



2022 - Issue 4

▲ 'Stronger Together' • 06

Military medicine • 20

Brotherly love • 54





During World War II, Mayo Clinic physicians and other staff members joined the war effort and served with courage, loyalty and distinction. No matter where in the world they were, they approached their responsibilities with the same standard-bearing care and resolve that was ingrained in them at Mayo Clinic during peacetime. This issue of the magazine includes excerpts from wartime correspondence between six surgeons and Donald Balfour, M.D., then director of Mayo Clinic School of Graduate Medical Education.

Letter from the secretary-treasurer

'IN THE BETTERMENT OF MANKIND'

Service is at the heart of each physician and scientist. Just as Mayo Clinic is expanding its clinical reach globally, Mayo alumni are expanding humanitarian initiatives globally. Mayo Clinic is founded on the principles set forth by its founders. William Worrall Mayo, M.D., said: "No one is big enough to be independent of others," establishing the concept of collaboration.

His son, William J. Mayo, M.D. (Dr. Will), reiterated the importance of collaboration in 1935: "It is a great thing to make scientific discoveries of rare value, but it is even greater to be willing to share these discoveries and to encourage other workers in the same field of scientific research."

Dr. W.W. Mayo's other son, Charles H. Mayo, M.D. (Dr. Charlie), summed up the family's commitment to service in 1927: "All who are benefited by community life, especially the physician, owe something to the community," showing the concept of service to others.

In 1938, as Dr. Will neared the end of his life, he expressed his thoughts on the measure of a life — one's contributions to the betterment of mankind: "At the close of a man's life, to estimate his worth it is wise to see him in relation to his life surroundings, to know not only the part he played as an individual, but also as a component part of the great events to which he contributed in the betterment of mankind."

These sentiments — sharing knowledge, serving others and giving back — have been passed down by revered mentors throughout the history of Mayo Clinic. Today, the current generation of Mayo Clinic staff and alumni continue this rich legacy.

This issue of Mayo Clinic Alumni magazine shares stories that demonstrate that legacy and keep alive the spirit of the founders. Sharing expertise to protect military service members and civilians alike. Providing resources to low- and middle-income countries to jump-start their ideas. Making a difference in parts of the world severely lacking in resources and expertise. All in the betterment of mankind. We are proud of all the Mayo alumni engaged in humanitarian programs.



M. Molly McMAhon, M.D.

M. Molly McMahon, M.D. (ENDO '87)
Secretary-Treasurer
Mayo Clinic Alumni Association
Division of Endocrinology, Diabetes,
Metabolism, and Nutrition
Mayo Clinic in Rochester

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Medal and uniform on pages 20-21 provided by Paul Huddleston, M.D. (MED '94, OR '00), Department of Orthopedic Surgery, Mayo Clinic in Rochester.

Illustration on page 36 by Yeni Kim.

Mail

21 Sea June 4, 1944 Bed 2-19-44

Dear Packer Balfow: your grand lester of may fuit reach se several days you and again I am deeply appreciative of your Lought folmer in writing. as perhaps gor may have heard, I have a grand visit with Jim Briestly Chuck may tum, Heat Achmiat, Harry Brown, Burgers Sealey, and ca weld we poles out rose in their part gust long evough to prolo up some porients but at least, I had an oppoiturity to see them are only request that are the york couldn't have come down to the ship Many Low to remain on lity so I missa seeing Ea Juaa, Linata, and some of the others. The other Chuck's unt is some six ty miles away so die not see them, much to my di repositment. There ale looked grand all were as

