


Global perspectives

HAEI MAGAZINE · ISSUE 2/2020

 92 Member countries




HAE
GLOBAL
CONFERENCE
FRANKFURT
14-17 MAY
2020

THE 2020 HAE GLOBAL
CONFERENCE GOES VIRUTUAL

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DESPITE PANDEMIC

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ROSA MARÍA'S CONCERN TURNED
INTO ACTIVE INVOLVEMENT

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The 2020 HAE Global Conference went virtual due to COVID-19 – read about the 2020 HAE Virtual Global Conference on page 14

Magazine staff

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HAE International is a global non-profit umbrella organization dedicated to working with a network of national HAE member organizations to raise awareness of HAE

HAE International is registered as a non-profit organization in the United States of America



DEAR HAEi FRIENDS,

Welcome to the latest edition of Global Perspectives! The pages that follow will provide the usual comprehensive overview of what is going on in the world of HAE.

As we are all very well aware, the COVID-19 pandemic caused the cancellation of the HAE Global Conference planned for 14-17 May in Frankfurt, Germany. The HAEi team deserves to be congratulated for efficiently and effectively handling the complicated and tedious details involved in canceling flight and hotel reservations, and refunding registration fees. One would think that unwinding an event involving a thousand people would be a monotonous task, but that was far from what was actually experienced. Our team observed an uncanny level of resilience and optimism as they interacted with the global HAE community. This remarkable positive attitude inspired and motivated HAEi to figure out a way to overcome the COVID-19 lockdown restrictions and still bring HAEi friends together. Our solution—The 2020 HAE Virtual Global Conference.

Just as had been planned for the “live” event, we dedicated the virtual global conference to the memory of HAEi’s Founder and renowned physician/researcher Professor Marco Cicardi whose untimely passing leaves a void that will never be filled. The virtual meeting has proven to be a great success with over 12,200 visits to the conference site. In addition, visitors logged more than 300 total hours of time viewing the conference videos. We encourage anyone who has not yet visited the virtual conference to please do so at haei.org/gc2020.

The Global Conference wasn’t the only major event affected by the COVID-19 pandemic. Over the years, HAEi friends from around the globe have enthusiastically participated in the HAE global walk, which is an important part of **hae day :-)** activities. In keeping with the “can do” spirit of our remarkable community, HAEi friends found creative and safe ways to comply their government rules, but still get out and take 62,266,404 steps for HAE awareness. Congratulations to our great HAEi friends in Canada who led the pack and logged 7,700,000 steps!

HAE is an ultra-rare disease which means that the vast majority of physicians will not have seen anyone with the condition or know anything about it. That is why HAEi is offering a smartly designed Emergency Card that contains important information about HAE, treatments for attacks, and personal information such as emergency contact details and contact information for your HAE doctor. The Emergency Card is now available in 34 languages with more to come. See page 13 for more information.

We now see a slow, but steady easing of restrictions in most of our countries. We care deeply about the health of everyone in our community and encourage you to stay safe by carefully following the precautions recommended by health officials in your country.

I now invite you to enjoy the interesting and important information in the pages that follow.

Anthony J. Castaldo
President & CEO, HAE International

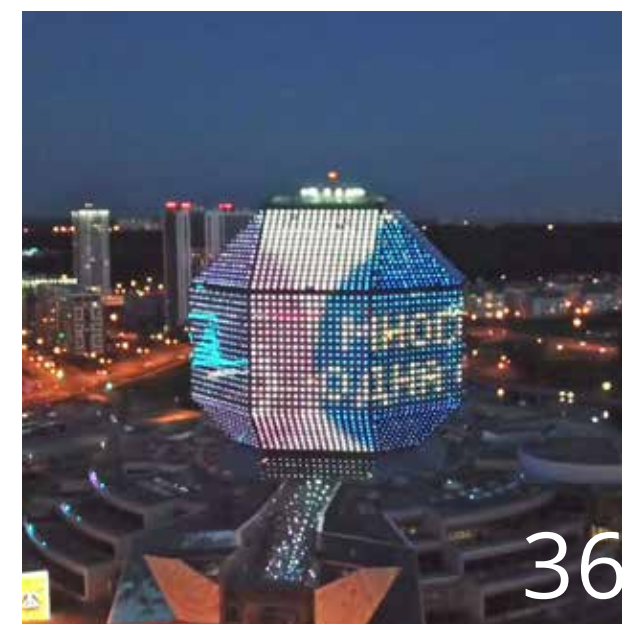
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NEWS FROM THE HAEI REGIONAL PATIENT ADVOCATES

The COVID-19 crisis has, unfortunately, put a hold on a few of the plans the Regional Patient Advocates (RPAs) had. However, like everyone, we have had to adapt and alter the way we do things.

We hope you enjoyed the RPA sessions during the virtual 2020 HAE Global Conference as much as we enjoyed recording the videos. The RPAs do fantastic work with individual countries in their regions, and we hope you got to know your RPAs a little better with the “Never Have I Ever” game and Q&A sessions.

Despite the lockdown situations in countries due to the pandemic, many patient groups have been very creative in coming up with ways to celebrate **hae day** :-) 2020.

The RPAs have introduced the Regional Advisory Group (RAGs) initiative to their countries. This initiative was born from the decentralized approach that HAE International has adopted.

Each country nominates an Advisor to form the Regional Advisory Group in its region. Each RPA will meet up to three times a year with the Advisors via teleconference and facilitate discussions to gain valuable feedback and understanding of challenges in each country. The information collected is then reported to HAE International. This information will shape further initiatives, and projects from the global organization and determine how it can be of further assistance.

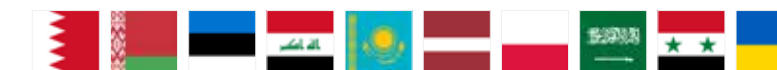
Thank you to the Advisors who are taking part in the Regional Advisory Group project. We have had valuable and useful responses to the first round of questions.

I hope you enjoy reading about the work going on around the globe.

Fiona Wardman
Chief Regional Patient Advocate



MICHAL RUTKOWSKI
CENTRAL EASTERN EUROPE,
BENELUX & MIDDLE EAST



I have successfully presented the Regional Advisory Group concept and Code of Conduct to all member organizations from Central Eastern Europe and Benelux. None of them had any doubts following the idea, and all countries declared participation in the project. Also, together with Advocacy Contractor Rashad Matraji, we have introduced the RAG concept to member organizations from the Middle East.

Since the last edition of *Global Perspectives*, the number of countries joining HAE International has expanded. The newest members from the regions I am responsible for are **Bahrain, Iraq, Latvia, Saudi Arabia** and **Syria**. In all of these countries there now is a local point of contact for HAE patients, caregivers and physicians.

As hard work pays off, the latest efforts resulting in the implementation of HAE International resources are as follows:

- **Estonia, Kazakhstan** and **Latvia** launched new websites hosted by HAE International
- The new, updated website for HAE **Poland** will be active shortly
- The HAE Emergency Card has been translated into Estonian and Latvian
- Furthermore, all of the resources available were introduced to more countries, and I expect them to implement soon.

Also, the ACARE project is more and more recognized in the HAE community in countries from my region, and I keep encouraging patients and physicians to create accredited angioedema care centers.

We all were very disappointed with the cancellation of the 2020 HAE Global Conference in Frankfurt, Germany due to the global pandemic situation. That is why it was even more appreciated to have the opportunity to follow the virtual conference. One of the highlights of the program was to celebrate **hae day** :-) 2020 jointly. The circumstances in which we found ourselves meant that each patient organization celebrated the awareness day separately. There has been many interesting initiatives in my region, for instance:

- In **Belarus**, the National Library in Minsk was illuminated with the **hae day** :-) logo
- In **Poland**, the patient organization launched the campaign “Fight for breath, withstand pain”, which aims to raise awareness about the disease, as well as ensure reimbursement for on-demand and long-term prophylaxis HAE treatments
- In **Ukraine**, an online press conference was held, and there were activities with the bloggers' community.



NATASA ANGJELESKA
SOUTHEASTERN EUROPE



I have had communication via e-mail with the patient groups and the patient organizations in my region to explain to them the establishing, the aim and the operation of the Regional Advisory Group (RAG) in Southeastern Europe. I requested the nomination of an Advisor from each country and 10 April 2020 we could hold the first RAG meeting – due to the coronavirus lockdown via Skype. Representatives from **Bosnia and Herzegovina, Bulgaria, Greece, Montenegro, North Macedonia, Serbia, Romania, and Turkey** were present – and following the Skype meeting, I scheduled meetings with representatives from **Albania, Croatia, Cyprus, and Slovenia**. The meeting was following this agenda:

- What is the general situation regarding access to medications in time of the COVID-19 pandemic globally?
- Code of Conduct
- RAG establishment, questions and shared answers, roles and future meetings
- **hae day :-)** 2020 marking - plans and joint initiatives

I was invited to participate in the online platform initiative “From Gaps to Bridges: The Future of Patient Engagement in Central and Eastern Europe”. It took place 12 May 2020 as an Innovative Medicines Initiative funded-project PARADIGM. This is currently developing tools aiming to make patient engagement easier for all throughout medicines research and development process. I have participated in the third of three workshops aimed at improving the meaningfulness of the monitoring and evaluation framework for Central and Eastern Europe by enriching the co-developed framework with metrics that capture value from the regional perspective.

Prior to **hae day :-)** 2020 I was happy to participate in the realization of the **hae day :-)** campaign on Instagram that was born as an idea at the Youngsters’ Advocacy Workshop in Atlanta in 2019 by a group of youngsters that I facilitated. I was delighted when Sofija Popovic from Serbia and Jack Cope from the United Kingdom were willing to implement their idea and received mentorship support and guidance from Lisa Facciola and Nevena Tsutsumanova with the end result to run one week before 16 May 2020.

hae day :-) activities

Many countries in my region had innovative ways to celebrate **hae day :-)** 2020. They had to cancel planned public events and/or patient/physician gatherings due to the lockdown and restrictions regarding group gatherings because of the COVID-19 pandemic - but they didn’t lose their enthusiasm and were dedicated to finding alternative ways for celebrating the HAE awareness day.

The newly registered patient association HAE **Croatia** gathered a group of patients and physicians in front of the Pedestrian Bridge in the city of Osijek. With the bridge illuminated in purple, they gave interviews for the media as a continuation of awareness activities that started with the publishing of several patient stories. Furthermore, they were guests in TV programs thus contributed to the awareness-raising following the official registration of the national organization on 29 February 2020.

HAE **Serbia** also realized an amazing initiative with the illumination in purple of several beautiful landmarks in the capital Belgrade: the Aval Tower, the National Assembly, the Palace of Albania, the Ada Bridge, the Gazela Bridge, Branko’s Bridge, and the New Railway Bridge. HAE Serbia used #osvetlimohae and in that way contributed to raising awareness along with media interviews with the president of the association, Jovana Cvetkovic.

In **Bulgaria**, the national organization was able to promote a documentary film with testimonials from patients and physicians’ interviews. This contributed to a huge Bulgarian awareness campaign including guest appearances of the HAE Bulgaria President Danail Dimov on national TV channels where he explained about the challenges of life with HAE. He also talked about access to medications and what is needed to be regulated for HAE patients to have improved quality of life in Bulgaria.

HAE **Turkey** held a webinar with various sessions about the association and the disease. In the questions and answers section that took place at the end of the program, physicians answered questions received from the patients. During the broadcast, more than 140 participants were included on a single user basis. Considering that there would have been multiple participants in the same household, it is believed that the attendance was around 180 in total. HAE Turkey is very proud of the fact that this is so far the event with the most attendees in 2020. Considering the feedback, the organization has received, additional online activities are to be held in the coming period for patients to meet more frequently. The webinar broadcast was recorded and published on YouTube.

Each year the HAE organization in **North Macedonia** tries to mark the HAE awareness day. This year, in the setting of the global pandemic with social distancing, it was decided to celebrate the day with small but sweet tokens of appreciation for the professionals and friends who have been helping in our fight. Cupcakes carrying the motto “Many Faces One Family” were delivered to them. HAE patients wanted to brighten up the daily lives of our close friends and associates by sending out the message “I Swell, But You Cannot Tell, I Care Very Well!” HAE Macedonia also prepared and published a puppet theater show and a children’s rap song on HAE on social media.

In **Romania** Physician, Dr. Noemi Bara was guest in a TV interview where she spoke about the challenges and needs of HAE patients and contributed to marking **hae day :-)** 2020 as well.

Furthermore, many patients, friends and supporters from the Southeastern European countries registered their steps for the 2020 HAE Global Walk campaign.

Finally, it should be mentioned that the youngsters Sofija Popovic (**Serbia**), Ersan Sevinc (**Turkey**), Dejan Angjeleski (**North Macedonia**), Erini Giannakidi (**Greece**), and MonaLisa Baltatescu (**Romania**) participated in the HAE Youngsters’ initiative and joined other youngsters from all over the world in sharing their #togetherapart posts.



FIONA WARDMAN
ASIA PACIFIC



I had planned to hold the first HAEi Regional Workshop Asia Pacific in Singapore in April; however, due to COVID-19, the workshop has been postponed until we are all safe to travel again.

I'm happy to report that we have two new patient groups in the Asia Pacific region. Angioedema **Bangladesh** was established in the last few months along with HAE **Singapore** more recently. Both new patient groups have a website (bangladesh.haei.org and haesingapore.haei.org) with HAE International, and both have set up Facebook groups. Ovi from Bangladesh and Jannah from Singapore would like to invite you to join and "like" their pages. Please see the section with news from the national organizations for more information.

HAE **Pakistan** has established a physician's group. The dedicated doctors in the network are from Pakistan, Saudi Arabia, and Canada. These physicians are very interested in creating awareness, educating their peers, improving diagnosis, and helping to gain access to treatments for patients in Pakistan. I have hosted two teleconferences with the physicians, where we have put an action plan and tasks in place.

A survey will be sent to patients in **India** to determine the country's burden of illness. The results will give us a starting point to work with to gain access to modern HAE treatments.



FERNANDA DE OLIVEIRA MARTINS
SOUTH AMERICA & MEXICO



I have had an online meeting with the President of Society of Allergies, Asthma and Immunology Dr. Joselit Torres and the President of HAE **Venezuela** Wilfredo Bocaranda. Topics discussed included identifying HAE and its treatments in crisis. Questions and concerns from patients registered with the foundation were answered in the meeting.

Several of the countries in my region had celebrations around **hae day :-)** 2020 – have a look at the section with news from the national organizations.



JAVIER SANTANA
CARIBBEAN AND CENTRAL AMERICA



During the past months, many patients in the Latin American region have been pending all the information related to the global pandemic coronavirus COVID-19. During the month of March, a virtual conference was held in Spanish so that Spanish-speaking patients who wanted to clarify doubts about coronavirus and HAE could participate and ask questions. Dr. Zaragoza, epidemiologist and allergist from **Puerto Rico**, was the invited speaker.

On the other hand, representatives of a drug distribution company in Central America are making the necessary efforts to bring the Icatibant drug to several countries in the region. This keeps many patients and doctors pending because it would be the first medication aimed at directly treating HAE in some countries.

We have a new member country – **the Dominican Republic** – which is patient organization number 90 around the world affiliated with HAE International. The national contact is Carol Batista and she is very excited to start working with us in her country for the well-being and better quality of life of patients with HAE.



MARIA FERRON
MEDITERRANEAN, NORTH AFRICA & BRITISH ISLES



Since holding a successful meeting with the North African countries in Algiers, I have introduced the HAEi Member Organization Code of Conduct to all the patient leads in all countries in my region. I also have been working with each country to nominate an Advisor for the Regional Advisory Groups. I have received excellent feedback from the first three questions, which will help me and HAE International understand the challenges and issues for each country.

I am also working on websites with a couple of my countries and setting up HAEi Connect.

Most recently my region has increased, as I am now also the Regional Patient Advocate for the **United Kingdom** and **Ireland** – I look forward to working with these countries as well.

