms of the AMN type of X-ALD.

The ABCD1 gene provides instructions to make a specific protein called ALDP. This protein is responsible for moving fat molecules called very long chain fatty acids (VLCFAs) into a specialized part of our cells, where the fat molecule gets broken down. When there is not enough working ALDP, the fat molecules accumulate causing high levels of VLCFAs, which are toxic to the adrenal glands and fatty covering on the nerves. There are other disorders that cause high levels of VLCFAs including Zellweger Spectrum Disorder (ZSD). At the CHC we already care for a number of children with ZSD. By default we expect this new test will also detect babies that are born with ZSD, which will allow us to start treatment early in life for these infants.

Treatment for X-ALD varies with the type. Children with the cerebral childhood form may be considered for stem cell transplant. Adrenal insufficiency type is treated with corticosteroids. Physical therapy may be beneficial for the AMN form of the disease. Additionally, clinical trials are underway to investigate treatment with gene therapy.

Why Do Some People Need to Restrict Protein?

If protein is the building block of cells, why do some people have to limit their intake of protein? Don't they need protein to be healthy? How do they make muscle, skin, hair and other cells in their bodies if they never eat meat, fish, poultry, eggs, milk or cheese?

Animal foods aren't the only sources of natural protein. Did you know a slice of whole wheat bread has about 3 grams of protein? A half cup of potatoes has about 2 grams of protein. One cup of cooked macaroni has 8 grams or as much protein as one cup of milk! Peanut butter or almond butter have 7 grams of protein in 2 tablespoons. An ounce of meat or cheese has 7 grams of protein.

Protein breaks down into tiny pieces called amino acids. There are 20 different amino acids in protein. People with metabolic disorders can't use all of the amino acids that are in protein. A person with PKU or phenylketonuria, must limit the amino acid phenylalanine. Those who have Propionic Acidemia (PA) need to limit the amino acids valine, methionine, isoleucine and threonine. The common thread for these metabolic disorders is limiting dietary protein.

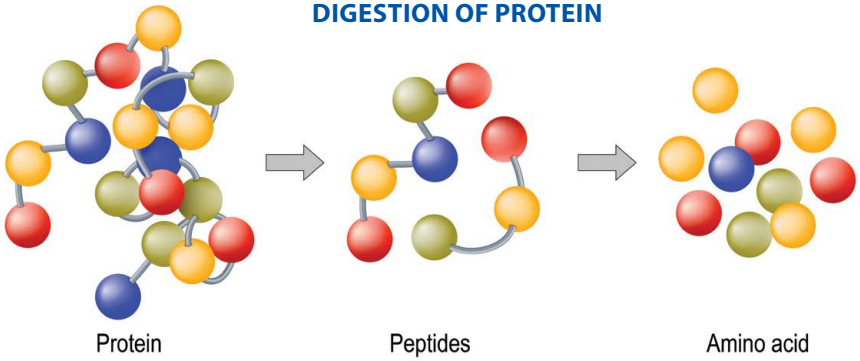
Generally we determine protein needs based on body weight in kilograms. The recommended dietary allowance is usually around 1 gram of protein per kilogram. An easy way to estimate protein needs is to take half of the weight in pounds to find out the grams of protein needed. A person who weighs 150 pounds needs about 75 grams of protein per day.

It isn't unusual for someone with a metabolic disorder to need to limit their intake to 5 or 10 grams of natural protein for a whole day. Others are more fortunate but still limit protein intake to 20 or 30 grams per day. How do people stay healthy and grow if the diet is very low in protein?

Most people who limit natural protein need to have a medical formula that has all the amino acids except for the one(s) the body can't process. This formula is prescribed by the medical team to provide most of the protein the body needs to be healthy. The protein in the formula has been broken down into the individual amino acids. The prescribed formula eliminates the offending amino acid(s). Fat and carbohydrate are added to give the medical formula a perfect balance.

The foods naturally low in protein, fruits and vegetables, make up the rest of the diet. These are the super foods that provide vitamins, minerals and fiber for good health. Special low protein flours and mixes allow baked goods, pasta and other special foods in the diet. Substituting zucchini "noodles," cauliflower "rice" or mushroom "burgers" are other ways to keep the diet interesting. The dietitian at the Community Health Clinic is available to help plan these special diets and provide creative ideas to keep meals and snacks fun.