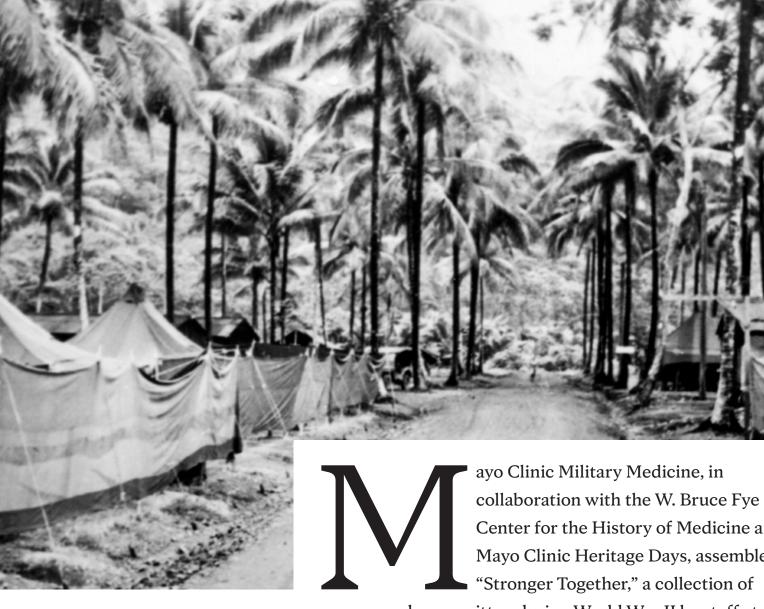


Stronger Together'

Excerpts from a correspondence-based history of Mayo Clinic surgeons in World War II

Opposite: A letter from Howard Gray, M.D.

Above: James Priestley, M.D., and Charles (Chuck) Mayo, M.D., in 1943, before heading to the South Pacific.



collaboration with the W. Bruce Fye
Center for the History of Medicine and
Mayo Clinic Heritage Days, assembled
"Stronger Together," a collection of
correspondence written during World War II by staff at
Mayo Clinic. The letters, exchanged primarily among six
physicians (page 9) and Donald Balfour, M.D., then director
of Mayo Clinic School of Graduate Medical Education, form
a chronology of events the physicians experienced.

In addition to countless others, six surgeons with deep but varied ties to Mayo Clinic joined the war effort and served the Allied forces with courage, loyalty and distinction. Whether on a ship in the Pacific, the battered streets of London, or hospitals in California or the South Pacific, they approached their wartime responsibilities with the same standard-bearing care and resolve that had been ingrained in them at Mayo Clinic during peacetime. Dr. Balfour also served his country by being the connection to the lives the six physicians had left behind.

The letters* show the culture of service and sharing of medical knowledge that are integral to the enduring Mayo Clinic tradition. Here, Mayo Clinic Alumni magazine shares excerpts from "Stronger Together."

Above: Nurses quarters in Milne Bay, Papua, New Guinea. Two U.S. Army hospital units staffed by Mayo Clinic physicians, nurses and technicians were deployed to the South Pacific.

^{*}Letters have been excerpted, but the portions that appear are presented as they were written.

MEDICAL SERVICES IN EUROPE

Archibald (Archie or Mac) McIndoe, M.B., Ch.B., a native of New Zealand, interned and practiced with the Mayo brothers for almost six years, learning all that Dr. Will and Dr. Charlie could teach him about caring for patients. In late 1930, he and his wife, Adonia, left Rochester for the United Kingdom.

The use of aircraft to defend a country, in the early years of the war, was a new and novel idea. While this brought a world of opportunities and hope, it also brought a new set of challenges. Fiery crashes from battles high above London resulted in horrific burn injuries.

October 15, 1940

Dear Donald,

Personally, I am very busy for in addition to my hospital here now full to overflowing, I am consulting surgeon to the Royal Air Force and must do a great deal of traveling round the country to their various hospitals. The types of injury are very different to the last war and consist largely of crash injuries and burns. Our ideas on burns have had to be entirely recast and I hope to solve it by creating Burn Centres on the lines of Isolation Hospitals for the control of infection where the cases can be segregated and properly treated. The burns are of course quite different to those seen in civilian life.