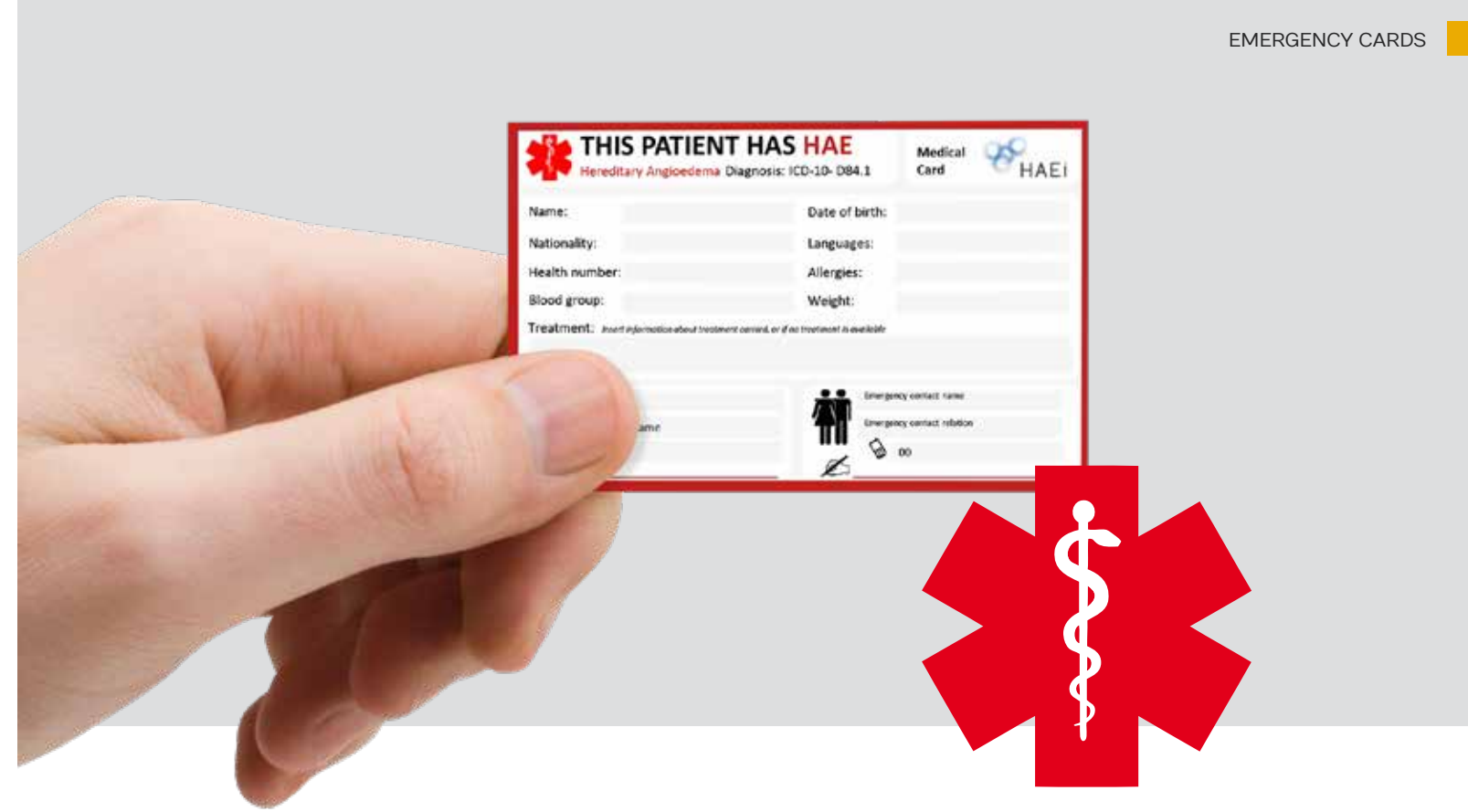


PATRICIA KARANI
SUB-SAHARA AFRICA



hae day :-) 2020 in **Kenya** was a day to raise awareness amongst the general public, and we got a lot of support from friends and family who chose to participate in our 5k global walk. We also had friends raise awareness through cycling as they remembered all HAE patients and their caregivers and the physicians who take care of HAE patients. We are confident that through more awareness campaigns, we will be able to identify more patients and improve quality of life for these patients. We eventually made an online video that has caught the attention of other well-wishers who wish to be part of the HAE awareness campaign in Kenya.

Doctors in **Sudan** were invited to join the virtual 2020 HAE Global Conference through an announcement made through the Sudanese Society of Clinical Immunology, all in an effort to raise more awareness amongst them.



EMERGENCY CARD NOW IN 34 LANGUAGES

No matter if your preferred language is Arabic, Chinese, Greek, Latvian or Spanish there is an Emergency Card from HAE International for you.

“As a matter of fact, we are presently at 34 languages and thereby covering a large portion of the globe”, says Henrik Balle Boysen, Executive Vice President & COO of HAE International:

“The Emergency Card can be a quick and effective way to let healthcare professionals know that you have a diagnosis of HAE when you arrive at a hospital or care center, and the treatment that should be considered.”

The Emergency Card contains clear and straightforward information about HAE and treatment required during an attack. It also has space for patients to add personal information such as emergency contact details and their specialist treatment center. The Emergency Card – now in 34 languages with more to come – is being used by HAE advocacy organizations around the world.

The Emergency Card has been designed to be used by HAE patients from all countries and can be adapted by any HAE International member organization.

“If you are a member organization and have designed your own emergency card that could be displayed on the HAE International website, or if you would like help from us in adapting a card, please contact me”, says Chief Specialist Projects and Research Deborah Corcoran.

If you are not a patient or part of an HAE International member organization and would like to use one of the cards, please contact the Regional Patient Advocate for your area and inform him or her that you plan to use the card.

See more about the Emergency Cards at haei.org/resources/emergency-cards/

CONTACT

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Regional Patient Advocates
haei.org/organization/meet-the-rpas



2020 HAE GLOBAL CONFERENCE GOES VIRTUAL

Frankfurt

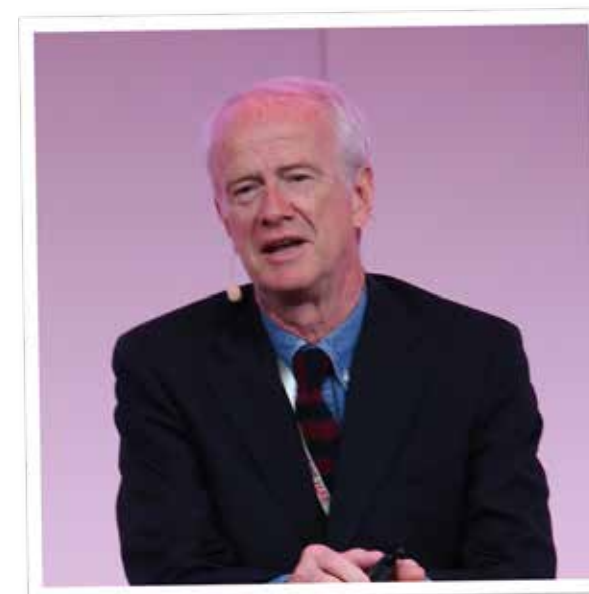




2020 HAE GLOBAL CONFERENCE GOES VIRTUAL

The coronavirus COVID-19 pandemic prevented HAE friends from around the globe to meet in person for the 2020 HAE Global Conference 14-17 May in Frankfurt, Germany.

“However, the ‘can-do’ spirit of the HAE global community inspired us in transforming this widely anticipated bi-annual conference into an exciting virtual event. Over the scheduled conference days, we presented a number of educational and interesting as well as motivating and fun sessions. It was all done via the Internet – and I am happy to say that this very different kind of global conference was followed by HAE friends from all over the world”, says the HAE International Executive Vice President & COO Henrik Balle Boysen.



The virtual conference was – just as it was the intention for the live edition of the 2020 HAE Global Conference – dedicated to the memory of HAE International’s founding father, the physician and researcher Professor Marco Cicardi from Italy.

“We honor the memory of a true giant in the HAE scientific and clinical realms – this exceptional and beloved man spent his life conducting research and providing care that dramatically improved HAE patients’ quality of life”, says President & CEO Anthony J. Castaldo.

The focal point of the virtual global conference was – and continues to be – the website haei.org/gc2020. Here, HAE International presents a number of videos in six main areas:

HAE INTERNATIONAL

Here you will find three videos on the story of the organization, the Regional Patient Advocacy program, and the HAEi Global Access Program. See more at <https://haei.org/gc2020/#haei>.

REGIONAL PATIENT ADVOCATES

Chief Regional Patient Advocates Fiona Wardman gives an overview of the program, and each of the Regional Patient Advocates introduces themselves and talks about what is going on in their regions. Also, they reveal some interesting things about themselves as they play a game of “Never Have I Ever”. See more at <https://haei.org/gc2020/#rpa>.

MEDICAL PRESENTATIONS

Professor Marc Riedl from the United States of America delivers a presentation on “HAE symptom recognition, diagnosis (including HAE-normal C1INH), and current treatments”, while Professor Markus Magerl from Germany discusses “HAE treatment plans, patient quality of life, and the future for HAE therapies and research.” Furthermore, this section of the virtual global conference includes a presentation by Professor Marcus Maurer from Germany on the features and benefits of the GA²LEN/HAE International Angioedema Centers of Reference and Excellence (ACARE). See more at <https://haei.org/gc2020/#medical>.

EXHIBITS

This part of the website includes virtual presentations from the pharmaceutical company sponsors BioCryst, Takeda, CSL Behring, Pharming, KalVista, and Pharvaris. See more at <https://haei.org/gc2020/#exhibits>.

SCIENTIFIC

This track is opened by HAE International Chief Specialist Projects & Research Deborah Corcoran together with Professor Bruce Zuraw from The United States of America and Professor Konrad Bork from Germany. Here you will also find abstract presentations – more will be added as they become available

over the coming weeks. They will also be promoted through the HAE International social media channels, so make sure to follow HAE International on your preferred social platform. See more at <https://haei.org/gc2020/#scientific>.

YOUNGSTERS

The HAEi Youngsters' Advisory Group share a video about their most recent activities and future projects, together with an **hae day** :-) 2020 campaign designed by Sofija Popovic (Serbia) and Jack Cope (United Kingdom), showing personal quotes from young HAE patients around the globe.

Another exciting project the HAEi Youngsters took part in for the 2020 HAE Global Conference, was the digital Poster Project. The idea was that they – either by themselves or in team of three – get a chance to work with their national member organization or one of HAE International Regional Patient Advocates in creating a digital poster about HAE in their country or region. The HAE International team provided the youngsters with a number of easy to customize templates to choose from to match their vision. You can see two examples here and explore more at haei.org/gc2020/#youngsters.

THE VIRTUAL CONFERENCE IN NUMBERS

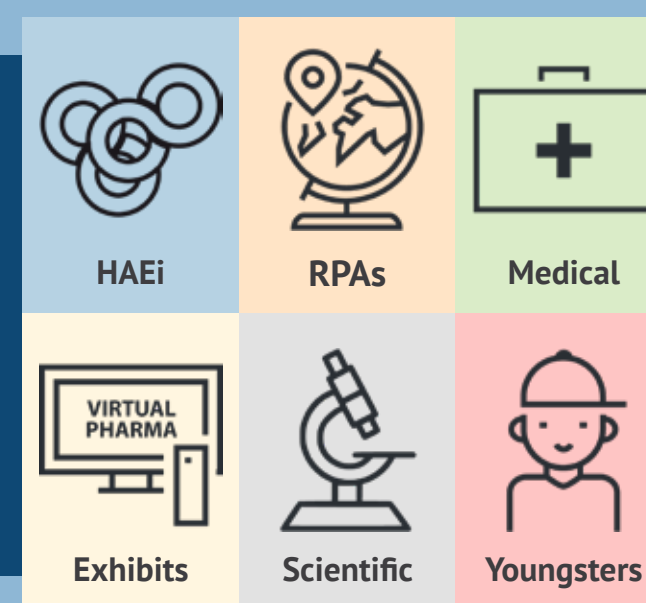
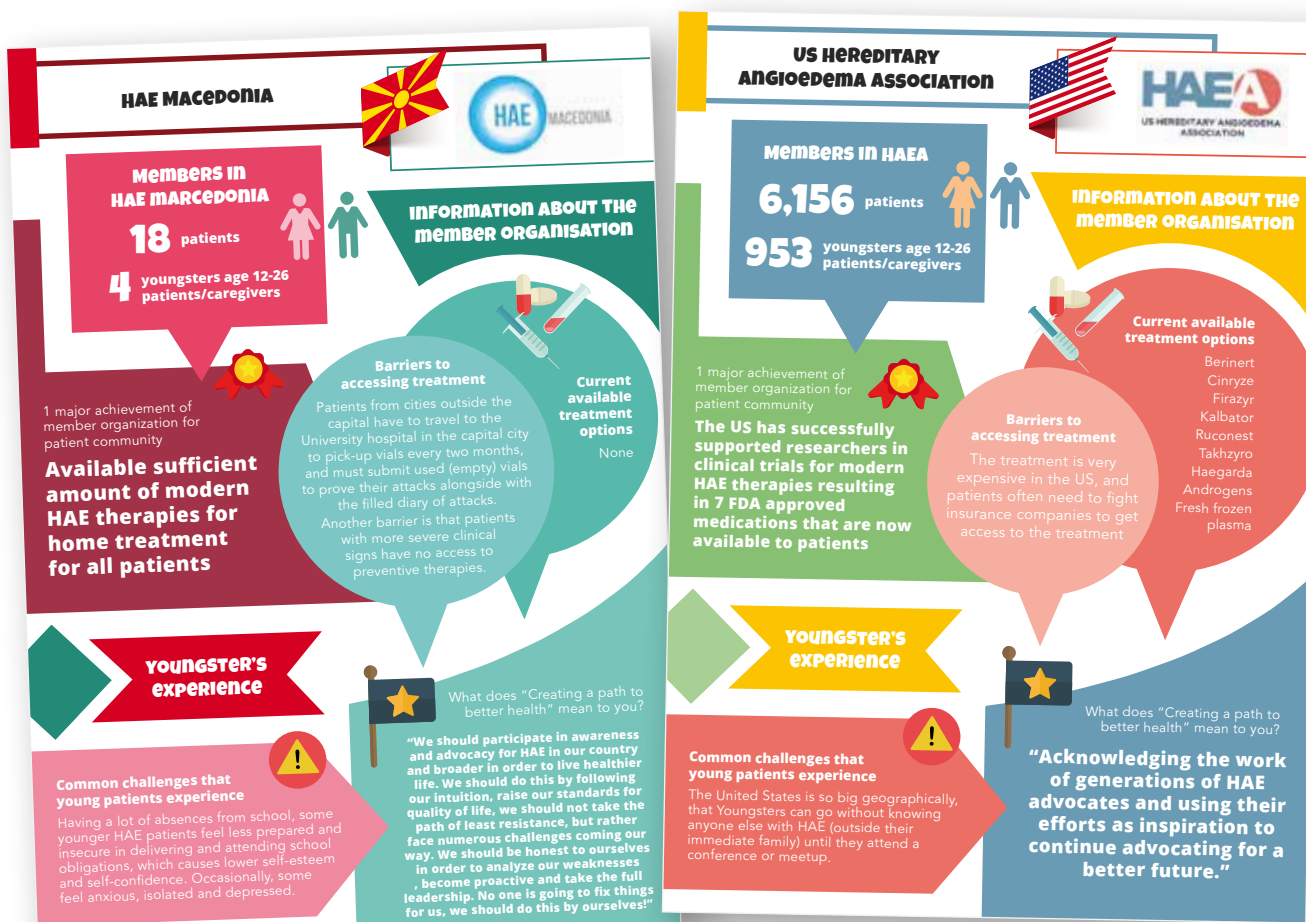
"In total we uploaded 24 videos for the virtual version of the 2020 HAE Global Conference. Naturally, we hoped that many patients, relatives, health care professionals, and pharma representatives from around the world would tune in and have a closer look. However, I have to say that we are genuinely amazed that we had more than 12,200 visits to the conference website with 142,000 impressions (number of times the conference videos were loaded). Overall, visitors spent more than 300 hours viewing conference content", says Henrik Balle Boysen.

The virtual global conference was promoted primarily through the HAE International social media channels leading to a lot of activity and increase in followers on Facebook as well as LinkedIn.

Posts about the virtual conference have had around 23,500 impressions, and more than 3,100 interactions – that is likes and shares – and have attracted more than 40 new members to our Facebook group dedicated to more personal interactions between patients and caregivers.