DIGESTION OF PROTEIN



CLINIC NEWS & UPDATES

Thank You for Your Support and Advocacy

As many of you have heard, early this year, we made the difficult decision to cancel our auctions in both Shipshewana and Nappanee in response to the COVID-19 health crisis.

At the time, because of the medically complex and fragile patients we serve and the medical role we serve in the community, we were not able to support bringing large groups of people together in the way that our benefit auctions have in the past. We certainly missed the opportunities for fellowship, and we appreciate your grace and understanding.

Our annual benefits support nearly one-third of our operating budget, and we are grateful for the individuals and the Amish and Mennonite churches that have made donations to date to help offset the loss of income to our clinic. Our hope is that others who are able will also choose to support us this year through a financial donation. Any gift is appreciated, and all funds go directly to supporting patient care services. **Donations can be made online at https://www.indianachc.org/give, by telephone at (260) 593-0108, or mailed to the Community Health Clinic, PO Box 9, Topeka IN, 46571.**

Our special clinic would not be here today without the unique and valued partnerships we have in the communities we serve. The Community Health Clinic was founded of a need and a dream; a dream of parents and grandparents and of doctors and nurses that one day we would be able to help all of our patients live healthy, happy and productive lives. These folks shared their dream with others, and they too shared it with others still. Over time, many, many hands have come together to help make the dream a reality – founding and supporting the clinic we have today.

On behalf of our staff, board, and many volunteers, thank you for all you do to help us fulfill our mission: Please continue to share the stories about this most privileged work we do together. We could not do it without your advocacy, and we are truly humbled by your support.

CHC Purchasing Land to Plan for a New Facility

Since the opening of the CHC in 2013, we have been careful stewards of community resources, doing our work in a modest rented space, less than 3500 ft.^{2} in the basement of a small medical building in Topeka. From the earliest planning for the clinic, our founders had a dream to one day have our own facility to provide the best possible care for patient families, but it was also important that we grow the clinic sustainably – with care and consideration. The communities we serve also understood the longer-term needs and made some generous donations – seed money in the early years to eventually support the construction of a larger building.

With clinical and support staff sharing offices and meeting spaces, and creative patient scheduling, we continue to provide care, but with twenty staff serving more than 3,600 patients, we have significantly outgrown our space and the time has come to plan for a new building. After several years of searching, and consideration of multiple locations, we've recently put some of the donated building funds to use and are in the final stages of purchasing land in north Shipshewana.

We are very early in the process of defining requirements for a new facility to sustain and support our mission and enhance our medical care, patient-centered research, and education services for all those we serve today and those we will serve in the years to come. Our board, staff, and volunteers have a lot of important work in front of us and we look forward to updating you over the coming year as the planning for a new building for the Community Health Clinic moves forward.

Expanded Newborn Screening Partnership

Starting July 1, 2021, The Community Health Clinic has expanded newborn screening follow-up coverage. In collaboration with the Indiana State Department of Health, we will now be providing follow-up services for inborn errors of metabolism, spinal muscular atrophy, severe combined immunodeficiency and X-linked adrenoleukodystrophy for 19 counties in Indiana. We are excited about this opportunity and thank all our supporters who have helped make this possible.

Welcome Rhonda and Jessica

Rhonda Anderson, an experienced certified nurse practitioner, joined the clinic in June. Rhonda graduated with her Bachelor of Science in Nursing degree from the University of Saint Francis in 2003 where she began her nursing career in the Emergency Department. She returned to the University of Saint Francis to obtain her Master of Science degree in Nursing in 2013.

Upon graduating, she chose a career path that she was most passionate about and began working in complex care pediatrics. Rhonda is the mother of a special needs child with a genetic condition which has given her special interest with the Community Health Clinic. She aspires to be an advocate for her patients and their families and has over eight years of experience working with children with multiple complex medical conditions. Rhonda lives in Rome City, IN and is married to Brad, a retired Army veteran and has three daughters: Abby, Kylie, and Kaitlyn. In her spare time, she enjoys spending time with her family, attending her daughter's softball and volleyball games, and volunteering for the school.