Kindest regards to all, Mac

February 26, 1941

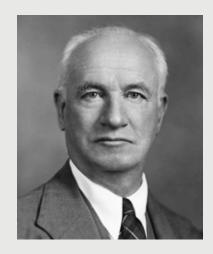
Dear Donald,

Your most interesting and welcome letter arrived this morning, 47 days after it was posted! That should give you some idea about what is happening in the world today particularly on the Atlantic.

Medically speaking I have never been so busy. My hospital is full to the doors and I have a large turnover. I am constantly on the move among R.A.F. hospitals. You ask what is there new under war conditions. Well, plenty. First of all, this is a burn and crash war. The death rate is high as witness the 50% mortality in air raid casualties. We now have burn units scattered over the country on the model of my own one, complete with medical and nursing staff and equipped with special saline baths for the treatment of 3rd degree types, and all hands and faces. The number of skilled pilots who were tanned unmercifully was nobody's business. However, that has all stopped now and with salinesulphonamide therapy we are getting somewhere. Instead of having 3rd degree burns hanging around the wards for months, they are in for only weeks. We were well prepared for the facial injuries.

Mac

Correspondents



Donald Balfour, M.D. (S '09), director, Mayo Clinic Graduate School of Medicine, 1937–1947, died 1963



Archibald (Archie or Mac) McIndoe, M.B., Ch.B. (S '30), died 1960



Howard Ives, M.D. (S '41), died 1965



Albert Snell, M.D. (I '25), died 1960



Howard (Howdie) Gray, M.D. (S '32), died 1955



James (Jim) Priestley, M.D. (S '33), died 1979



Charles (Chuck) William Mayo, M.D. (S '31), died 1968

OTHER ALUMNI MENTIONED IN LETTERS

Henry (Waltman) Walters, M.D. (1 '21, S '27), died 1988

Charles (Chuck) Maytum, M.D. (I $^{\prime}26$), died 1953

 $\textbf{Herbert Schmidt, M.D.} \ (I\ '38), \ died\ 1966$

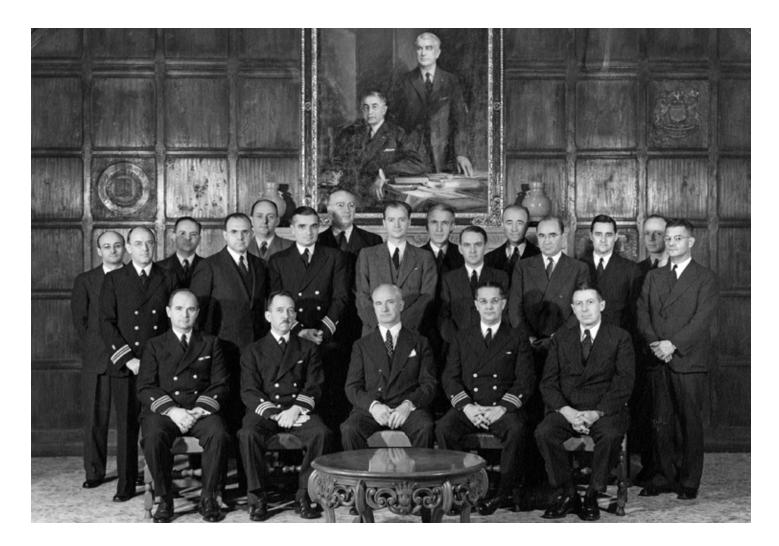
Henry (Harry) Brown, M.D. (ENT '37), died 1997