2020 HAE VIRTUAL GLOBAL CONFERENCE – IN NUMBERS

12,200 VISITS
142,000 IMPRESSIONS
300+ HOURS



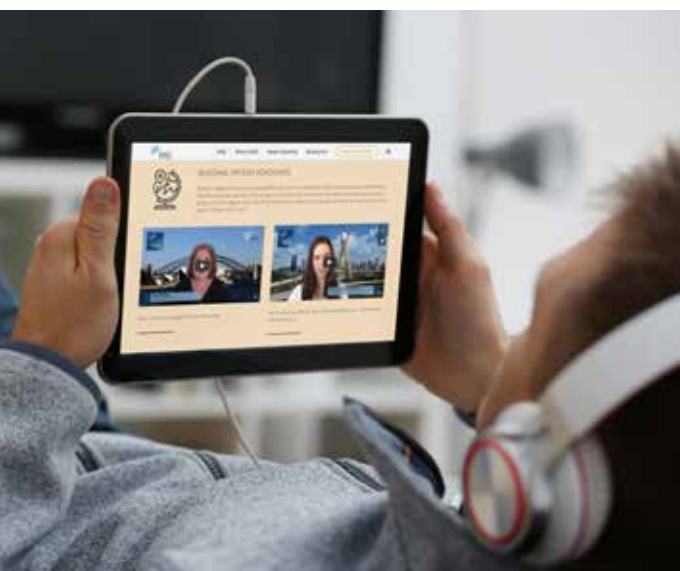
All presentations from the 2020 HAE Virtual Global Conference are available online for you to watch at your convenience:
haei.org/gc2020



3 VIDEOS

ABOUT HAE INTERNATIONAL

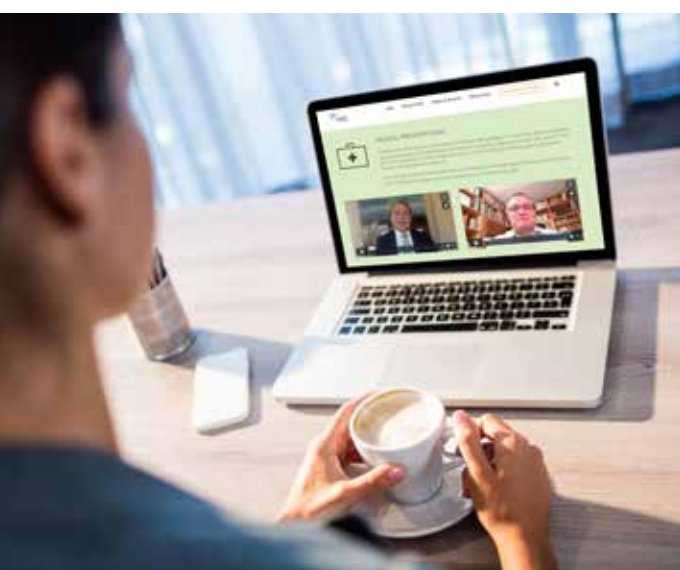
The videos in this track introduce you to the HAE International Story, the Regional Patient Advocacy program, and the Global Access Program.



10 VIDEOS

REGIONAL PATIENT ADVOCATES

Meet the Regional Patient Advocates (RPA) in this track. Chief RPA Fiona Wardman gives an overview and each RPA introduces themselves and talks about what's going on in their regions. Also, learn more about the RPAs in a game of "Never Have I Ever."



3 VIDEOS

MEDICAL

Prof. Marc Riedl and Prof. Markus Magerl deliver their always popular presentations about 'HAE symptom recognition, diagnosis, and current treatments' and 'HAE treatment plans, quality of life, and the future for HAE'. Also, Prof. Marcus Maurer presents the features and benefits of ACARE.



6 VIDEOS

EXHIBITS

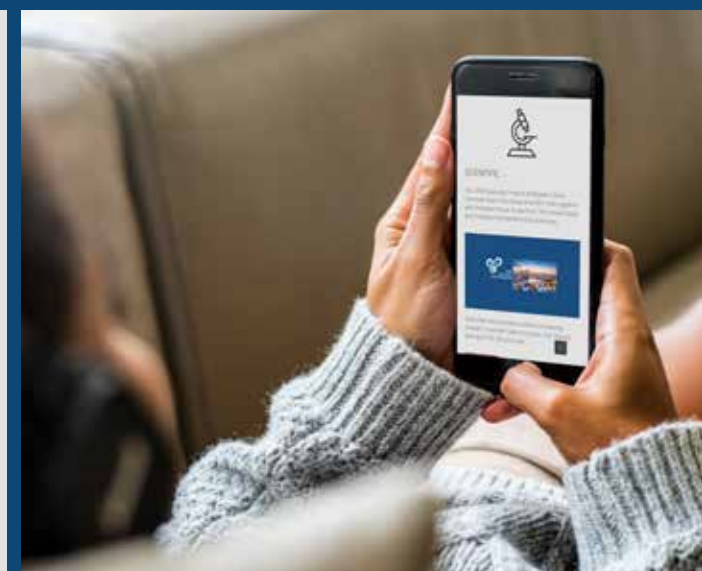
In these videos you can join in on a virtual visit to the exhibit booths of the pharmaceutical company sponsors sponsors BioCryst, Takeda, CSL Behring, Pharming, KalVista, and Pharvaris.



1 VIDEO

SCIENTIFIC

Chief Specialist Projects & Research Deborah Corcoran opens the Virtual Scientific Track together with Prof. Bruce Zuraw and Prof. Konrad Bork. Abstract presentations from the Scientific Track will be added to this section as they become available.



1 VIDEO

YOUNGSTERS

The future of HAE International share a video about their most recent accomplishments and projects. They also present their 2020 **hae day :-)** campaign, and their contributions to a digital poster project.





hae
day :-)

MANY FACES
ONE FAMILY

GREAT HAE GLOBAL WALK DESPITE PANDEMIC

As HAE friends around the globe will know the annual **hae day :-)** aims to raise awareness worldwide – and as part of the efforts to raise awareness HAE International organizes the HAE Global Walk.

“This was also going to be the case in 2020, and we had high expectations regarding setting another record. However, the coronavirus pandemic turned many things upside down, including a number of scheduled walks in many a member country”, says Executive Vice President & COO Henrik Balle Boysen:

“The population in a large number of countries around the world experienced harsh limitations to everyday life during the period of the 2020 HAE Global Walk. Previous years, we have urged HAE friends to gather in groups large and small to walk together and register their steps for the annual campaign. This year many were forced to take precautions because of coronavirus COVID-19, and obviously, we didn’t want anyone to take any chances with their health. Bearing the regulations that might apply in any given country in mind, we did, however, hope that a large number of HAE friends across the world would find it possible to take part in the walk.”

The 2020 HAE Global Walk campaign ran from 1 April to 31 May, and during that period more than 3,800 people entered their steps. Based on the entries on the campaign website at haeday.org, it is very clear that the majority of contributors have been walking alone or in groups of just a few people. However, despite the coronavirus situation in most countries around the globe, a lot of walking did actually go on.

Compared to the previous years HAE International – and indeed the global HAE family – can be proud of the result: In total the 62,266,404 steps amount to 19,907 kilometers/12,442 miles taken by 3,831 people in 51 countries.

“There is no doubt that we see more and more involvement in the campaign across our member countries and with that in mind we are more than happy to launch another HAE Global Walk on 1 April 2021”, says Henrik Balle Boysen.

2020 HAE GLOBAL WALK IN NUMBERS

62,266,404
steps taken in total

19,907
kilometers

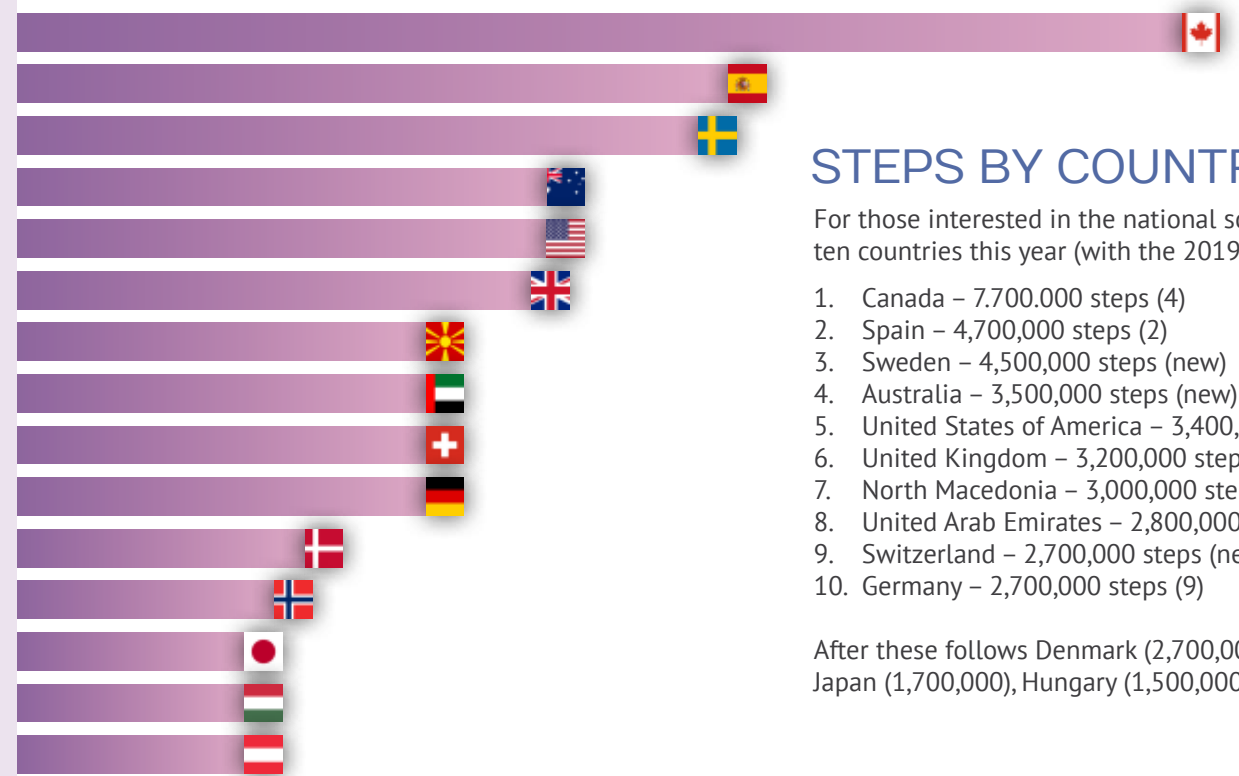
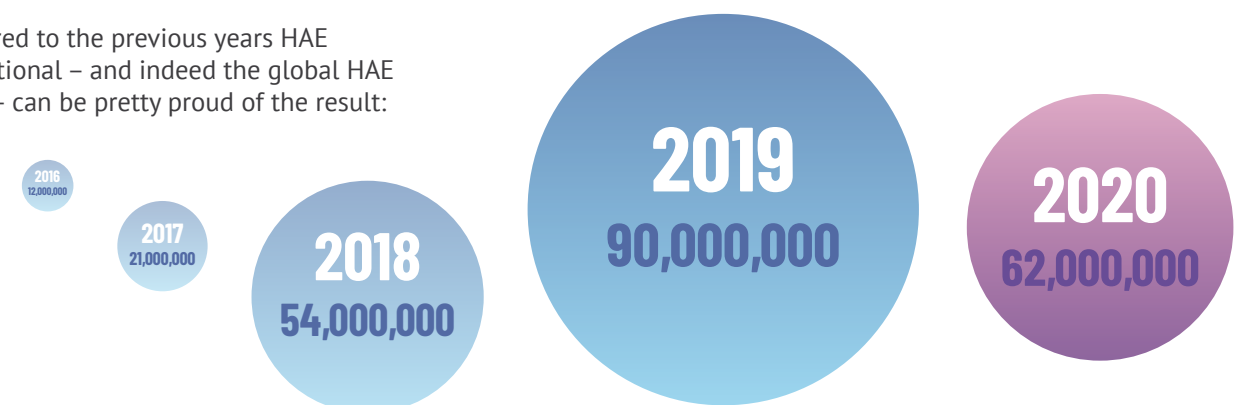
12,442
miles

3,831
participants

51
countries

STEPS COMPARED TO PREVIOUS YEARS

Compared to the previous years HAE International – and indeed the global HAE family – can be pretty proud of the result:



STEPS BY COUNTRY

For those interested in the national scores, here are the first ten countries this year (with the 2019 ranking in brackets):

1. Canada – 7,700,000 steps (4)
2. Spain – 4,700,000 steps (2)
3. Sweden – 4,500,000 steps (new)
4. Australia – 3,500,000 steps (new)
5. United States of America – 3,400,000 steps (6)
6. United Kingdom – 3,200,000 steps (7)
7. North Macedonia – 3,000,000 steps (1)
8. United Arab Emirates – 2,800,000 steps (new)
9. Switzerland – 2,700,000 steps (new)
10. Germany – 2,700,000 steps (9)

After these follows Denmark (2,700,000), Norway (1,900,000), Japan (1,700,000), Hungary (1,500,000) and Austria (1,500,000).

TRUE PARTNERSHIP CAN BRING THE BEST TO PATIENT CARE



*Professor Marcus Maurer
HAE International's Chief Medical Advisor
and GA²LEN/HAEi ACARE Coordinator*

Late 2019, HAE International and the non-profit organization of leading clinical and research facilities in the field of allergy and asthma GA²LEN established GA²LEN/HAEi Angioedema Centers of Reference and Excellence – or in short ACARE.

The joint venture with GA²LEN fulfills HAE International's longstanding goal of establishing a worldwide network of accredited angioedema care centers. Together the organizations work on developing ACARE, ensuring that it is an attractive partner for HAE treating physicians all over the world.

Professor Marcus Maurer – the HAE International Chief Medical Advisor as well as the GA²LEN/HAEi ACARE Coordinator – explains:

“GA²LEN/HAEi ACARE takes on board not just the physician side of things, not just the patient side of things but truly a combined effort. We do the whole process as a peer review network where all the ACARE Centers audit and certify each other with the aim of bringing a strong network to the game that provides excellent patient care. That is the cornerstone of it all. But GA²LEN/HAEi ACARE also moves knowledge on angioedema by research and projects – and it is a network for advocacy and awareness to increase the attention that this disease receives.”

Establishing ACARE through cooperation with GA²LEN has given HAE International the certified accreditation program that the organization has been looking for as well as an inclusive solution where nobody will be left out as ACARE aims to be a worldwide network of specialized treatment centers.



Please see acare-network.com for an updated list of ACARE Centers across the globe.

If you would like to become an ACARE Center, please use this link for further information: acare-network.com/index.php/become-an-acare-center.

GA²LEN/HAEi ACARE is based on 32 requirements that must be met for a hospital to become accredited. Among these requirements are multidisciplinary approach, structured and valid protocols of diagnosis and management, assessment of patient satisfaction and unmet needs, support of the ACARE network, a “Never give up” attitude, knowledge and use of current nomenclature as well as classification of angioedema, family screening, scientific and educational activities as well as a cooperation with the patient organization in their country.

“If you wish to become an ACARE Center, you reach out to the ACARE office and apply. It's a very simple process: The office will assign an auditor to you – that's the head or the deputy of another ACARE – and they then come to you to go over the 32 criteria to make sure that all of them are met. Once this is done the recommendation for the decision goes to the Steering Committee, and then you are accredited and receive a certificate valid for two years. It is then followed by a re-audit to make sure that the high standards are being met over time. By this process we grow as a network because each audit and re-audit is a nice opportunity for one ACARE to talk to another ACARE, to learn from each other and to work together on projects and other initiatives”, says Professor Maurer:

“Interacting with patient organizations is within the criteria: You must have a link to a patient organization in order to be accredited. But ACARE is the evolution of this because this is not just being linked to a patient organization. You must have true partnering with the patient organization.”

Professor Maurer points out that HAE International has affiliations in many countries around the world “where physicians need help and where they need to interact with patients to implement these centers of excellence and reference.”

“We are growing fast as we have around 40 accredited and certified ACARE centers, while we have ten applicants and 43 centers which have expressed interest in joining the network. I am pretty sure we will reach 100 centers before the three-year mark is up and that we will have an ACARE in every continent by the end of the year”, says Professor Maurer:

“This is an experiment, but it's a very exciting and promising one where true partnership between physicians, patients and other partners can bring the best to patient care and to improving knowledge and understanding of the disease.”



UPDATES FROM THE HAEi YOUNGSTERS' COMMUNITY

It has been almost two and a half years since the idea of the HAEi Youngsters Community was officially launched at the 2018 HAE Global Conference in Vienna, Austria. However, young HAE patients have been connecting online and staying in touch long before that.

"At HAE International we are happy to be able to support the work of our youngsters and watch them constantly come up with interesting new ideas, projects and activities", says Operations Manager Nevena Tsutsumanova.

The current HAEi Youngsters Advisory Group consists of seven people: Anna from Brazil, Facundo from Argentina, Nathan from Ecuador, Hana from South Africa, Nanna fra Denmark, Eirini from Greece, and Isabel from the United States of America. This group has been working on a couple of upcoming projects launching soon.

"One in particular is the HAEi Youngsters Online meetups – a virtual meeting place where young HAE patients can meet and discuss different topics such as, HAE, sports, social interactions, school, and friendships. This has been a very passionate project for the advisory group, especially now and as they like to say: "We need to be innovative and find new ways to stay connected, show support for each other and grow as a community." Another project that is very close to their hearts right now is the Graduation project, that was launched on 1 June", says Nevena Tsutsumanova:

"If you are graduating from school, high school or university this year, you have probably had a different experience than what you would have imagined. However, we are sure it was still an amazing experience that you got to celebrate with friends and family. Therefore, the HAEi Youngsters Advisory Group ask youngsters from around the globe to send an email to youngsters@haei.org or a message via the social media channels, with photos or videos of your graduation so we can celebrate you."

If you are a young HAE patient or care giver, between the age of 15 and 25 years old, make sure to keep an eye out on the HAEi Youngsters Community website, Facebook and Instagram for more information about the online meetups and other fun activities.



Follow us on Instagram:
@haeayouth @ushaea
@haeiyoungsters



Join our group on Facebook:
HAEi Youngsters Community



Visit us online:
www.youngsters.haei.org

PATIENT STORY



Patient Story: Rosa María Perez González

ROSA MARIA'S CONCERN TURNED INTO ACTIVE INVOLVEMENT



When did you have your first symptoms?