Jessica Meyer joined the Community Health Clinic as a receptionist earlier this year as part of our operations team. Jessica grew up in Ossian, IN where she has lived most of her life. She moved to Albion in 2019 and started working as a Medical Staffing Coordinator for Rosewood Staffing.

Jessica recently graduated from Ivy Tech in 2020 with her Technical Certificate in Business Administration.

In her free time, Jessica likes to run, read, and spend time with her dogs, Red and Daphne.

Outreach Clinics

In addition to seeing patients in our main facility in Topeka, CHC offers periodic outreach clinics in outlying communities in Indiana including Ft. Wayne, Berne, Paoli, and also in Clare, Michigan. The next scheduled outreach clinics include:

Ft. Wayne, IN
Monthly on 2nd & 4th Wednesdays

Berne, IN
December 11-12

Paoli, IN
August 31- September 1

Clare, MI
October 7-8

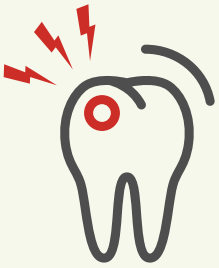
For other dates, appointment availability and additional information including whether an outreach clinic is appropriate for you, please contact us at 260-593-0108.

NEW SERVICES AT CHC, INC!

We at CHC, Inc. are happy to announce new services at the Community Health Clinic and the Community Dental Clinic!

This summer, pediatric cardiologist Dr. Devyani Chowdhury joined our Outreach Program. Dr. Chowdhury has almost 20 years experience and founded *Cardiology Care for Children*, which provides specialized care to children in Lancaster, PA, its surrounding cities and beyond. She has collaborated with the Clinic for Special Children(CSC) seeing patients with heart issues related to genetic disorders. Dr. Chowdhury understands the needs of the Plain community and strives to provide quality, one-on-one attention while keeping costs as low as possible. Her services include, but are not limited to, EKGs, echocardiograms and Holter monitoring.

Dr. Chowdhury's next visit to the CHC is October 15th. If you are interested in scheduling an appointment, please call 717-925-8300. When planning, please let the office know you would like to be scheduled at the Community Health Clinic in Topeka, IN. Appointments will be scheduled on a quarterly basis.



The Community Dental Clinic is now offering an "after-hours" service and is available to our existing patients. It is set up to assist those who are having an urgent dental situation or who may be experiencing dental trauma. Dr. Sarah will assess the situation and act accordingly by deciding if the patient requires an after-hours urgent appointment or a trip to the hospital emergency room. *If you are an existing patient* at the Community Dental Clinic, please call 260-768-7918 and follow the prompts for urgent services.

The Community Health Clinic, Inc. is always looking for ways to add services and remove barriers to affordable quality healthcare. We would appreciate your help in identifying these needs. If you have any ideas, suggestions or to simply explain something you may be struggling with, please give me a call. I can be reached at 260-593-0108 or you can send suggestions by mail to CHC, Inc., PO Box 9, Topeka, IN 46571 ATT: Debbie J.

Great things can happen when we work together!

Deborah Jurgielewicz
Operations Director

ACMG Annual
Clinical Genetics Meeting

Digital Edition

CHC Clinicians Present at ACMG National Meeting

Education is an important component in the CHC's mission that we believe will lead to improved health for the community we serve. In addition to providing education to each family, we also participate in events to educate the community and healthcare providers. CHC staff participated in the annual educational conference for the American College of Medical Genetics and Genomics, a virtual meeting that reaches genetics professionals across the US and all over the world.

Dr. Zineb Ammous organized a session at this conference titled "Plain People, Precision Medicine, and the Legacy of Victor McKusick" to highlight how targeted genetics care for the Plain community began and has evolved over the years. This session featured six speakers. Gerard Vockley, a medical geneticist in Pittsburgh, outlined the work of Dr. Victor McKusick who first recognized the value of the Amish community for genetics research and described dozens of genetic disorders in the 1960s. Dr. McKusick's work set the stage for Dr. Holmes Morton to establish The Clinic for Special Children in Pennsylvania in 1989, the first Plain community clinic for patients with rare diseases.