W. Burgess Sealy, M.D. (S '42), died 2001

Edward Weld, M.D. (S '19), died 1956

Edward Judd, M.D. (S '42), died 1996

Kinsey Simonton, M.D. (ENT '37), died 1994



Mayo Clinic staff who were Naval Reserve specialists in Units 54 and 56, Dec. 7, 1941, pictured with Dr. Balfour: Archie Baggenstoss, M.D. (PATH '37), died 2003 Richard Cragg, M.D. (I'36, PATH'37), died 1946 Alexander MacLean, M.D. (N'38), died 1977 Henry Williams, M.D. (ENT '30), died 1974 Louie Austin, D.D.S. (OMS '20), died 1976 Harry Weber, M.D. (RD '31), died 1958 Richard Kent, M.D. (I'46), died 1993 Charles Watkins, M.D. (DERM '58), died 1980 John Camp, M.D. (RD '24), died 1969 Howard Gray, M.D. (S'32), died 1955 Hugh Butt, M.D. (I '36), died 2008 Edward Cook, M.D. (U '35), died 1972 Virgil Counseller, M.D. (S'27), died 1977 Harry Macey, M.D. (OR '46), died 1951 John Berkman, M.D. (I '31), died 1978 Henry (Waltman) Walters, M.D. (I'21, S'27), died 1988 Thomas Magath, M.D. (PATH '19), died 1981 Donald Balfour, M.D. (S'09), died 1963 Winchell Craig, M.D. (S'26), died 1960 Albert Snell, M.D. (I '25), died 1960

Howard Ives, M.D., a young fellow in surgery at Mayo Clinic, was moved by a call to arms. President Franklin D. Roosevelt issued a request for physicians to volunteer for Red Cross duty in Britain. England's Emergency Medical Service, starved of its medical professionals by either voluntary enlistment or the draft, was overwhelmed in treating casualties in the general population. Dr. Ives, moved by the suffering of civilians in war-torn London, was the first physician in America to sign up for service.

HILL END HOSPITAL, ST. ALBANS, HERTS (HERTFORDSHIRE) July 16, 1941

Dear Dr. Balfour,

I am sorry I haven't written before to let you know a little of the news but as you might imagine, things have been a little helter skelter the past weeks but are now settling down. It's a little hard at times to realize that I am actually here when not long ago we were living a comfortable peaceful existence in Rochester. Unfortunately we don't appreciate things to their full extent until we have to leave. I find myself now beginning to see as I hadn't before, the Clinic and its training. Needless to say, that's the reason I want to get back.

The name Mayo Clinic has been magic more than once and many times I have been mighty proud of Rochester. Everywhere I go here, people speak in the greatest respect of the clinic and its staff.

Howard

January 26, 1942

Dear Dr. Balfour,

The Army has now called twice for many more men, the situation now lies that all men must go into the army at the end of 6 months internship unless they are able to get a higher job. There are very few higher jobs, as only a very few of the Chief Assistants or Registrars have been permitted to stay. As a result of this, my job has doubled. At present I have about 125 patients under my care, two new interns to teach the ropes as best I can, two days a week operating with the neurosurgeon and my teaching duties and ward rounds which have likewise greatly increased. I love the work. I think I am getting a tremendous amount out of it, but it seems almost as though night comes immediately after the morning.

Perhaps if you ever have an extra second to drop me a line, you could give me your advice. I wonder if I should come home in May at the end of my year and join the U.S. forces. They need men badly here now, more than when I came, and I am needed here at this base hospital. If I drop out there are almost no trained men to fill in. Personally, I want to stay on for another year, we can only hope that the end of the war may be in sight then.

September 5, 1942

Howard Ives

Dear Dr. Balfour,

I can honestly say I have never enjoyed my work more. It was something that I never dreamt to have the opportunity of seeing and doing all that they are giving me here.

I am more proud now of the Mayo Clinic than ever for it is even clearer what you men stood for and taught as well as did. I constantly look forward to coming back again some day and picking up where I left off.

With kindest regard to Mrs. Balfour and yourself. Howard Ives

As he had so selflessly done by joining the Red Cross in 1941, Dr. Ives followed his conscience and the best personal advice offered by Dr. Balfour. In early 1943, he applied to the U.S. Navy. While it was common practice at the time for individuals to join the military from within their own country, Dr. Balfour, through his contacts in the Office of the Surgeon General, arranged for Dr. Ives to receive his U.S. Navy commission while still overseas.