I don't remember the exact age, but I must have been around six years old when I had my first inflammations of the upper and lower extremities. At age 11, I experienced my first facial swelling. I remember this vividly because our local doctor treated my condition with intravenous epinephrine to prevent glottic edema. After that, I experienced swelling every three to four months in my hands or feet, and each time these attacks were treated as allergic reactions with steroids and antihistamines.

With each health crisis, I was bombarded with epinephrine, hydrocortisone, prednisone, diphenhydramine ... but nothing was resolved. The edema occurred fast, "in crescendo", until it reached its limit, and then slowly began to decrease. Pediatricians and allergists agreed that it had to be an allergic reaction since allergy tests came back positive for seafood, canned foods, and sausages. I continued to have multiple allergy tests since I was supposed to be a very allergic girl. Still, I would swell after an injury, a bug bite, or even after wearing uncomfortable shoes. The swelling would start in one hand, one foot, or on my forearm. Later, doctors determined that "gastric crises" caused my abdominal pain that led to persistent vomiting. Doctors continued to prescribe treatments for the symptoms without knowing the cause.

ROSA MARÍA'S STORY IN BRIEF

- Born 1969 in the town of Quivicán, Cuba
- Lawyer; studied at *Facultad de Derecho de la Universidad de La Habana* (the Faculty of Law of the University of Havana) in Cuba
- HAE symptoms started in childhood; diagnosed in the 90ies
- Other HAE patients in her family: Father, paternal aunt, one of her two sons



Were you the only one in your family with this type of episode?

No, but even though my father and a paternal aunt had suffered similar symptoms throughout their lives, no one associated my condition with a possible hereditary disease. I remember seeing my father with a swollen and deformed face, and not looking at all like himself, right before he would undergo a tracheostomy. In my innocence, however, I never imagined that I would look like that someday.

How were you diagnosed?

When my oldest son Luis was one year old, he fell in the bathroom and split his lip a little. Although this type of fall is common in children that age, his minor accident turned into a severe inflammation of his face. After that incident, I decided to seek answers to these medical mysteries actively. Thanks to an immunologist from my hometown, I was referred to the Institute of Immunology and Hematology of the Cuban Ministry of Public Health, where I met Dr. Consuelo Macías. Dr. Macías is today the Director of that health center, and she was able to offer an HAE diagnosis “a priori”.

After a series of blood tests performed on different family members and myself, the HAE diagnosis was finally confirmed. In 2013, following a more extensive family test, five additional HAE patients were identified in my family. I also discovered that I was a Type 1 HAE patient.

Would you say being diagnosed changed your life?

Well, it did somewhat. Since our arrival as HAE patients at the Institute of Hematology and Immunology, I have learned to manage my condition better. During severe abdominal attacks, I can receive C1 Inhibitor treatment at the Institute. At times, I have had intermittent Danazol and tranexamic acid treatments, although these two therapies do not address my condition preventively.

As a diagnosed patient, I am often concerned about my child’s illness, as well as my own. I pray to God every day for good health, and that the international scientific community will develop therapies that are accessible and help prevent HAE attacks.

How would you describe your childhood and adolescence living with your condition, even though you were not diagnosed at the time? Were you prevented from doing the things your friends did?

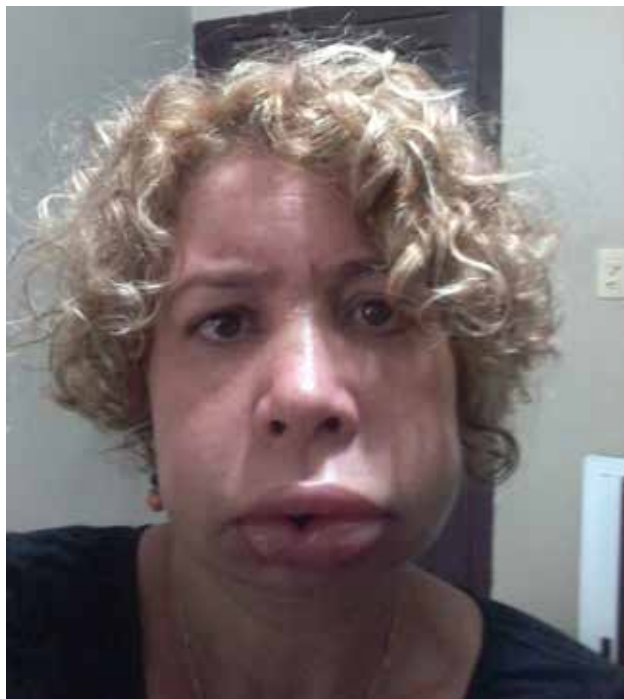
During my childhood and adolescence, I was treated as a very allergic child and prohibited from eating seafood, canned meats, and many other things. I was restricted from attending summer camps and other activities that children my age would typically enjoy. Meanwhile, insect bites and trauma triggered unexplained crises.

And what about your years of study?

I studied at the Faculty of Law at the University of Havana, Cuba. Today I am a lawyer by profession. Although my illness did not limit my studies, I do not doubt that the stress generated by my work in its sustained and cyclical way affect my health and trigger my attacks.

What is the situation of the other HAE patients in your family?

My father, who is now over 80 years old, has not had an attack for more than ten years. In his youth and adulthood, however, he was highly symptomatic and experienced edema of upper and lower limbs, genitalia, internal abdominal organs, as well as face and glottis. One of my paternal aunts, who is now in her 70s, still has frequent swelling. While my youngest son, Lester, remains asymptomatic, his older brother, Luis, has had swelling attacks in the limbs, genitals, face, and internal abdominal organs that have included vomiting and diarrhea.



Would you say that the people around you have understood your condition?

My family, after much insistence and education, have managed to understand. Still, on occasions, I have been described as nervous or anxious, since I begin to feel the symptoms and the appearance of a swelling crisis before it is visible.

How do you see the future for HAE patients in Cuba?

Unfortunately, Cuba is an underdeveloped country. Although the Cuban Ministry of Public Health intends to guarantee therapies to improve the quality of life of patients with HAE, we are aware that this is challenging due to the high costs of medications in the international market. Today more than ever, we need and seek the help that the international community can offer.

Looking at it from a general perspective, I consider that this disease limits the development of the individual patient. Patients need close access to a health center and have to navigate through the lack of HAE knowledge and general ignorance that primary care doctors have about our condition. This is why HAE patients often face additional stress when they are experiencing a health crisis.

Of course, no one can be more interested in HAE matters than the HAE patients themselves. Although there is some knowledge of other rare diseases in Cuba, very little is generally known about HAE among the general public and health professionals. I consider strengthening the work of the Cuban organization for patients with HAE essential as is our collaboration with the international community in order to gain support.

What steps do you understand could be taken in the short and long term in your country to create more awareness about the disease?

It is necessary that the Institute of Hematology of Immunology, through our Ministry of Public Health, have access to the required supplies needed to carry out testing and diagnosis for family members. HAE education needs to be extended to medical training at the primary level of health. Currently, there is greater support for the treatment and management of symptoms than there is for patient identification and diagnosis.

From the perspective of a patient already diagnosed and given the little knowledge that exists in your country about the disease, how do you help to create more awareness and educate about its existence?

Really, my contribution is limited to the circle of friends, coworkers and family. However, I have managed to educate on the disease. They are the ones who support and assist me in trying to avoid traumatic situations that could trigger an attack. Similarly, I have shared information with doctors and nurses close to our family who now have at least minimal knowledge of the disease.

How has the support been, and how have the doctors of your country been involved in learning about HAE? Is there interest?

There are HAE medical specialists that have extensive knowledge on the subject and have a lot of empathy for the patients. I have since created a cohesive group of patients. Still, because this is a rare disease, there is a need to inform the primary health physicians who are unaware of everything related to HAE and are the first to encounter HAE patients.



Read more about HAE in Cuba at haei.org/hae-member-countries/cuba

NATIONAL WEBSITES – IT DOESN'T GET MUCH EASIER!

When it comes to website design, editing and hosting, it doesn't get much easier than what HAE International has to offer.

“For quite some time now, we have provided those member countries that would like it a full-scale national website, and many of them have chosen our solution. However, some organizations with, for instance, a limited number of members or in other ways reduced needs have been asking for a somewhat simpler solution. That is why we introduced a 2Go system that can be up and running within a few days”, says Enterprise Technology Manager Ole Frölich.

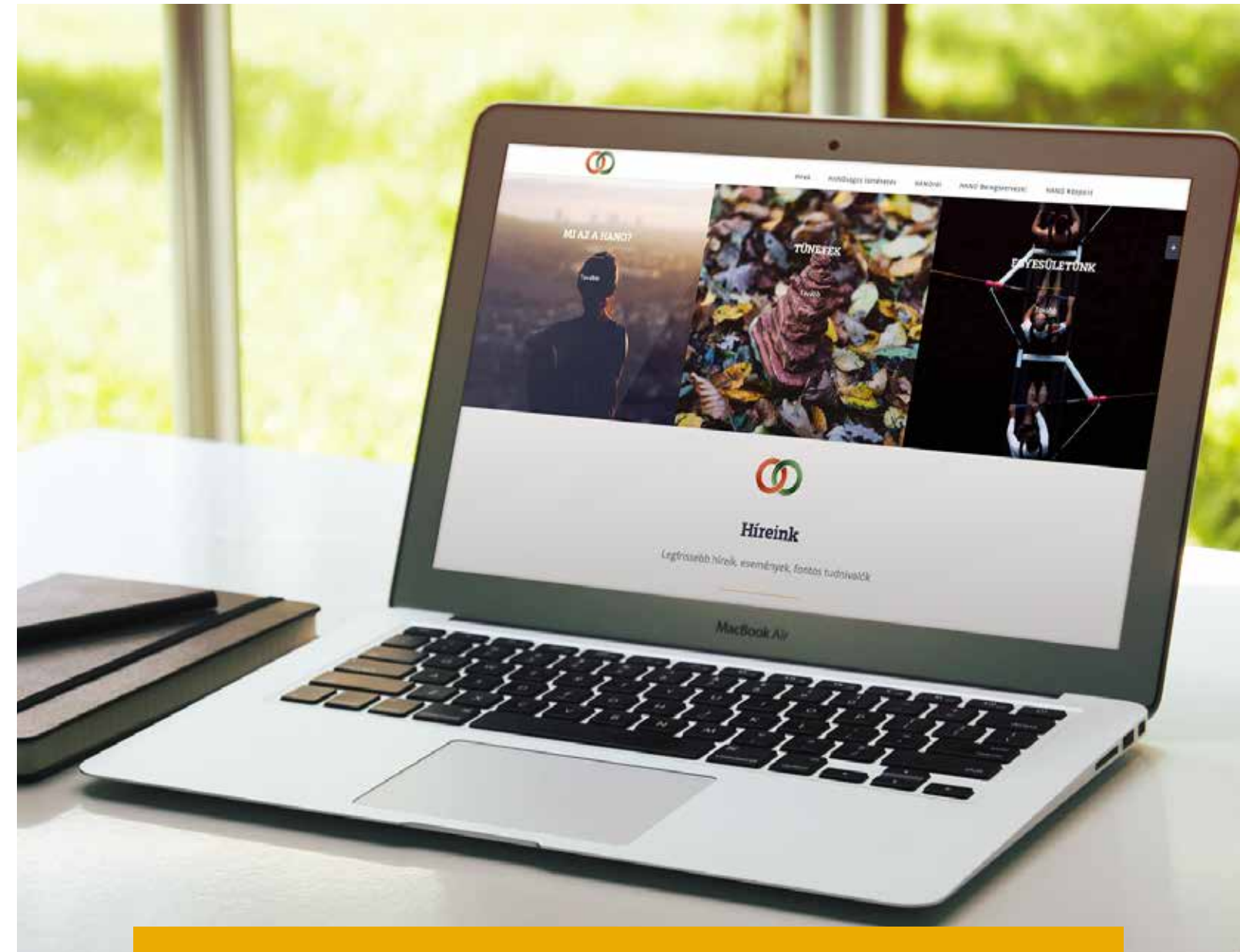
At the other end of the spectrum, you will find countries that have had a good website for some years but are now facing a required update of content and design – and perhaps both. On that topic, Ole Frölich says:

“By nature, it takes more to move such a website under the wings of HAE International, but it is by no means an impossible task. In fact, it is quite a nice challenge that we gladly take on. Recently, we have done just that for the national organization in Canada with Belarus, Hungary, and Spain as other examples.”

To this date, almost 50 countries have chosen to have HAE International host their website. They are:

- **Albania:** haealbania.haei.org
- **Armenia:** hae.am
- **Australia:** haeaustralasia.org.au
- **Bangladesh:** bangladesh.haei.org
- **Belarus:** by.haei.org
- **Bosnia & Herzegovina:** haebosnia.haei.org
- **Brazil:** abranghe.org.br
- **Canada:** haecanada.org
- **China:** haechina.haei.org
- **Costa Rica:** costarica.haei.org
- **Croatia:** haecroatia.haei.org
- **Cyprus:** greece.haei.org
- **Denmark:** haescan.org
- **Ecuador:** aehecuador.haei.org
- **Egypt:** haeegypt.haei.org
- **El Salvador:** elsalvador.haei.org
- **Greece:** greece.haei.org
- **Hong Kong:** haehk.haei.org
- **Hungary:** hano.hu
- **Iceland:** iceland.haei.org
- **India:** haeindia.haei.org
- **Indonesia:** haeindonesia.haei.org
- **Kenya:** haekenya.haei.org
- **Kuwait:** haekwait.haei.org
- **Lebanon:** haelebanon.haei.org
- **Libya:** libya.haei.org
- **Lithuania:** paelietuva.haei.org
- **Malaysia:** malaysia.haei.org
- **New Zealand:** haeaustralasia.org.au
- **North Macedonia:** haemacedonia.haei.org
- **Norway:** haescan.org
- **Pakistan:** pakistan.haei.org
- **Panama:** aehpanama.haei.org
- **Poland:** pl.haei.org
- **Qatar:** haeqatar.haei.org
- **Romania:** romania.haei.org
- **Serbia:** rs.haei.org
- **Singapore:** haesingapore.haei.org
- **Slovenia:** haeslovenia.haei.org
- **South Africa:** southafrica.haei.org
- **South Korea:** haekorea.haei.org
- **Spain:** angioedema-aedaf.haei.org
- **Sweden:** haescan.org
- **Taiwan:** haetaiwan.haei.org
- **Turkey:** turkey.haei.org
- **Ukraine:** ua.haei.org
- **United Arab Emirates:** haeuae.haei.org
- **Uruguay:** uruguay.haei.org

Ole Frölich is presently working on a handful of other national websites, hoping to be able to introduce countries like Chile, Georgia, Peru, and the Philippines in the second half of 2020.



MAKE YOUR MEMBER ORGANIZATION OR PATIENT GROUP VISIBLE – get started on haei.org/resources/haei-hosted-websites

- Freedom to add content and additional pages
- Supports right-to-left (RTL) text direction
- Your domain name
- Choose from five templates as starting points
- Always updated
- Secure https://
- Daily backup
- Training for editors
- And it is free

NEWS FROM MEMBER ORGANIZATIONS AROUND THE GLOBE



BANGLADESH

HAE International welcomes the 86th member of the global family: Bangladesh. Please visit haei.org/hae-member-countries/bangladesh for further information.

HAE Bangladesh is yet another national organization

with a website hosted with HAE International – please see the result at bangladesh.haei.org.

The national organization already has a Facebook page – have a look at facebook.com/groups/3670276249681518.



CROATIA

From President Mihaela Šogoric and Željka Kardum, HAE Croatia

Upon the initiative of a group of patients in Croatia, the founding assembly of patients with HAE was held in the DVD home in Semeljci on 29 February 2020. The need to establish an association was recognized for a longer period because of the problems with non-recognition of symptoms in patients with HAE that are often confused with allergies, but also the inadequate access to treatment for HAE patients across the country, thus a need to increase the awareness about HAE with both doctors and the general public.

The founding assembly was attended by patients from all over the Republic of Croatia, doctors from KBC Osijek, family members and several locals together with the mayor.

Mihaela Šogoric was elected President of the association, Davorka Grbić from Petrinja was chosen as Vice President, and Saša Pavlić from Rijeka was elected Secretary.

A special thanks was announced to all who contributed to the realization of this gathering, especially Mayor Grga Loncarevic, DVD Semeljci, the parents' association Sunce (Mrzovic), the association Duga (Semeljci), the coffee bar Phoneix (Semeljci), the baker shop Docaj, the hunting association Srndac (Kesinci), the department of clinical immunology and allergology from Osijek, the Kick band for the party, all the friends and family members without whom it would not be possible to realize this great project.