Dr. Donald Kraybill from Elizabethtown College described the origin and features of the Plain community, how cultural traits lead a deep divide between the Plain community and the modern healthcare system, and how a practice of providing "culturalized medicine" is necessary to improve the health outcomes in the Plain community.

CHC's Rebecca Evans highlighted the history of the CHC to illustrate the vital tools necessary to establish a successful genetics clinic to serve the Plain community. These tools include the community, collaboration with other healthcare providers, a strong clinical staff team, open communication, an ongoing needs assessment, and a commitment to education, outreach, and research. Rebecca also described the development of the Plain Community Health Consortium, the network of like-minded Plain community health clinics.

Dr. Erik Puffenberger and Karlla Brigatti from the Clinic for Special Children gave examples of how to take Plain community population knowledge in combination with culturalized healthcare to develop better outcomes for individual community members. They described both the development of their Plain Insight Panel™ (PIP), which provides more affordable and more accurate genetic testing to the Plain community, and their Spinal Muscular Atrophy (SMA) Prevention Readiness program, which helps prevent significant disease burden through early diagnosis and treatment of SMA in the community.

Finally, the CHC's very own Dr. Ammous wrapped up the panel presentation by reviewing collaboration around GM3 synthase deficiency, from first discovering the genetic basis all the way to hope of developing an effective treatment based on the genetic cause of this disease. She used this example to show how lessons learned in her daily practice can apply to other clinics practicing genomic medicine.

Nicole Bertsch, one of our genetic counselors, presented a poster presentation at the ACMG meeting titled "Diagnosing Copy Number Variation Disorders via Multigene Panels: 3 Case Reports." When a patient goes to a genetics clinic for an evaluation due to symptoms such as developmental delay, learning problems, and/or intellectual disability, the standard of care is to order a particular genetic test called a microarray. A microarray analyzes most of a patient's DNA for any extra or missing sections (duplications and deletions). However, microarrays are not currently available at a low cost.

Since the Plain community often faces financial barriers to medical care, the CHC strives to use lower cost genetic testing options when appropriate. This often means instead of ordering a microarray first, the CHC will order a genetic test called a "multigene panel." A multigene panel analyzes the spelling of individual genes and is not specifically designed to detect deletions and duplications like a microarray. However, sometimes a panel can detect a deletion or duplication of a single gene which can point to a larger deletion or duplication of genetic material.

Nicole's poster presented three patients for whom a microarray would have been the standard test to order based on their symptoms. Multigene panels were ordered instead since these were available for little to no cost. The CHC team carefully interpreted the results of these panels and made a genetic diagnosis for each patient that would typically have been detected using a microarray. However, the panels for these patients were sufficient to find a diagnosis and also reduced financial barriers for patients.

Overall, CHC presentations highlighted the success at providing high quality, affordable genetics care to the Plain community. The CHC participates in these national conferences in order to educate other healthcare providers who may work with the Plain community or who may work with other special populations who have similar barriers to healthcare.

The Value of Carrier Screening Services

"How does our child have a genetic condition? Nobody else in our family has this condition."

This is a statement we hear over and over again at the CHC. The most common situation in which we are told this is when a child is affected with a recessive genetic condition and both parents are carriers for that condition but did not know it. For a recessive genetic condition to occur, there needs to be a harmful variant (mutation) in each copy of the same gene. When a person has a variant in just one copy of a gene, he or she is a carrier. Being a carrier is a silent phenomenon since it does not generally cause any symptoms of a genetic condition. This means it can appear as if there are no genetic conditions in a family when in fact a gene mutation is being passed down through the generations of a family.

Being a carrier of a recessive condition is most significant if two people who are carriers of the same genetic condition have children together. Then, there is a chance with each pregnancy that each parent would pass on the copy of the gene with a variant. If that happens, the child would end up with a variant in both copies of the gene and be affected with a recessive condition. Many conditions we see at the CHC work this way including phenylketonuria (PKU), propionic acidemia (PA), GM3 synthase deficiency, severe combined immunodeficiency (SCID) syndrome, and hundreds more.