149 HARLEY STREET, LONDON, W.1., ENGLAND

March 8, 1944

Dear Donald,

As usual, I am exceedingly busy and have taken on instructional courses for the U.S. Forces in war wounds and burns which allow little time for play. I am soon taking over a complete new surgical block which will offer every possible modern convenience and refinement. This has been built by Canada and a second unit is about to be built by the U.S. So that eventually we shall have quite the most up-to-date and complete plastic hospital anywhere in the world. These are permanent structures of very advanced design and should enable good work to be done in good surroundings. Yours ever,

Mac

MEDICAL SERVICES IN THE U.S. NAVY

Navy Medical Unit No. 1 was formed immediately after Dec. 7, 1941, and had as its nine members those at Mayo Clinic who were in some manner associated with the Naval Medical Reserve. Albert Snell, M.D., head of a section of gastroenterology, was its initial executive officer; and Howard (Howdie) Gray, M.D., a general surgeon.

Dr. Snell had served in the U.S. Navy at the end of World War I. Following the war, he worked in the clinical labs at the University of Minnesota Hospitals before going to Mayo Clinic in 1925. He once again entered active service in the medical corps of the Naval Reserve on Dec. 29, 1941, with the rank of commander. At 45 years old, he was one of the oldest physicians at Mayo Clinic on active wartime duty.

The USS Tryon, a transport evacuation ship, set sail for New Caledonia, a French territorial island off the coast

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An Army hospital medical ward at the Mayo-staffed unit in Nadzab, New Guinea.

of Australia, on Oct. 9, 1942. For 15 months, it evacuated combat casualties from the Solomon Islands, New Caledonia, New Zealand and Australia. Throughout the ship's journey, Dr. Snell was the medical officer on board.

USS TRYON, C/O FLEET P.O., SAN FRANCISCO December 9, 1942

My dear Dr. Balfour:

As you know, the Tryon left San Francisco the first week in October and has been on the move ever since. We have covered about 15,000 miles and by the time this letter is mailed will have been in eight different ports. We have been a sort of work horse ship, operating alone without convoy and carrying everything in the way of men, munitions and casualties that you can imagine.

Medically speaking, we have had either a feast or famine. About 620 casualties have been carried to date, comprising about the whole range of human ailments or injuries. Medical care begins in the field or on the ship and is kept up continuously until the man is back at a base hospital. Every form of transport is employed, including planes, which the doctors ride, giving treatment (plasma, blood, morphine, etc.) as they go. As a result of this extraordinarily good set-up, the mortality from wounds is only about 1% — if one excludes those patients who die during the first twenty-four hours after they are hit.

I hope you will write me a line about the clinic news if you can — and please give my best holiday wishes to all my friends. No mail in two months and I feel somewhat out of circulation — but the clinic is still close to my heart. Sincerely,

Al Snell

Henry (Waltman) Walters, M.D. joined Mayo Clinic in 1920 and served in the U.S. Army and U.S. Naval Reserve from 1925 to 1946. When the second Mayo Clinic Navy Medical Unit was formed in late 1941, he was appointed its commanding officer. The unit had the daunting task of converting a massive hotel in Coronado, California, into a fully functioning Naval hospital.

Around this time, interest was raised about the organization of a full Army hospital staffed by Mayo Clinic physicians, nurses and support personnel. As had been the case during the previous war, when Drs. Will and Charlie had enlisted staff in Rochester to run a hospital in Europe, the hope in 1942 was to create another Mayo unit with the same patient-centered care as at Mayo Clinic. Whether it was due to the growing countrywide call to arms or the lure of legend and institutional

pride, so many signed on that eventually two Army hospital units were established.

June 27, 1943

Dear Dr. Balfour:

It was grand to hear from you and to have news from the Clinic.