The 2020 **hae day :-)** was marked in Osijek, Croatia. Members of HAE Croatia, along with physicians from the University Hospital Osijek and General Hospital Šibenik were gathered in front of the Osijek bridge, which glowed purple, to raise awareness about HAE. The event was covered by the media, and the emphasis on timely and accurate diagnosis and treatment for HAE was placed.



BRAZIL

2 March 2020 Fernanda de Oliveira Martins and Raquel de Oliveira Martins attended an event organized by Takeda called “A Blueprint for Success Brazil Summit”.



There days later Raquel took part in the event “V Rare Disease Scenario”, also attended by the Brazilian first lady, Michele Bolsonaro.



End April 2020, HAE Brazil (ABRANGHE) turned ten years. It all began in Orkut, Brazil with a talk about HAE back in September 2005. Four years later, in November 2009, a meeting with few patients, Dr. Anete S. Grumach and Henrik Balle Boysen from HAE International took place, and that was the start of a national member organization – and on 28 April 2010, the organization was formally created with 32 patients.

In commemoration of **hae day :-)** 2020, ABRANGHE organized an online meeting for HAE patients, in which GEBRAEH physicians answered questions. The meeting lasted two hours since everyone was really engaged. You can find the session at youtube.com/watch?v=nZXWOHSJeCA.





SOUTH KOREA

For **hae day :-)** 2020, the South Korean HAE organization held its regular meeting as well as a celebration of the awareness day. The event took place at the Songseok Welfare Foundation in Seoul and was attended by 15 patients and guardians as well as eight officials from the foundation. The program began with greetings from the sponsors Songseok Welfare Foundation and Takeda Pharmaceutical Company followed by a report on the activities of HAE Korea, including future tasks and detailed. Before lunch, the patients presented themselves and their life story while the first point on the agenda after the break was an introduction to the HAE Medical Support Project in Korea. After taking of a group photo followed the actual **hae day :-)** celebration “Hyehwa-dong Walk with Comments”. Also, this was the day that the HAE Korea logo was unveiled.



ROMANIA

There has been a change in HAE Romania as the new main contact person is now Sebastian Banc. You will find his contact information at haei.org/hae-member-countries/romania.



PERU

There is a new member organization in Peru: The name is Asociación de Pacientes con Angioedema Hereditario del Perú, the President is Carla María Goachet Boulanger, and you can find her contact information at haei.org/hae-member-countries/peru.



In Peru, the **hae day :-)** 2020 was celebrated already on 15 May with an online meeting with Dr. Calderón, who answered questions from patients.



SAUDI ARABIA

Yet another country from the Middle Eastern region has joined HAE International – this time Saudi Arabia registered as member no. 87. You will find contact information on Saudi Arabia including three HAE knowledgeable physicians and an ACARE Center at haei.org/hae-member-countries/saudi-arabia.



PAKISTAN

HAE Pakistan now has a website hosted under the HAE International umbrella. Have a look at pakistan.haei.org.



SWITZERLAND

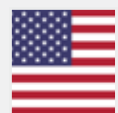
From Vice President Nicole Hodler, HAE Schweiz

Unfortunately, also we at the Swiss HAE organization had to cancel our June meeting due to coronavirus COVID-19. We are still evaluating the possibility of proceeding with this meeting in November 2020 instead.

In the Sunday newspaper from 16 February 2020, an article was published with the title “Strange Swellings” under the theme “How the rare disease hereditary angioedema (HAE) can be recognized and treated earlier.” In the article, HAE is described as an unpredictable and dangerous disorder. Dr. Heinz Hengartner shares information about the new long-term prophylactic treatments that show promising results. A female patient is thankful and happy that she finally can live her life without HAE attacks. The article can be read at hae-vereinigung.ch (in German).



For **hae day :-)** 2020 we sent this flower to our members. We hope that the flower will follow our members, as it transforms into a shopping bag.



UNITED STATES OF AMERICA

From Ianice Viel, Patient Advocate/Social Media Manager, US HAEA

HAEA COVID-19 WEBINARS



COVID-19 webinars and Webinar Briefs: In light of the COVID-19 pandemic, the US HAEA has been offering a series of webinars presenting information on the latest developments on COVID-19. The webinars focus on potential health risks presented by the coronavirus to HAE patients, regulatory and legislative changes that may impact access to treatments, and how to manage stress while staying at home. All webinars are offered by professionals who understand HAE. These are the webinars available to date:

- COVID-19 and HAE, with Dr. Marc Riedl, Clinical Director at the US HAEA Angioedema Center at University of California San Diego
- COVID-19 and Staying Mentally Healthy, with Troyce Venturella, MPH, RN, CCM
- COVID-19 and HAE Update, with Dr. Marc Riedl, Clinical Director at the US HAEA Angioedema Center at University of California San Diego
- Legislative and Regulatory Changes in times of COVID-19, with John Williamson and Dane Christiansen, Health and Medicine Counsel (HMCW)

All webinars are available to watch through the US HAEA website. For those who just want to catch key points discussed at these webinars, we are also showcasing webinar briefs, which provide answers and key information in a short format.



Virtual Youth Advocacy Program: The HAEA Youth Advocacy Program encourages young people to be active in shaping the perspectives of elected representatives in Congress. By participating in legislative advocacy initiatives, our HAEA Youth use their collective voices to ensure that issues important to them and the entire community are heard by our elected officials.

The US HAEA is offering an innovative, virtual legislative training program that prepares HAE youth between the ages of 12 and 25 to advocate for additional research and improved HAE treatments and access. The Youth Legislative Training program consists of six online lessons that guide young advocates through the process of identifying key policymakers, legislative priorities for the HAE community and culminate with coaching on drafting and delivering an elevator pitch for visits with lawmakers. The goals of the Youth Advocacy Program include:

- Empowering young people to become HAE advocates, so their perspectives are well represented in public policy that affects the HAE community, and
- Instilling confidence in the next generation of HAE community leaders

Participants will receive a US HAEA Youth Advocacy Certification upon completion of all activities.



Stepping Forward Together Virtual Walk: Many members of the U.S. HAE community celebrated **hae day :-)** during the month of May by joining the Stepping Forward Together Virtual Walk. Steps accumulated by the US HAEA Community were also included in the 2020 HAE Global Walk.



HAEA Health Team lends a helping hand: The HAEA Health Team is ready to support patients and families as they manage their HAE. Health Advocates offer kind and compassionate support to guide patients through diagnosis, offer physician referrals, and provide assistance with insurance denials and reimbursements.

Obtaining a correct diagnosis and having an optimal HAE treatment plan are the cornerstones of a better life. We have built a nationwide network of knowledgeable physicians who know how to diagnose and treat HAE. Our Health team provides referrals to these physicians and can also arrange appointments with highly skilled angioedema specialists.

In uncertain times such as these, the HAEA Health Team stands ready to lend an ear and provide support as members face new challenges posed by the COVID-19 pandemic. To this end, we have expanded opportunities to connect with others through our virtual support groups. The HAEA Virtual Support group provides a warm and caring environment conducive to supportive, compassionate discussions, and problem solving and is open to patients and caregivers.

The Health Team continues to engage and introduce a basic understanding of HAE to medical professionals. Our efforts to expand our network of HAE medical professionals is ongoing and we will keep on offering Continuing Medical Education courses to meet this goal. These courses are available through our special portal at haeedu.com.



Access to therapies through Charitable Assistance Programs: The US HAEA leads the United for Charitable Assistance Coalition and is working hard to ensure patients and families living with chronic conditions can afford their prescribed medicines. Access to charitable assistance programs is now more important than ever as the economic impact of the COVID-19 crisis puts additional pressure on patients and their families. With this in mind, the United for Charitable Assistance Coalition sent letters to Congress urging them to protect vulnerable patients and reject policies that would jeopardize the availability of charitable assistance. The US HAEA is committed to advocating for an uninterrupted access to life-saving therapies for members of our patient community.



Podcasts give HAE community a voice: In our continued outreach to the community we heard many requests for more opportunities to share the HAE journey. In response to our members' input, we are pleased to announce the launch of a new podcast series: HAEA Speaks. This podcast series are geared to a wider audience and cover important HAE topics and information offered by medical professionals, patients, and caretakers. Topics

include strategies to manage stress, prepare for a visit with your HAE specialist, care for a loved one with HAE, what to expect when you are newly diagnosed, the road to treatment, and much more. The first episode of HAEA Speaks is hosted by Missy, who talks about being a caregiver to her husband, Mike, and daughter Abby.

Anyone interested can listen to the HAEA Speaks podcasts on their favorite platform or through anchor. fm/haespeaks or anchor.fm/haeyouth.



Brady Club offers fun, educational material for: The Brady Club is an online, safe space just for children, ages 4-12, diagnosed with HAE and their siblings. The Brady Club gives children a place to share their experiences and learn to better understand and cope with HAE. Brady Club members receive quarterly activity books with fun and informative hands-on activities. This summer's Brady Club Activity Book motivates kids to enjoy bright and sunny summer days through outdoor activities with parents, caretakers, and siblings. The activity book also includes information on HAE and simple lessons for kids to learn about HAE and its causes. It is available in English and Spanish.



Together Apart: Members of our US HAE youth community are connecting with fellow HAE patients from other countries by participating in the HAEi Youngsters Community's #TogetherApart Project. Kids and young adults between the ages of 12 and 25, are sharing their stories, photos, and words of wisdom to bring the global HAE community together. The Together Apart project brings our community together and focuses on those things that unite us. It also reflects the diversity of other cultures that expands understanding and enriches our worldviews. We are proud to take part in this campaign and look forward to extending our experiences and helping hands beyond borders.



#BeyondHAE Challenge brings the HAE Youth together: The US HAEA aspires to support the HAE Youth by offering spaces to share their lives even as they spend an increasing amount of time at home and practice social distancing in light of COVID-19. Participants are challenged to share photos and/or videos that showcase aspects of their daily lives beyond HAE. Whether they like binge-watching on a good TV show, drawing, or exercising at home, sharing their favorite activities to pass the time helps to raise their spirits and makes them feel connected to others across the country.



Three HAE knowledgeable physicians have been added to the HAE map – please see their contact information at haei.org/hae-member-countries/tunisia.



BELARUS

For **hae day :-)** 2020 the National Library of Belarus in Minsk was illuminated with the awareness day logo. The library is the main information and cultural center of the country as its depository collections include about 10 million items of various media. It houses the largest collection of Belarusian printed materials and the world's third largest collection of books in Russian.



MALAYSIA

The national organization in Malaysia is yet another user of the free HAE International offer regarding website design and hosting. You can see the website at malaysia.haei.org.



SYRIA

One more country to join HAE International – this time the 88th – is Syria. Please see haei.org/hae-member-countries/syria for contact information.



AUSTRALIA AND NEW ZEALAND

From CEO Fiona Wardman, HAE Australasia

HAE Australasia Youth Group is up and running, and the group facilitator Jess has done a great job in connecting some of our youth from Australia and New Zealand. We would encourage more youth to join the group as we have some projects and a competition for them to participate in.

Due to COVID-19, HAE Australasia has had to put on hold a couple of the projects we were working on in the last few months. We hope to get them progressing again very soon. But this has allowed us to work on some other plans and projects behind the scenes.

Patients in Australia are hoping to gain access to a new preventative treatment. Patients are providing their consumer comments to the decision-makers.

HAE Australasia is hosting a video for patients and their families on updates on HAE and COVID-19 with Prof. Katelaris. During the video, a new and exciting initiative providing support services to patients and their families will be announced.

Well done to all the patients, family members, dogs, and friends from Australia and New Zealand who took part in the HAE Global Walk. You're all awesome! Thank you!!



CANADA

From COO Daphne Dumbrille, HAE Canada

Organizations across the globe have adjusted and regrouped due to the COVID-19 pandemic, and HAE Canada is no exception. It is hard to believe we are in the third month of the quarantine, but we are grateful we are still able to move forward with our projects and initiatives from the comforts of home.

Between encouraging the Canadian HAE community to participate in the 2020 HAE Global Walk and helping our members navigate around COVID-19, HAE Canada continued to work on abstracts and posters to present at international conferences. We are fortunate to present our poster, titled “Real world data of Canadians living with HAE: Need for innovative, newer, prophylactic and subcutaneous medications”, at the European Academy of Allergy & Clinical Immunology (EAACI)’s Digital Congress 2020, and that a slide show, of the same title, was presented at the 2020 HAE Global Conference. We are amazed at the creativity and ingenuity used to make these conferences available virtually after they were cancelled due to COVID-19.

Speaking of the HAE Global Walk, we would like to say how proud we are of the Canadian HAE community. We have been leading the way right from the start of this year’s walk and were able to gain the coveted title for a second time. Thank you, Canada – your steps are encouraging and appreciated!

An exciting piece of news we would like to share is our partnership with HAE International to create our new and improved website. Our website, while still fully managed and run by HAEC, is now being hosted by HAE International and we couldn’t be happier with the outcome: a stunning new website. Working with Ole Frølich, HAE International’s Enterprise Technology Manager, was a pleasure; his guidance and expertise, not to mention his patience, were invaluable. Thank you, HAE International. Please take a look at our site at haecanada.org, where you can also find the newly updated 2019-2024 HAEC Strategic Plan.



We cannot mention the global organization without thanking the HAE International Team for the amazing job they did on the – virtual – 2020 HAE Global Conference. The website was easy to navigate, and the content was interesting, informative and fun to learn. The hard work and energy that went into developing the virtual conference was greatly appreciated; despite COVID, we had a fantastic conference experience.

We are also pleased to report that HAE Canada now has more to offer when young Canadian HAE patients join the HAEC Child & Youth Program. There are two age groups, 0 to 13, and 14 to 25 years old. The younger children will be connected with child-focused resources, such as exercise books; however, both age groups will be provided with information on new treatments, clinical trials and given an opportunity to connect with other youth with HAE, to name but a few. We are looking forward to further supporting the young HAE patients in Canada.

Unfortunately, COVID forced us to postpone a planned HAE Canada Patient Information Update in Winnipeg, Manitoba, where Dr. Chrystyna Kalicinsky offered to discuss current and upcoming treatments with members in the area. We are looking forward to re-scheduling once gatherings are permitted again.

Fortunately, on 9 May 2020, we were able to host a virtual Patient Information Update to HAEC members who live in the Edmonton, Alberta, area. We would like to say thank you to Dr. Bruce Ritchie (picture), who kindly spent his Saturday morning with us, explaining the latest and upcoming treatments, as well as answering member’s questions. We all enjoyed and benefited from the presentation. Thank you, also, to our amazing Regional Director Pacific, Lorraine Coumont, who connected with most members before the event to ensure they were aware of the event and helped them join online. The Update was a success, and we have already started to plan another for our membership.

For the rest of the spring, HAE Canada will focus on initiatives aimed at helping ensure Canadians are given access to new and improved treatments. A few projects are planned, including one where we will be asking our members to participate in a survey that will ultimately provide data for our second National Report Card. We are looking forward to connecting with our engaged HAE community to complete these important projects.



CUBA

Rosa Maria Pérez is the new national contact for HAE Cuba – please see more at haei.org/hae-member-countries/cuba/



SINGAPORE

HAE Singapore is the 89th national organization to become as a member of the HAE International family. Upon joining the organization has chosen to have a website designed and hosted through HAE International. Please see haei.org/hae-member-countries/singapore for further information. Also, HAE Singapore has a Facebook page – you will find it at facebook.com/HAE-Singapore-102117721530025.



LIBYA

Yet another country to have its national website hosted via HAE International is Libya – have a look at libya.haei.org.



ARMENIA

There has been a change in national contact in Armenia as Armen Ghukasyan has taken over the job. Please see haei.org/location/hae-armenia for contact information.



DOMINICAN REPUBLIC

The 90th member of HAE International is the Dominican Republic. The national contact is Caroll Batista (25) who lives in the capital Santo Domingo. Also, HAE International has registered three HAE knowledgeable hospitals in the country – contact information for both national organization and hospitals can be found at haei.org/hae-member-countries/dominican-republic.



IRAN

Parichehr Bahraini is the new primary contact in Iran. She is a care giver, works in the Immunology, Asthma and Allergy Research Institute (IAARI) in Teheran and is the manager of the HAE patient registry in Iran. See more at haei.org/location/hae-in-iran.



UNITED KINGDOM

From Chief Executive Officer, Laura Szutowicz, HAE UK

It seems no time at all since I wrote the last News from the UK, in early March 2020. It was full of the “I am Number 17” campaign, our wonderful fundraisers running marathons and 24-hour karting challenges and looking forward to the 2020 HAE Global Conference in Frankfurt, Germany. There was something in the news about the Coronavirus, but I don’t think any of us realized the dramatic change it was going to make in our lives. Now, three months later, the UK is just starting to come out of lockdown, and we are fortunate in having so many very dedicated doctors and nurses who have still been helping and assisting our members whenever needed.

Obviously, we have had to abandon many of our planned events, but we have been successful in using Zoom and other digital resources to have virtual meetings and even a virtual quiz!