Since being carrier of a recessive condition usually does not cause symptoms or health problems, it is not possible to know whether one is a carrier unless 1) a child is born who is affected by a recessive condition or 2) a person has a genetic test called carrier screening. Carrier screening tells somebody for which recessive genetic conditions he or she is a carrier.

The CHC is committed to making carrier screening affordable and accessible to our community. To that end, we recently started a program where **the second Friday of each month at the CHC is reserved for carrier screening**. Carrier screening is available to any member of the Plain community or person of Plain ancestry who is **18 years of age or older.** If you are interested, you can call the CHC to make an appointment. First, you would come for a visit at the CHC for education about carrier screening and a blood draw. The genetic test is then run, which analyzes over 1,000 genetic variants and takes 4-6 weeks. Once results are back, you have a genetic counseling visit to discuss results. The CHC will help you understand your results and make a plan that will benefit your entire family. Carrier screening is also available for non-Plain individuals. Do not hesitate to call us with any questions about this beneficial program!

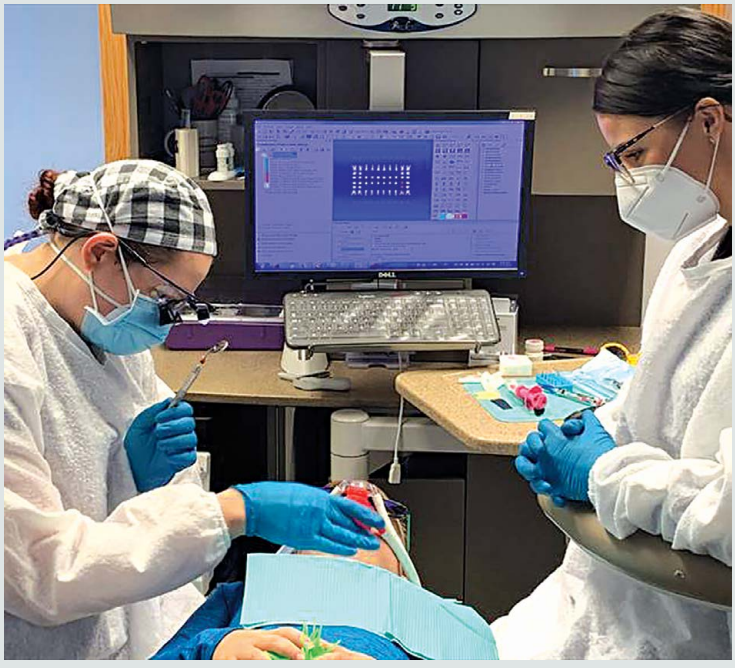
Carrier screening is a useful tool for the following reasons:

- Families can prepare emotionally for the possible birth of a child with a genetic condition instead of being caught off guard.
- If both parents are carriers for the same condition, the CHC can coordinate genetic testing for a baby at birth off of a blood sample from the umbilical cord (cord blood testing). This allows the family to know whether the baby is affected within a few days after birth rather than waiting over time for signs or symptoms of the condition to develop.
- Any treatment or special medical care that is available for a genetic condition can be started as early as possible. This can assist with better medical outcomes and quality of life.
- If treatment is not available for a genetic condition, then we can assist families with affected children with a palliative care plan and avoid extended hospitalizations and unnecessary interventions. An example of this is when parents are carriers of nonketotic hyperglycinemia (NKH).
- If parents are not carriers of any of the same conditions, they can be reassured that there is a low chance of having children with certain genetic conditions.
- If parents are concerned about their child and already know they are carriers for certain conditions, this can potentially shorten the process of a genetic evaluation and potentially prevent an extended journey to find a diagnosis.

The mission of the Community Dental Clinic is to provide high quality, affordable and compassionate dental treatment with a focus on **PREVENTION** and **EDUCATION**. Serving the needs of children and adults in the Amish, Mennonite, and other rural northern Indiana communities.

Here at the Community Dental Clinic, we are passionate about our mission statement and our focus on prevention and education! Our first topic that we would like to concentrate on is the importance of dental x-rays.

Why are dental x-rays so important and do you really need them?