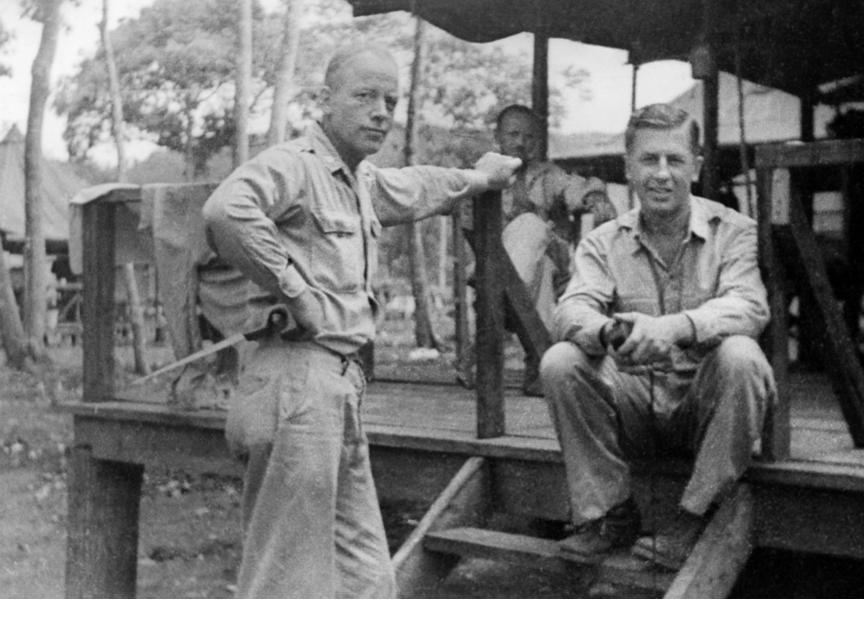
Our last trip over the familiar course was productive of a record load of patients; none of them very sick but quite a problem nevertheless for our somewhat limited facilities. This load (about 500) might be classed as "strictly fresh" material, coming as they do from field hospitals and remote naval dispensaries.

We anticipate some rather heavy going in the next few weeks — our medical staff is reduced by illness and transfers, but our corpsmen are now trained to the point where they are really excellent help. We have continued with their instruction, having classes between our loads of patients and the boys do surprisingly well.

I hope this finds you well and your family well and the Clinic flourishing. One can imagine how difficult it is to keep the place going, but I know the Board will manage some way. With every good wish to you and all my Rochester friends, I am Sincerely,

Al Snell

By the summer of 1943, so many Mayo Clinic physicians, nurses and staff were supporting the war effort and serving in the military at various locations around the world that there were dangerously few remaining at home. Despite the



challenges, Saint Marys opened a new wing that summer and grew to accommodate 800 patients every day.

August 5, 1943

My dear Dr. Balfour:

Just a brief note to tell you that we are still afloat and very much on the go. The last two months have been very busy ones for this ship and particularly for the medical department. There have been lots of serious cases to transport — both wounded and purely medical — and our small personnel and cramped quarters have been rather severely taxed. Between loads, we get more supplies ready and try to scheme out ways to do the job a little better the next time.

I hear the Clinic is terribly busy and that the men are carrying a very heavy patient load. When I get news like that I wish I could be there to help. No matter who the patients are, they couldn't be any better than those we have in our care. The patience and guts of these men continue to amaze all of us.

Drop me a line if you find the time — it's always grand to hear about the hometown and the Clinic, and even better to hear from your friends. And remember me to my friends at the Clinic. With all good wishes, I am Sincerely, Al Snell

James Priestley, M.D., and Herbert Schmidt, M.D., at the 237th Station Hospital in Finschhafen, New Guinea, 1944.