Our Facebook page and our website have been very useful in keeping in touch with our members and being able to give them information. Our HAE Clinical Network collaborated in providing information and advice to patients, which has been very useful in ensuring that the correct advice is given at the correct time.

We have had Zoom meetings with Dr Scott Hackett, our pediatric specialist presenting and answering questions at one and Dr. Hilary Longhurst carrying out one aimed at women and HAE. We have more such ‘meetings’ planned.



hae day :-) 2020 was marked with a “Silly Saturday”, and members posted their costumes online: Dana the clown, Pitt the cow, Nikki the Piggy, Rose the witch and Rachel the carrib.

And on the evening of **hae day :-)** 2020, when we should have been having the celebration dinner in Frankfurt, we had a fun quiz, Rachel was quizmaster, and we had a good number of teams. It was a very close finish, but the Easton family won the team section with Andy Long winning the couples. Definitely one to repeat!

We are still keeping our options open about our Patient Days planned for later in the year. It will all rather depend on how the COVID-19 situation continues.

One other project that has completed during the lockdown although it was being worked on for a long time prior to that is our “HAE Expert Nurse Training Programme” which is now being loaded onto a closed part of our website to which interested nurses can log on and go through the training modules. These have been reviewed by our nurse advisors to ensure that they reflect best clinical practice. Each module concludes with a test to ensure full comprehension. On completing the course, the nurse will be an “Expert HAE Nurse”! This is a very exciting project, and we are very grateful to Pharming for having provided the funding for its development.



My walking companions have been helping me clock up the steps for the 2020 HAE Global Walk.

I have thought for some time that it might be useful to describe how HAE care is managed in the UK. Ninety-five percent of HAE patients attend an Immunology Centre, although there are some whose care has been historically handled by another specialty. In order to be designated as an Immunology Centre, the center must conform to the "Service Level Agreement" which is a document describing the minimum services the center must provide, and for this purpose Hereditary and Acquired Angioedema are described as Primary Immune Deficiencies, along with other complement disorders. All centers must provide hospital-based out-patient and daycare as well as access to in-patient (hospital beds), regular clinics, access to infusion suites. They must also provide support from ear nose and throat specialists, respiratory medicine, gastroenterology, pediatrics, infectious diseases, clinical genetics, haemo-oncology, rheumatology and other specialties such as dentistry if there is a dental hospital associated with the center. There will also be a specialized laboratory service and access to European/USA laboratories. Home therapy must be provided, training and ongoing support with patients assessed as to their suitability.

The staffing requirements for a designated center is a minimum of two Consultant Clinical Immunologists, and Immunology Specialist nurses and there must be provision of "out of hours" emergency care for HAE patients as well as all the usual clinics, home therapy training where appropriate and other services. Referral to a center is through the GP although once under a center all medication (except for attenuated androgens and tranexamic acid) are provided under "Specialized Commissioning" so funded directly by the NHS.

The whole system is overseen by UKPIN, which is the network of Immunology Consultants and Specialist nurses. The accreditation of centers is overseen by the Royal College of Physicians through the QPIDS (Quality in Primary Immunodeficiency Service) system. HAE UK has had considerable input to the system to ensure the correct management of HAE and AAE. There are now 15 fully accredited centers in the UK and 23 other centers working towards accreditation. The accreditation process takes 1-2 years and involves regular assessment. Once accredited the centers have to submit annual reviews and be re-assessed every five years. So, it is a very stringent process and one which ensures that regardless of where a patient is in the UK, they are assured of being treated to a high standard. All centers are also able to treat overseas visitors so if you are travelling to UK, contact us to find out the center closest to where you will be staying.

I hope that the next I write will be in a happier time and we will be planning for the next international meeting!



BAHRAIN

Country no. 91 to join HAE International is Bahrain – please see haei.org/hae-member-countries/bahrain for contact information.



IRAQ

Close to magazine deadline HAE International was able to welcome country no. 92 as member of the global organization. You will find contact information for Iraq at haei.org/hae-member-countries/iraq.



CHINA

On 16 May 2020, HAE China in collaboration with the Chinese Organization for Rare Disease (CORD), with the support of Takeda China, held an online live event with the theme "Change edema to zero, imagine the future" which was a great success. The Director of CORD Mr. Huang (Kevin) Rufang and the attending physician of the Allergy Department of Peking Union Medical College Hospital, Chinese Academy of Medical Sciences Professor Yuxiang Zhi along with Mrs. Nan Zhang (patient and Director of HAE China) presented during the broadcast. The intention of the live event was to assist in the understanding of how HAE can be improved, and more patients can be diagnosed and treated correctly in time.



The broadcast began 10:30 a.m., Ms. Zhang spoke with empathy on her desire to help HAE patients cope with the disease and improve their quality of life. Mrs. Zhang also shared the story of how HAE China was founded in 2017 with the help of HAE International, the CORD rare disease center and Professor Zhi.



During the broadcast, Mr. Rufang called on the public to pay more attention to the rare disease. He said CORD and the HAE community will actively provide services to patients with the disease.



In this live broadcast, Professor Zhi explained in detail the basic knowledge related to HAE and what to pay attention to in the life of HAE patients, which led to the introduction of therapeutic drugs in China and greatly relieved patients' anxiety. HAE patients should expect to see new drugs on the market in the near future.



A total of 17,084 people watched the broadcast online for 1 hour and 30 minutes, and since the end of the transmission, HAE patients have been joined by other patients, who have comforted and encouraged each other. The incidence of HAE is one in 50,000. However, only a few hundred people in China's population of 1.4 billion have been diagnosed with the disease. We hope that all circles in the world will pay more attention to and understand HAE so that more patients can be diagnosed as soon as possible, find the right treatment path and harvest sunshine. As the song sings, "dream of the future, and you will be safe and sound".



COLOMBIA

In commemoration of **hae day :-)** 2020, HAE Colombia organized the first Instagram Live, in which the leader of the organization, Jessika Torres spoke with the expert Dr. Margarita Olivares about HAE.



Also, in the period leading up to **hae day :-)** 2020, the Colombian organization asked for pictures from the patients with the hashtag #yosoyAEHColombia (I am HAE Colombia).



VENEZUELA

In the time leading up to **hae day :-)** 2020, the Venezuelan HAE organization asked for pictures from the patients with the hashtag #yosoyAEHVenezuela (I am HAE Venezuela).



RUSSIA

From Chairman Elena Bezbozhnaya,
HAE Russia

Under quarantine, providing support for patients with HAE takes on special significance. HAE Russia launched a new online project for children and held several remote meetings for members for the patients to receive medical and legal advice.

Call a friend: In March, we launched a new psycho-emotional support project for the youngest members of the organization. The online project "Call a Friend" was developed for juvenile patients diagnosed with HAE. The participants are children of three age groups: 5 to 8 years old; 9 to 12 years old; 13 to 18 years old. In mid-March, the first lesson gathered a younger age group. Through the web platform, children from different regions of the country were able to communicate live with the psychologist and with each other. The children told about themselves, what they are interested in. At the first lesson, children learned to

recognize and understand what feelings people around us experience. At the following meetings with the psychologist, young participants will learn to control negative emotions. Since increased anxiety can trigger an attack, children diagnosed with HAE should avoid stressful situations. According to the comments of their parents, who watched the first online session, all the young participants were very pleased with the new experience and are already wondering when the next meeting will be held.



Webinars on medication: In early April, we held two webinars on "Medication for HAE patients in the pandemic". The online meetings engaged patients with HAE from Moscow, Siberia, Crimea, the North Caucasus as well as other regions of Russia. Hosted by myself and lawyer Ilya Ushankov the discussion focused on violation of patients' rights to preferential medicines and health care under quarantine. The lawyer shared with patients the possibility of remote medicine prescription. Due to the pandemic, the Ministry of Health of the Russian Federation in March 2020 issued an order granting patients with chronic diseases the right to receive prescriptions remotely, for a period of three to six months, without in-patient visits to doctors. We also discussed various violations of patients' rights with the participants.

Webinar on the pandemic: 24 April 2020 we held a webinar titled "The Pandemic: Treatment is a right, not a privilege" with Natalia Kuzmenko, allergist and immunologist, and once more Ilya Ushankov as the main speakers of the meeting. Since we suggested that the webinar participants send questions in advance, the speakers arranged their speeches based on these requests. Natalia Kuzmenko addressed the specifics of the disease course, prevention and treatment methods. The doctor paid special attention to the frequency of

use and dosage of drugs, the possible impact on the hormonal background, reception patterns and side effects arising from the use of certain drugs. The second part of the webinar considered legal issues. Ilya Ushankov presented a list of legal documents confirming the right of patients with HAE to receive effective drug therapy.

Webinar on expert opinion: 8 May 2020 we held a webinar titled "Expert Opinion". This online meeting discussed draft new clinical guidelines providing medical care to patients with HAE. As the event-speaker, Elena Latysheva, Doctor of Medical Sciences, submitted draft clinical recommendations and new approaches to treatment, emergency care and diagnosis of the disease. New standards of therapy and diagnostics were created based on the experience gained, the emergence of effective drugs, current methods of treatment and prevention. In the final part of the meeting, the speakers answered the questions most related to the issues of preferential provision of medicines.

Given the restrictions on the spread of coronavirus infection, HAE Russia continues to protect patients' rights and provide them with legal, social and psychological support.



SPAIN

From President Sarah Smith, AEDAF

Awareness day: After having to cancel its 22nd General Assembly and Annual Meeting, which was due to take place in April, and with very strict confinement measures in Spain as of mid-March due to Covid-19, AEDAF did decide to carry on with the project it had planned for **hae day :-)** in collaboration with Takeda. This was a video to spread knowledge and raise awareness of HAE and focused on the theme of "Somos impredecibles" (We are unpredictable). In the end it was not possible to film the video in a studio because of lockdown, so it was decided to produce the video with only one of our patient members (Carolina Zamora, the person in charge of our social networks) along with two actors. All three of them had to film their parts by themselves at home. We are very pleased with the result because this circumstance of confinement at home underlined even more the challenges of living with HAE.

Along with the video, which was posted on our website and our social networks (Facebook, Instagram and Twitter) a few days before **hae day :-)** 2020, we launched

a challenge that consisted of making a video of yourself writing “Somos impredecibles” with your foot and sharing the video on Instagram. We have estimated a total of around 120 participants. You can see the video (including a version with English subtitles) and the explanation of the challenge on the AEDAF website: angioedema-aedaf.haei.org.

HAE Global Walk: In the end there was a very good Spanish participation in the 2020 HAE Global Walk, in spite of the strict confinement measures in place in the country through all of April and most of May. We congratulate all the walkers from Spain and around the world who took part with their steps in the HAE Global Walk for the fantastic results again this year in these most difficult of times!!

Virtual Meeting and General Assembly: Because of Covid-19, AEDAF has decided it is best not to hold any in-person meetings or workshops at least for the rest of 2020. It is planning on having a virtual Zoom meeting in late September or early October, the main topic of which will be Covid-19 and HAE and which will be combined with our 2020 General Assembly.



JAPAN

From President Beverley Yamamoto, HAE Japan

As in previous years, on 22 February 2020 we hosted the Rare Disease Day event for Kobe City. Many other Rare Disease Day events had been cancelled due to the COVID-19 situation, but as ours is a relatively small event we decided to go ahead with some precautions. We had an unusually large turnout as patients who would have attended Rare Disease Day event in other nearby cities came to Kobe. One of the very enjoyable sides of this event is that we got to speak to patients and families representing a number of other disease areas. There was a strong sense of connection and commonality.

HAE Japan held its 6th Annual General meeting using Zoom on 30 May 2020. Our priorities for the next year include gaining a better view of the attack frequency and treatment landscape around children and young people with HAE in Japan, and creating resources to support them and their families. We are currently sending out a questionnaire to HAE physicians to gain a better idea of treatment options and needs.

We have translated the Brady Club book into Japanese and are currently getting this printed with a plan to distribute copies to our young members. We have many other ideas we want to pursue over the year.



We are also trying to better support patients diagnosed with HAE with normal C1. We are reaching out to HAE International to gain the latest scientific information in order to provide better educational resources to our members in the Japanese language.

We are looking forward to having access to one or more modern prophylactic treatment in the not too distant future. In February, BioCryst announced that it has submitted a new drug application to the Japanese Pharmaceuticals and Medical Devices Agency (PMDA) for approval of its oral, prophylactic treatment for HAE

after running the APEX-J trial. In April, CSL Behring announced that it would be conducting a CSL830 HAEGARDA Japan trial.

We continue to lobby to get self-administration for C1-inhibitor for acute attack therapy authorised. During the COVID-19 shutdown, HAE patients have had to go to major hospitals, as usual, to get treatment even though most treating hospitals are serving as the designated COVID-19 treating hospitals. Patients and family have expressed their unease at having to go to the emergency department to receive treatment at a time when the overwhelming message has been to stay at home where possible.



PANAMA

Due to the restrictions that have been implemented in several countries, not many countries held events related to **hae day :-)** 2020.

In Panama the group of patients managed two religious services that were dedicated on behalf of the health of patients with HAE in that country. Religious services were broadcast live on television and social media.

Additionally, Dr. Olga Melcina, who is honorary advisor to HAE Panama, participated in a television program where she spoke about the condition of HAE and the existence of the group of patients.





TIME FOR SPRING CLEANING OF THE MEMBERSHIP REGISTER

Many member organizations will undoubtedly be able to recognize the challenge of maintaining a membership system. It applies whether it is based on a spreadsheet or some kind of technological solution.

“For many, there is a need for a degree of spring cleaning – regardless of the season. This is where HAE International’s free solution HAEi Connect can be of great value because in connection with the implementation you review and update the data of the individual member and subsequently you have all information in an efficient and easy to understand system”, says HAE International’s Enterprise Technology Manager Ole Frölich.

HAEi Connect – a cloud-based member database for national organizations to manage their members – is being rolled out to still more countries.

“First and foremost, HAEi Connect includes an easy to use editor for creating emails to members as well as a template for saving and re-using emails. Another feature is the possibility of contacting members via text message. Other updated features are four new sections in the HAEi Connect dashboard to initiate contact to members as well as right-to-left language support”, says Ole Frölich.

To date, HAEi Connect has been implemented in Australia, Brazil, Bulgaria, Denmark, Hong Kong, Hungary, India, Israel, Kenya, Mexico, New Zealand, North Macedonia, Norway, Peru, Poland, Slovenia, South Africa, Spain, Sweden, Turkey, and the United Kingdom.

“Furthermore, we are talking to a handful of national organizations so I expect that we will within the coming months be able to add countries like Canada, China, Croatia, Lithuania, Puerto Rico, and the United States of America”, says Ole Frölich.