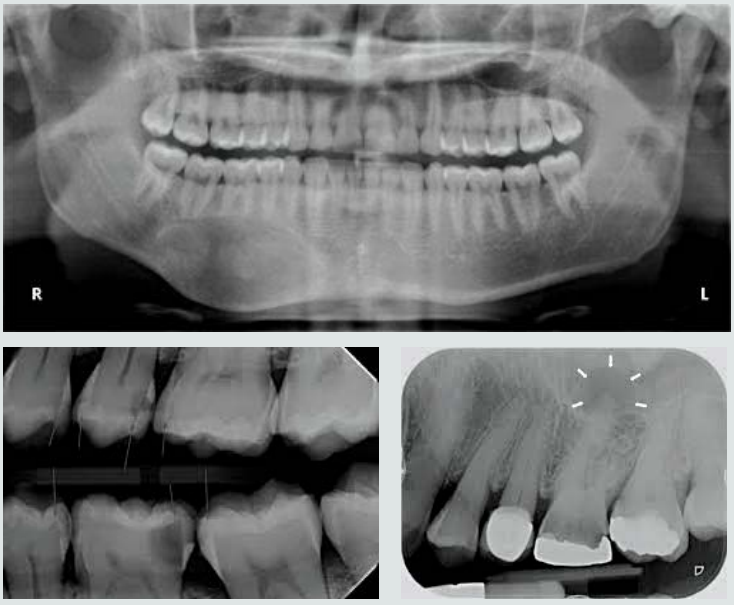
One of the primary reasons we go to the dentist is to detect dental issues before they turn into serious problems. While a physical examination can find noticeable signs of concern, some oral diseases are not visible to the naked eye. This is why dental x-rays are such a valuable part of preventive dental care. Dental x-rays can detect even the slightest traces of oral health problems at their earliest stages, such as cavities, gum disease, oral infections, and some types of tumors. With early detection at preventive care (cleaning) appointments, this will assist the dentist in helping you fight against oral diseases.

It is important to realize that dental x-rays are only taken when necessary for diagnosis and treatment. The frequency of x-rays depends on the individual's dental health, signs of dental problems, age, and risk for oral disease. Individuals that are at a high cavity risk will need x-rays more often, potentially every six months. Typically, cavity detection x-rays are taken only once a year. Panoramic x-rays, which show all of your teeth and jaw, are taken every three to five years, depending on any risk factors.

When problems are diagnosed, x-rays help serve as a guide for practitioners. Would you have a surgery at the hospital without having the proper diagnostic tools in place? A physician certainly would not do a surgery to fix a bone without first having x-rays. Dentistry should not be viewed differently. This useful tool helps your dental providers see cavity location, severity and size. It helps to diagnose bone loss patterns in periodontal disease (result of infections and inflammation of the gums, periodontal ligament and the bone that surrounds and supports the teeth). It helps the dentist know what the root structure looks like and where your sinus is located when doing an extraction (pulling a tooth), among other various reasons.

While some individuals worry about the radiation exposure from x-rays, modern technology has reduced radiation levels to miniscule amounts. For almost 25 years, the American Dental Association has published recommendations to help family dentistry practices make sure that radiation exposure is as low as effectively possible. In addition, dentists take numerous safety precautions like protective aprons and collars to protect patients from radiation. They also make any exposure as brief as possible by using digital x-rays or the fastest film speeds available. In our office, we utilize digital x-rays.

While we do not routinely take x-rays on pregnant women, they are considered safe by The American College of Obstetricians and Gynecologists when a protective apron is worn that covers a patient's throat and abdomen, so do not delay seeking dental treatment if you are pregnant. We are equipped and prepared to protect you and your developing baby as recommended.



Displayed are examples of digital dental x-rays. Top: Tumor Abscess; Bottom Left: Abscess (Infection); Bottom Right: Large Cavity

The true importance of dental x-rays is the ability to discover dental problems before they have a chance to develop. If you do not discover issues early, even the latest technology and an expert dentist cannot save you from the pain, time, and expense of treating problems after they have progressed.

Community Dental Clinic
A Non-Profit Community Dental Health Care Program

At the Community Dental Clinic, we aspire to provide you with high-level dental care and we are not willing to guess when it comes to your health! Dental x-rays help take the "guesswork" out of dentistry!

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