MEDICAL PAPERS

Here are summaries of some of the recently published HAE related scientific papers:

International Consensus on the Use of Genetics in the Management of HAE – by Anastasios E. Germeris, University of Thessaly, Greece, et al.:

HAE is becoming much more genetically complex than was initially considered. Thus, the role of HAE genetics is expanding beyond research laboratories, and the genotyping of subjects suffering from HAE has become diagnostically indispensable in clinical practice. The synthesis and interpretation of the clinical and biochemical analyses to facilitate appropriate genetic test selection has thus also become significantly more complex. With this in mind, an international multidisciplinary group of 14 experts in HAE genetics and disease management was convened in 2018. Eleven consensus statements were generated, encompassing considerations regarding the clinical indications for genotyping patients with angioedema, the methods of detection of HAE-causative variants, the variant pathogenicity curation, the genotyping of patients with HAE in the clinic, and genetic counseling. These statements are intended both to guide clinicians and to serve as a framework for future educational and further genetic testing developments as the field continues to evolve rapidly. (J Allergy Clin Immunol Pract, March 2020)

Pediatric Angioedema: Essential Features and Preliminary Results from the HAE Global Registry in Italy – by Mauro Cancian, University of Padova, Italy, et al.:

Isolated angioedema may be classified, based on genetic pattern and mediators, respectively, as acquired or hereditary and histamine- or non-histamine-induced. The pediatric population with HAE due to C1-inhibitor deficiency is mostly symptomatic. The frequency of symptoms in such a population compared to adults seems to be lower, but we need more prospective data to conclude on this point. The HAE Global Registry, which collects symptoms in real time, will probably provide such information. In terms of treatments, pediatric patients are significantly disadvantaged due to the few studies aimed at registering treatment for this population. (Pediatr Allergy Immunol, February 2020)

C1 Inhibitor Activity and Angioedema Attacks in Patients with HAE – by Allen P. Kaplan, Medical University of South Carolina, the United States of America, et al.:

HAE is highly variable in clinical presentation, and early studies suggested that there was not a clear relationship between functional C1-INH levels and disease activity. Later, a threshold of approximately 40 percent functional C1-INH was identified, above which patients' risk of an attack was diminished. Long-term prophylaxis with plasma-derived C1-INH effectively reduces attack frequency and severity. Pharmacokinetic modeling shows that functional C1-INH levels are associated with the relative risk of having an attack. Subcutaneous administration of C1-INH results in consistently high levels of functional C1-INH activity, whereas intravenous administration results in periods of low trough functional C1-INH activity before the next scheduled dose, increasing the risk of an angioedema attack. These studies suggest that measurement of functional C1-INH activity may be useful as a biomarker of the risk of an attack in patients with HAE who are receiving long-term prophylaxis with plasma-derived C1-INH. (J Allergy Clin Immunol Pract, March 2020)

Patient-reported Burden of HAE: Findings from a Patient Survey in the United States – by Aleena Banerji, Massachusetts General Hospital, the United States of America, et al.:

A noninterventonal survey of patients with HAE in the United States, conducted in 2017, shows that despite treatment advances, US patients with HAE continue to have a high burden of illness. The mean Hereditary Angioedema-Quality of Life scores were generally lower with higher attack frequency. General health was "poor" or "fair" for 24.8 percent of the patients. The mean percentage impairments were 5.9 percent for absenteeism, 23 percent for presenteeism, 25.4 percent for work productivity loss, and 31.8 percent for activity impairment. (Ann Allergy Asthma Immunol, June 2020)

Self-Management Plans in Patients with HAE: Strategies, Outcomes and Integration Into Clinical Care – by Constance H. Katelaris, Western Sydney University, Australia:

Genetic or acquired chronic conditions impose a significant burden on health care systems with high utilization of hospital and emergency department resources. Self-management is increasingly recognized as one of the pillars in models of care for those with long-term medical conditions. Prompt recognition and appropriate treatment of HAE are necessary to avoid the pain and suffering associated with attacks and to manage life-threatening laryngeal swellings that around 50 percent of HAE patients will experience in their lifetime. Since the early 2000s, a number of very effective, albeit expensive, treatment options have become available, at least in some countries. Utilization of these options within a written patient self-management plan provides the most satisfactory treatment outcomes and improves patient quality of life. Successful self-management depends on a productive partnership between patient and health care professional, with patient education the cornerstone of a successful outcome. This is a dynamic process, particularly in a condition such as HAE where frequency and severity of attacks may vary given different life circumstances. (J Asthma Allergy, April 2020)

A Focus on the Use of Subcutaneous C1-inhibitor for Treatment of HAE – by Maria Fernanda Villavicencio, Universidad San Francisco De Quito, Ecuador, and Timothy Craig, Penn State University, the United States of America:

HAE causes significant distress for patients not only during an acute attack but also constant fear for a subsequent attack. It is important to address long-term prophylactic therapy to prevent attacks, decrease morbidity and increase the quality of life. When discussing long-term prophylactic, the drug burden, convenience and efficacy must be taken into account. Subcutaneous highly concentrated C1-Inhibitor has added significantly to the armamentarium of physicians that treat HAE. The ability to achieve a steady state of C1-INH above 40 percent function is key to the success of the drug. The drug burden is a subcutaneous injection twice a week that exceeds the newly approved lanadelumab. The benefit may be that the protein that is deficient in HAE is replaced and with this the complement, fibrinolytic, coagulation pathways, and contact system are also regulated; however, evidence that this is of benefit is still lacking. (Expert Rev Clin Immunol, April 2020)

HAE in a Single Family with Specific Mutations in Both Plasminogen and SERPING1 Genes – by Konrad Bork, Johannes Gutenberg University, Germany, et al.:

We analyzed the various clinical manifestations of HAE in 14 related patients using clinical data, biochemical analysis for C1-INH and C4 as well as gene sequencing. Patients' symptoms were assigned to two different forms of HAE. In ten patients suffering from swelling of the lips or tongue but not of the extremities, a mutation in the PLG gene was found whereas in the only four patients with swelling of the gastrointestinal tract and extremities, a mutation in the SERPING1 gene was identified. This unique finding of two different HAE-specific mutations in a large family not only explains the divergent phenotypes but also supports a genotype-phenotype correlation showing that abdominal attacks and swelling of the extremities are common with HAE-C1-INH but unusual with HAE-PLG. (J Dtsch Dermatol Ges, March 2020)

A First of Its Kind Quantitative Functional C1-esterase Inhibitor Lateral Flow Assay for HAE Point-Of-Care Diagnostic Testing – by Priya S. Chockalingam, Shire HGT Inc., a Takeda Company, the United States of America, et al.:

We demonstrate a proof-of-concept for the quantitative functional C1-INH lateral flow assay using normal and HAE plasma samples. We propose that the method could be used as a point-of-care test to diagnose HAE in a variety of settings, such as, a hospital or physician's office, at home or in an ambulance. (Int Immunopharmacol, June 2020)



CLINICAL TRIALS



According to the International Clinical Trials Registry Platform under World Health Organization (WHO) and clinicaltrials.gov under the U.S. National Institutes of Health the following trials should be recruiting at this moment:

A Long Term Safety Study of BCX7353 in HAE (APeX-S)

– recruiting in Australia, Austria, Denmark, France, Germany, Hong Kong, Hungary, Israel, Italy, South Korea, New Zealand, North Macedonia, Poland, Serbia, Slovakia, South Africa, Spain, Switzerland, the United Kingdom, and United States of America

A Phase II, Cross-over Clinical Trial Evaluating the Efficacy and Safety of KVD900 in the On-demand Treatment of Angioedema Attacks in Adult Subjects With HAE Type I or II

– recruiting in Austria, Czech Republic, Germany, Hungary, Italy, the Netherlands, North Macedonia, Poland, the United Kingdom, and the United States of America

A Study to Assess the Clinical Efficacy of IONIS-PKK-LRx in Participants with HAE

– recruiting in the United States of America

A Study to Investigate CSL312 in Subjects with HAE

– recruiting in Australia, Canada, Germany, Israel, and the United States of America

An Extension Study of IONIS-PKK-LRx in Participants with HAE

– recruiting in the United States of America

Biomarker for HAE Disease

– recruiting in Georgia and Romania

C1 Inhibitor Registry in the Treatment of HAE Attacks

– recruiting in Bulgaria, Croatia, Czech Republic, France, Germany, Hungary, Italy, North Macedonia, Norway, Poland, Slovakia, Slovenia, and Sweden

Cloud-R HAE Registry (CloudRHAЕ)

– recruiting in France

Contrast-Enhanced Ultrasound for the Evaluation of Changes in Tumor Blood Flow Surrounding HAE

– recruiting in the United States of America

Determination of Specific Biomarkers of Acute Attack of Angioedema Within Pediatric Population (BRADYKID)

– recruiting in France

Efficacy and Safety of Lanadelumab (SHP643) in Japanese Participants with HAE

– recruiting in Japan

Epidemiological Analysis for HAE Disease (EHA)

– recruiting in Germany, Italy, Japan, Poland, Turkey, and the United Kingdom

Firazyr General Drug Use-Results Survey (Japan)

– recruiting in Japan

Firazyr Patient Registry (Icatibant Outcome Survey - IOS)

– recruiting in Australia, Austria, Brazil, Czech Republic, Denmark, France, Germany, Greece, Ireland, Israel, Italy, Spain, Sweden, and the United Kingdom

Global Registry to Gather Data on Natural History of Patients with HAE Type I and II

– recruiting in Italy

HAE Kininogen Assay (HAEKA)

– recruiting in Germany

Patient Registry to Evaluate the Real-world Safety of Ruconest

– recruiting in the United States of America

Study to Evaluate the Real-world Effectiveness of Lanadelumab in Participants with HAE

– recruiting in Canada, Puerto Rico, and the United States of America

Study to Evaluate the Real-World Long-Term Effectiveness of Lanadelumab in Participants with HAE

– recruiting in Austria, Germany, Switzerland, and the United Kingdom

The Role of the Coagulation Pathways in Recurrent Angioedema (Angiocoag)

– recruiting in France

Read more about these and other clinical trials at clinicaltrials.gov and apps.who.int/trialsearch.

NEWS FROM THE INDUSTRY

21 April 2020

Pharming Group N.V. sees encouraging results from five patients with confirmed COVID-19 infections hospitalized with related severe pneumonia that were treated with Ruconest (recombinant human C1 inhibitor) under a compassionate use program at the University Hospital Basel, Switzerland.

Four male patients and one female patient (between 53-85 years of age) with COVID-19 and suffering from related severe pneumonia, who did not improve despite standard treatment, including hydroxychloroquine and lopinavir/ritonavir, were administered Ruconest at an initial dose of 8400 U, followed by 4200 U every 12 hours for three additional doses. No allergic reactions or drug-related adverse events were reported.

Following treatment with Ruconest, fever resolved in four of the five patients within 48 hours, and laboratory markers of inflammation decreased significantly (CRP, IL-6). Soon thereafter, the patients were discharged from the hospital as fully recovered. One patient had increased oxygen requirement and was temporarily transferred to the ICU for intubation, but over the subsequent days recovered and was released from the ICU.

Following these initial results, a multinational, randomized, controlled, investigator-initiated clinical trial with up to 150 patients with confirmed COVID-19 infections, requiring hospitalization due to significant COVID-19 related symptoms is planned. The study will be led by Dr. Michael Osthoff, University Hospital Basel, Switzerland.

Dr. Michael Osthoff, University Hospital Basel, Switzerland, and the treating physician, says:

“Although this is an uncontrolled, small treatment experience, the results demonstrate the potential effectiveness of using Ruconest as an anti-inflammatory approach to inhibit the complement and contact systems after SARS-CoV-2 infection. We are now in the midst of planning a multinational, randomized controlled trial in up to 150 patients to further understand the safety and efficacy of this approach in preventing deterioration in COVID-19 patients.”

Prof. Bruno Giannetti, Pharming's Chief Medical Officer, comments: “Some of the dangerous biochemical processes occurring during the worsening of a COVID-19 infection towards life-threatening pneumonia are likely triggered by complement activation as part of a systemic hyperinflammatory syndrome, otherwise known as a ‘cytokine storm’. C1 inhibitor has numerous anti-1 inflammatory properties, including inhibition of the complement and contact systems. A compassionate treatment in a few patients suffering from COVID-19 pneumonia was, therefore, scientifically sound and these preliminary results are very encouraging. Amongst others, we need to better identify the best time point to start Ruconest treatment and the optimal dosing regimen. The planned multinational study under the leadership of the University of Basel is aimed at providing this information.”

(Source: Pharming)



30 April 2020

The European Commission has approved an extension in the indication of Ruconest's (conestat alfa) Marketing Authorisation to include the treatment of acute angioedema attacks in children with HAE. This marketing authorisation expands the age range of Pharming Group N.V.'s lead product, Ruconest, a recombinant analogue of human C1 esterase inhibitor. Ruconest was previously approved for adults and adolescents in Europe.

The European Commission's decision allows children aged two years and older to be treated with Ruconest for acute angioedema attacks. In the European Union, Ruconest has been approved for this indication in adults since 2010 and in adolescents since 2016.

The C1 esterase inhibitor protein is required to control the ‘complement’ and ‘contact’ systems, collections of proteins in the blood that fight against infection and cause inflammation. Patients with low levels of this

protein have excessive activity of these two systems, which leads to the symptoms of angioedema. The active substance in Ruconest, conestat alfa, is a copy of the C1 esterase inhibitor protein and works in the same way as the natural human protein. When it is given during an angioedema attack, Ruconest stops this excessive activity, helping to relieve the patient's symptoms.

Sijmen de Vries, CEO of Pharming, says:

“We are pleased to receive approval from the European Commission and to be able to offer Ruconest as a treatment for acute HAE attacks in all patients aged two years and above. As we expand our distribution network in Europe following the reacquisition of Ruconest-licensed territories in December 2019, we are seeing increasing demand for the product in the treatment of HAE. This approval allows us to treat the most vulnerable patients and further demonstrates the safety and efficacy of Ruconest.”

(Source: Pharming)



2 May 2020

In its financial results for the first quarter of 2020 BioMarin Pharmaceutical Inc. states:

On November 14, 2019, the Company announced its third gene therapy candidate, BMN 331, for the treatment of HAE. BioMarin plans to build on its ever wider and deeper expertise in developing gene therapies for severe hemophilia A and phenylketonuria to improve efficiencies in the development process, and to optimize capsid and transgene design. The Company is monitoring developments surrounding COVID-19 but expects to begin IND-enabling studies in mid-2020.

(Source: BioMarin)



5 May 2020

The United States Patent and Trademark Office (USPTO) has issued a notice of allowance for patent application 16/671,649. The resulting U.S. patent, once issued, will extend the patent protection for BioCryst Pharmaceuticals, Inc.'s berotralstat (BCX7353) in the United States by four years through October 2039.

The allowed patent application covers crystalline salt forms of berotralstat active pharmaceutical ingredient (API).

“The extension of U.S. patent protection for berotralstat, through 2039, adds significant value to BioCryst. We look forward to the U.S. approval and launch of oral, once-daily berotralstat later this year,” said Jon Stonehouse, CEO of BioCryst.

The U.S. Food and Drug Administration is reviewing a new drug application (NDA) for approval of oral, once-daily berotralstat for the prevention of HAE attacks. The Prescription Drug User Fee Act (PDUFA) date for the NDA is December 3, 2020.

(Source: BioCryst)



6 May 2020

"This is a transformational year for BioCryst Pharmaceuticals, Inc. as we prepare to launch berotralstat in multiple territories to bring our oral, once-daily prophylactic medicine to HAE patients, and begin generating significant revenue," says Jon Stonehouse, President and CEO at the announcement of BioCryst's financial results for the first quarter ended 31 March 2020.

Program Updates and Key Milestones for the HAE Program – Berotralstat (BCX7353): Oral, once-daily treatment for prevention of HAE attacks

- BioCryst expects three regulatory approvals for berotralstat in 2020 and early 2021. These timelines remain on track.
- The U.S. Food and Drug Administration (FDA) is currently reviewing a new drug application for berotralstat and has set an action date of 3 December 2020, under the Prescription Drug User Fee Act (PDUFA).
- In Japan, the Pharmaceuticals and Medical Devices Agency (PMDA) is reviewing a new drug application (NDA) for berotralstat under the Sakigake timeline, and the company expects approval in Japan in the second half of 2020.
- On 30 March 2020, the company announced that the European Medicines Agency (EMA) had validated its marketing authorization application (MAA) submission for berotralstat and begun their formal review of the MAA under the centralized procedure. An opinion from the Committee for Medicinal Products for Human Use (CHMP) is expected within approximately 12 months from MAA validation.
- Ongoing commercial launch preparations are on track in the U.S., EU and Japan. The company does not expect delays due to COVID-19.
- On 5 May 2020, the company announced that the United States Patent and Trademark Office issued a notice of allowance for a new composition of matter patent which extends patent protection for berotralstat in the U.S. market by four years through October 2039.

(Source: BioCryst)



7 May 2020

At the presentation of the financial results for the first quarter ended 31 March 2020, Intellia Therapeutics, Inc. President and CEO John Leonard, M.D. says:

"Our mission is to develop curative, CRISPR/Cas9-based treatments for severe diseases. I am grateful to our team for remaining steadfast in our commitment to patients and putting us in the position to deliver on our goals despite the challenging circumstances presented by the global COVID-19 pandemic. We continue to advance the nomination of NTLA-2002 as our development candidate for the treatment of HAE."

Intellia has nominated its third development candidate, NTLA-2002 for the treatment of HAE. Building on the modular lipid nanoparticle (LNP) delivery system developed for the ATTR (transthyretin amyloidosis) program, NTLA-2002 is designed to knock out the prekallikrein B1 (KLKB1) gene in the liver after a single course of treatment. As part of an ongoing durability study of its lead LNP formulation in support of NTLA-2002, Intellia has now demonstrated six months of sustained therapeutically relevant reduction of serum kallikrein levels and activity following a single dose in non-human primates. Intellia expects to submit an Investigational New Drug (IND) or IND-equivalent for NTLA-2002 in the second half of 2021.

NTLA-2002 is subject to an option by Regeneron to enter into a Co/Co agreement, which must be exercised within a limited time period after development candidate selection. Intellia would be the lead party if the option is exercised.

(Source: Intellia)



14 May 2020

At the presentation of Pharming Group N.V.'s financial report for the first quarter of the year ended 31 March 2020 CEO Sijmen de Vries says:

"We received EMA and FDA approval of our new production facility for Ruconest, which will double our production capacity once fully operational later this year. In addition, approval from the European Commission to treat acute HAE attacks in children with Ruconest allows us to serve the most vulnerable patients and further demonstrates the safety and efficacy of our lead product. In addition to these achievements, Pharming has continued to deliver strong sales growth as new patients continue to benefit from Ruconest's product profile. Following the reacquisition of Ruconest-licensed territories from January 2020, we are excited to expand our distribution network in Europe, where we are seeing increasing demand for the product."

(Source: Pharming)



29 May 2020

The European Medicines Agency's (EMA) Committee for Medicinal Products for Human Use (CHMP) has adopted a positive opinion on a Type II Variation regulatory application and recommended the approval of a pre-filled syringe presentation of Takhzyro (lanadelumab) from Takeda Pharmaceutical Company Limited.

Takhzyro is a subcutaneous injectable prescription medication approved in Europe for routine prevention of recurrent attacks of HAE in patients aged 12 years and older.

"Our goal is to continuously innovate in all areas of HAE management," says Isabel Kalofonos, Global Product Strategy Lead, HAE, Takeda. "This positive opinion marks another important step forward as we aim to enhance the experience of treatment administration for people receiving Takhzyro. We look forward to bringing the pre-filled syringe innovation to the HAE community in Europe, starting later this year, and continue to progress plans to expand to other geographies in future months."

Takhzyro received European approval in November 2018 based on results of the Phase 3 HELP (Hereditary Angioedema Long-term Prophylaxis) Study, which measured the reduction in the number of mean monthly HAE attacks in patients receiving treatment with Takhzyro versus placebo. It is currently available as a 300 mg solution for injection, presented in a vial. The pre-filled syringe is a next-generation fully assembled presentation that requires fewer preparation steps than the current Takhzyro vial injection, while also reducing supplies and waste.

The EMA's Type II Variation to the terms of the marketing authorisation is for medicines that have some type of change, such as administration method, but it does not involve a change to the medicine's active substance. The CHMP opinion states that the European Commission (EC) decision will be adopted within 12 months, and under the terms of this Type II Variation, Takeda can proceed to commence launches of the Takhzyro pre-filled syringe in Europe later this year.

Further regulatory submissions for the pre-filled syringe presentation are under review or planned in other countries during 2020 and beyond.

(Source: Takeda)



6 June 2020

BioCryst Pharmaceuticals, Inc. presents findings from two patient surveys conducted to gain insights into patients' current HAE treatment expectations, experience and satisfaction. Patient-reported attack history shows patients treated with current injectable or infused prophylactic medications (Takhzyro, Haegarda, Cinryze) continue to experience breakthrough attacks with a mean ranging from 0.9 to 1.8 attacks over the three months prior to survey. In addition, the majority of patients surveyed did not expect to have zero attacks even when taking prophylaxis therapy.

The data were presented at the European Academy of Allergy and Clinical Immunology (EAACI) Digital Congress.

“While the injectable and infused medications introduced over the past 12 years have provided added prophylactic attack control for HAE patients, most patients in the study continue to experience breakthrough attacks, and medication adherence continues to be a challenge. HAE patients have indicated an interest in new preventative treatment options, with the majority agreeing that they would prefer an oral medication, despite liking their current prophylactic medication,” said Jinky Rosselli, vice president of global business analysis and operations at BioCryst, who conducted the research.

Study participants were U.S. adult patients with a diagnosis of Type I or Type II HAE. Patients participated in surveys in 2018 and 2019. Two patients participated in both surveys. The patient surveys were conducted anonymously in compliance with the EphMRA code of conduct.

In the 2019 survey, 85 percent of patients reported taking at least one medicine to prevent HAE attacks, compared to 64 percent in the 2018 survey.

The majority (89 percent) of patients using prophylaxis in the 2019 survey reported using at least one of the three most commonly prescribed injectable or infused prophylactic therapies.

Over the three months prior to the survey, these patients reported a mean of 0.9, 1.6 and 1.8 attacks while taking Haegarda, Cinryze and Takhzyro, respectively. Patients taking these injectable or infused therapies reported similar attack rates in the 2018 study.

In the 2019 survey, 21 percent of patients using prophylaxis reported the expectation to have zero attacks over the next 12 months.

(Source: BioCryst)



6 June 2020

New data from the APeX-2 and APeX-S clinical trials show that HAE patients taking oral, once-daily berotralstat experienced sustained decreases in their attack frequency and improvements in quality of life (QoL) scores over 48 weeks. Berotralstat was also safe

and generally well-tolerated over 48 weeks in both APeX-2 and APeX-S.

The data were presented by BioCryst Pharmaceuticals, Inc. at the European Academy of Allergy and Clinical Immunology (EAACI) Digital Congress.

“As HAE patients continue in our long-term clinical trials, we are seeing reductions in attack rate and increases in QoL scores which highlight the impact oral, once-daily berotralstat could have in reducing the burden of disease for patients currently dependent on injectable or infused prophylaxis options,” said Dr. William Sheridan, chief medical officer of BioCryst.

In APeX-2, 31 patients who were randomized to 150 mg of oral, once-daily berotralstat at the beginning of the study and completed 48 weeks of therapy had a mean baseline attack rate of 2.9 attacks per month, which declined to 1.5 attacks per month after one month and to 1.0 attack per month at 12 months.

In APeX-S, patients completing 48 weeks of treatment on 150 mg of berotralstat (n=73) had a median attack rate of zero attacks per month in six of the 12 months, including month 12 (week 48).

The low attack rate experienced by HAE patients on 150 mg of oral, once-daily berotralstat reduced the burden of disease and translated into clinically meaningful improvements in mean angioedema quality of life (AE-QoL) total score, as measured by the disease-specific AE-QoL questionnaire. This persisted through month 12 (week 48) in the APeX-S trial.

Improvements in mean change from baseline AE-QoL total score exceeding the minimum clinically important difference (MCID) of six points were observed by week four and at week 48 the mean AE-QoL total score for the berotralstat 150-mg treatment group had decreased by 14.7 points compared with baseline.

An integrated 48-week analysis across both APeX-2 and APeX-S showed no new safety findings. Berotralstat was safe and generally well-tolerated in a total of 342 patients with a total of 232 patient-years of daily oral dosing. The most common adverse event was the common cold, which occurred with similar frequency in berotralstat and placebo patients. Gastrointestinal events led to discontinuation of berotralstat in 3.2 percent of patients. Drug-related serious adverse events occurred in three of 342 subjects (0.9 percent)

and resolved after stopping or interrupting berotralstat dosing.

(Source: BioCryst)



6 June 2020

Findings from two new interim analyses of data from the Phase 3 HELP Study Open-label Extension (OLE) suggest that Takhzyro (lanadelumab) is well-tolerated and can prevent HAE attacks over an extended treatment period, with a sustained and consistent reduction in monthly attack rate across a range of different patient subgroups. The data are being presented by Takeda Pharmaceutical Company Limited at the 2020 European Academy of Allergy and Clinical Immunology (EAACI) Digital Congress.

The original Phase 3 HELP Study was conducted in 125 patients aged 12 years and older over 26 weeks, making it the largest randomised, controlled prevention study in HAE, with the longest active treatment duration, to date. The HELP Study OLE was designed to evaluate the long-term safety (primary endpoint) and efficacy of Takhzyro for up to 2.5 years and was completed in November 2019. These interim analyses were based on data collected between May 2016 and August 2018 and included 109 rollover patients, who were originally evaluated in the HELP Study, and 103 eligible non-rollover patients who did not participate in the initial study but had experienced at least one HAE attack in 12 weeks. At the time of the interim analyses, patients received treatment for a mean duration of 19.7 months.

“HAE attacks are unpredictable, often painful and can be debilitating for those living with the disease. These data are exciting as they help us better understand the potential of Takhzyro to provide sustained prevention and reduce attack frequency long-term, across a range of patient demographics,” said Donatello Crocetta, M.D., Global Medical Head, Rare Immunology and Metabolic Diseases, Chief Medical Office, Takeda. “The HELP Study OLE analyses add to the evidence that supports Takhzyro as a leading option in preventive HAE treatments.”

Results from the HELP Study OLE showed that the safety profile of Takhzyro was consistent with the

original findings from the HELP Study, with treatment-related treatment emergent adverse events (TEAEs) occurring in 50% of patients. In addition, data from the HELP Study OLE showed that the efficacy of Takhzyro 300 mg administered subcutaneously every two weeks in rollover patients was consistent with the original findings from the HELP Study. A sustained reduction in attack rate was observed in this group, with numerically lower mean monthly attack rates of 0.18 during the extended treatment period of the HELP Study OLE and 0.26 at the end of the HELP Study. The efficacy profile of non-rollover patients was similar to efficacy in rollover patients with two years of cumulative study experience in the HELP Study and HELP Study OLE. The median attack rate reduction was consistent across all subgroups, including patient sex, race, HAE type, age, BMI, history of prophylaxis use, history of laryngeal attacks, and baseline attack rate.

In the study, TEAEs occurred in ~95% of patients and were mostly mild or moderate in severity. The TEAEs related to treatment that were reported in more than 5% of patients are injection site pain (33.9% of rollover patients and 42.7% of non-rollover patients, injection site erythema (11.9% of rollover patients and 15.5% of non-rollover patients) and injection site bruising (4.6% of rollover patients and 9.7% of non-rollover patients).

Lanadelumab is well-tolerated and effective across patient subgroups: findings from the HELP open-label extension study; OAS 21 Recorded scientific content

In this interim analysis, treatment with Takhzyro 300 mg every two weeks was well-tolerated and effectively reduced attack rates over an extended treatment period across different patient demographic and disease characteristics.

According to the interim analysis, the median attack rate reduction was consistent regardless of patient sex (98.6% reduction in males, 97.4% females; race (97.8% white, 95.9% non-white); HAE type (97.6% type 1, 97.4% type 2); age (97.4% <18 years, 97.4% 18-40 years, 98.4% 40-65 years, 92.0% ≥65 years); BMI (98.5% normal, 97.5% overweight, 97.1% obese); history of long-term prophylaxis use (97.2% C1-INH use, 97.1% no LTP); history of laryngeal attacks (97.1% yes, 99.8% no); and baseline attack rate (92.2% <1 attack/month, 100% 1-<2 attacks/month, 98.1% 2-<3 attacks/month, 96.5% ≥3 attacks/month).

The safety profile of Takhzyro was comparable across all subgroups, with treatment-related treatment emergent adverse events (TEAEs) occurring in 50% of patients and the most common being mild injection site pain.

Efficacy of lanadelumab is durable over time: Findings from the HELP Study and HELP OLE; OAS 21 Recorded scientific content

According to the interim analysis, treatment with Takhzyro 300 mg every two weeks demonstrated sustained reductions in HAE attack rates in patients who received treatment for a mean duration of 19.7 months (0-26.1).

At the end of the HELP Study and at the start of the HELP Study OLE, the mean attack rates per month in the patients receiving Takhzyro 300 mg every two weeks ranged from 0.26 for the treatment group and 2.39 for the control group. For patients treated with Takhzyro 300 mg every two weeks in the original HELP Study, sustained reductions in HAE attacks were observed in the HELP Study OLE, with a mean monthly attack rate of 0.18.

Similarly, further numerical reductions were also shown for the number of attacks requiring acute treatment and for the rate of moderate or severe attacks for this group as well as for patients receiving Takhzyro 300 mg every four weeks in the HELP Study.

The efficacy profile of non-rollover patients was similar to efficacy in rollover patients with two years of cumulative study experience in the HELP Study and HELP Study OLE.

Takeda will present the following analyses during the EAACI Digital Congress:

- An open-label, multicentre phase 3 study evaluating lanadelumab for the prevention of HAE attacks in paediatric patients: SPRING study design; TPS 07 Recorded scientific content
- Evaluation of long-term effectiveness of lanadelumab for HAE in real-world clinical practice: design of the ENABLE study; PDS 06 Recorded scientific content
- Effectiveness of Lanadelumab in the Real-World Setting: Findings from a Temporary Authorization of Use (ATU) in France for the Treatment of HAE Type 1/2; PDS 06 Recorded scientific content
- The Relationship between Treatment with Long-Term Prophylaxis and Attack Rate in HAE: A Multinational Chart Review Study; PDS 06 Recorded scientific content

- Treatment-Specific Normalization of Plasma Kallikrein Activity Observed in Patients with HAE; PDS 06 Recorded scientific content
- A Novel Dried Blood Spot Assay of Functional C1 Inhibitor Activity from Patients with HAE; DCPD 07 Recorded scientific content
- Implementation of a novel DBS-based methodology to diagnose HAE in subjects with recurrent abdominal pain of unclear etiology – the international EHA study; OAS 21 Recorded scientific content
- Study to evaluate metabolomic profiling of HAE and identify candidate biomarkers for disease monitoring (HAEKA Study); PDS 06 Recorded scientific content
- Effectiveness of icatibant to control symptoms of HAE attacks in real-world clinical practice; PDS 06 Recorded scientific content
- Treatment of acute attacks of HAE due to C1 inhibitor deficiency with icatibant in paediatric versus adult patients: findings from the Icatibant Outcome Survey; PDS 06 Recorded scientific content
- Long-term effectiveness and safety of icatibant for the on-demand treatment of HAE attacks: 10 years of the Icatibant Outcome Survey; OAS 21 Recorded scientific content (#1118)

(Source: Takeda)



8 June 2020

CSL Behring has announced results of a Phase 2 clinical trial for garadacimab (previously known as CSL312), an investigational novel Factor XIIa-inhibitory monoclonal antibody (FXIIa mAb) in development as a preventive treatment in HAE. The data, presented at the European Academy of Allergy and Clinical Immunology (EAACI) Digital Congress 2020, showed that the study met its primary endpoint, demonstrating reduced number of attacks compared to placebo in patients with HAE.

Mean percentage reductions were 88.68%, 98.94%, and 90.50% in three garadacimab groups - 75, 200, and 600 mg subcutaneous versus placebo. The study also showed garadacimab to be well-tolerated.

Garadacimab inhibits the plasma protein, FXIIa. FXIIa initiates the cascade of events that lead to edema formation. By targeting FXIIa, garadacimab can prevent the initiation of this cascade.

Additionally, last month, the U.S. Food and Drug Administration (FDA) granted orphan drug designation to garadacimab as an investigational therapy for the prevention of bradykinin-mediated angioedema, which includes both hereditary and non-hereditary (acquired) angioedema. The FDA Office of Orphan Products Development (OOPD) grants orphan drug designation to novel drugs or biologics that treat a rare disease or condition affecting fewer than 200,000 U.S. patients. The designation qualifies companies with a range of incentives, including the potential for marketing exclusivity upon approval.

“The attacks that HAE patients experience can be very frightening, and clinicians want to do anything in their power to reduce the frequency of these attacks, lessen the need for rescue medicine and simplify treatment,” says lead study investigator Timothy Craig, D.O., Allergy, Asthma and Immunology, Department of Medicine and Pediatrics, Penn State Hershey, Hershey, PA. “The findings of this study are very encouraging and we look forward to further research assessing the safety and efficacy of garadacimab.”

“Consistent with our more than 40-year commitment to HAE therapeutic innovation, garadacimab represents a potentially first-in-class agent that utilizes a unique approach as a preventive treatment in HAE,” says Mittie Doyle, M.D., Vice President, Research and Development, Immunology Therapeutic Area at CSL Behring. “We are encouraged by the promising garadacimab data as well as the orphan drug designation milestone and look forward to advancing the clinical program to continue to deliver on our promise and improve the lives of people living with HAE.”

About the Phase 2 Study

In the Phase 2 study, a total of 32 adults with HAE were randomized and received either garadacimab (either 75 mg, 200 mg or 600 mg) or placebo every four weeks for 12 weeks. Researchers observed the following:

Significantly fewer monthly attacks in all three groups taking garadacimab, with garadacimab reducing the mean attack rates by 88.68%, 98.94% and 90.50%, respectively, compared to placebo. Specifically, the monthly attack rates were 0.48, 0.05 and 0.40 for the three doses of garadacimab compared to 4.24 for placebo. As comparison, patients experienced a mean monthly attack rate of 5.17 prior to the start of the study. A large portion of patients taking garadacimab were attack-free during the course of the study.

Specifically, 55.56%, 87.5% and 42.86% of patients taking garadacimab, respectively, did not have any attacks compared to zero percent in the placebo group.

All adverse events were mild or moderate, with the percentage of patients experiencing at least one treatment-emergent adverse event (TEAE) being similar across all groups. The common TEAE was mild to moderate injection site erythema (12.5%).

Additional Study Details

This multicenter, randomized, double-blind, placebo-controlled, parallel-arm Phase 2 study (NCT03712228) examined the efficacy, safety and pharmacokinetics of three different doses of garadacimab, an novel investigational FXIIa mAb, compared to placebo for the preventive treatment of HAE. Enrolled patients were 18-65 years of age with type I or type II HAE, with four or more documented attacks over a consecutive two-month period during the three months prior to screening. Patients were randomized to receive either garadacimab 75 mg, garadacimab 200 mg, garadacimab 600 mg or placebo, which were given as a subcutaneous injection every four weeks for 12 weeks after an intravenous loading dose. The primary endpoint was the number of attacks. Secondary endpoints included the reduction in attacks compared with the run-in period (4 or up to 8 weeks prior to the start of treatment) or placebo, use of on-demand therapies (to treat an attack) per month and safety.

(Source: CSL Behring)

CSL Behring



HAE INTERNATIONAL AROUND THE WORLD

Currently there are HAE member organizations in **92** countries. You will find a great deal of vital information on the HAE representations around the globe at **haei.org** – and the world map will provide you with contact information for the member organizations as well as care centers, hospitals, physicians, and available medication.

The information on **haei.org** is being updated as soon as HAE International receives fresh data from the national member organizations.