Howard Gray, or Howdie to his friends, served as surgical first assistant to Dr. Balfour. A volunteer medical specialist in the U.S. Naval Reserve before the country entered the war, he was placed on active service on Dec. 7, 1941. Leaving his wife, Wint, and two young daughters behind, he traveled the country with Naval Medical Unit No. 1 for two years until being assigned as medical officer aboard the USS Solace.

Entering service in 1927 as a passenger vessel for cruising the East Coast from New York to Miami, the Solace was praised as the largest and fastest ship in the Atlantic coast trade. Appropriated by the Navy in 1940, the Solace had extensive upgrades and re-entered service a short time later as a fully operational hospital ship. In December 1943, it was docked in Hawaii when Dr. Gray embarked. Within days, with a full complement of patients, the ship departed port for San Diego.

USS SOLACE, C/O FLEET P.O., SAN FRANCISCO

December 7, 1943

Dear Doctor Balfour:

The operating rooms are well forward and as our ship has a notorious pitch, it was an unusual experience to operate and at the same time hold the instruments on the table and your lunch in your stomach. Whew.

After a few days, however, the urgent surgical procedures had been accomplished and, although we pitched and tossed for nearly six days, the midship section was relatively quiet and we got along all right.

The spirit of the kids and their ability to come back with common sense conservative treatment are the two things that amazed me. We received our load sooner than any ship of this type ever has in the past and my first complete rounds the evening we came aboard was an experience I shall never forget, for the condition of a large portion was such that you would have every right to expect a disheartening

mortality. As a matter of fact, our mortality rate was seven tenths of one percent! With fluids, rest, morphine, etc. these kids looked like a different group of patients. The first night we worked in the O.R. until about 2:30 AM. That day was practically entirely orthopedic, and I assure you I learned a lot in an awful hurry. With this broadening experience I know I shall be a lot better surgeon.

I have a good group of shipmates, marvelous equipment, a fine ship with the one exception of the location of the O.R., and the policy now is evidently one that will keep us active. So, with the knowledge that my gang and you are all fine, I have no legitimate complaints. Thanks for all you have done for Wint and the kids. You know how deeply I appreciate it. Much love to you and Mrs. Balfour.

Always,

Howdie

U.S. NAVAL HOSPITAL 14, OAKLAND, CA

May 4, 1944

Dear Dr. Balfour:

This is a busy and hard-working hospital. We have very little surplus in the way of bed space or personnel, and it takes a good deal of effort to keep things moving. There is a wealth of clinical material here and one has little chance to forget about the practice of medicine.

I am certainly looking forward to having some of our clinic boys ordered here — we need some bright and energetic young men. If you get a chance to promote this, it would be appreciated and if you have, or heard of, a proctologist — don't forget us. Sailors' stern tubes seem to be very vulnerable and we could use one of the Clinic's proteges very nicely.

Sincerely,

Al Snell



James Priestley, M.D., in surgery at Saint Marys Hospital on the Rochester campus in 1951.

James Priestley, M.D., remembered with surgical society

In 1965, residents and fellows who worked with James Priestley, M.D., founded the Mayo Clinic Surgical Society in Honor of James T.

Priestley, a Mayo Clinic Alumni Association specialty society.

Dr. Priestley was a prominent Mayo Clinic surgeon with a national and international reputation who had great enthusiasm for teaching residents the care of patients and craft of surgery. The society's members are surgeons who trained at Mayo or who are current or former members of the Mayo Clinic Department of Surgery.

The group's more than 600 members hold annual meetings for scientific exchange and renewal of friendships. The president of the Priestley Society is Eric Dozois, M.D. (S '00, CRS '01), chair, Division of Colon and Rectal Surgery, Mayo Clinic in Rochester.

Join the Priestley Society:

alumniassociation.mayo.edu/societies/priestley-society



Even within the vast regions of the Pacific Ocean, every now and again the paths of various Mayo Clinic physicians would cross. On such occasions, this would invariably lead to impromptu reunions, happy greetings and, on departure, heavy hearts.

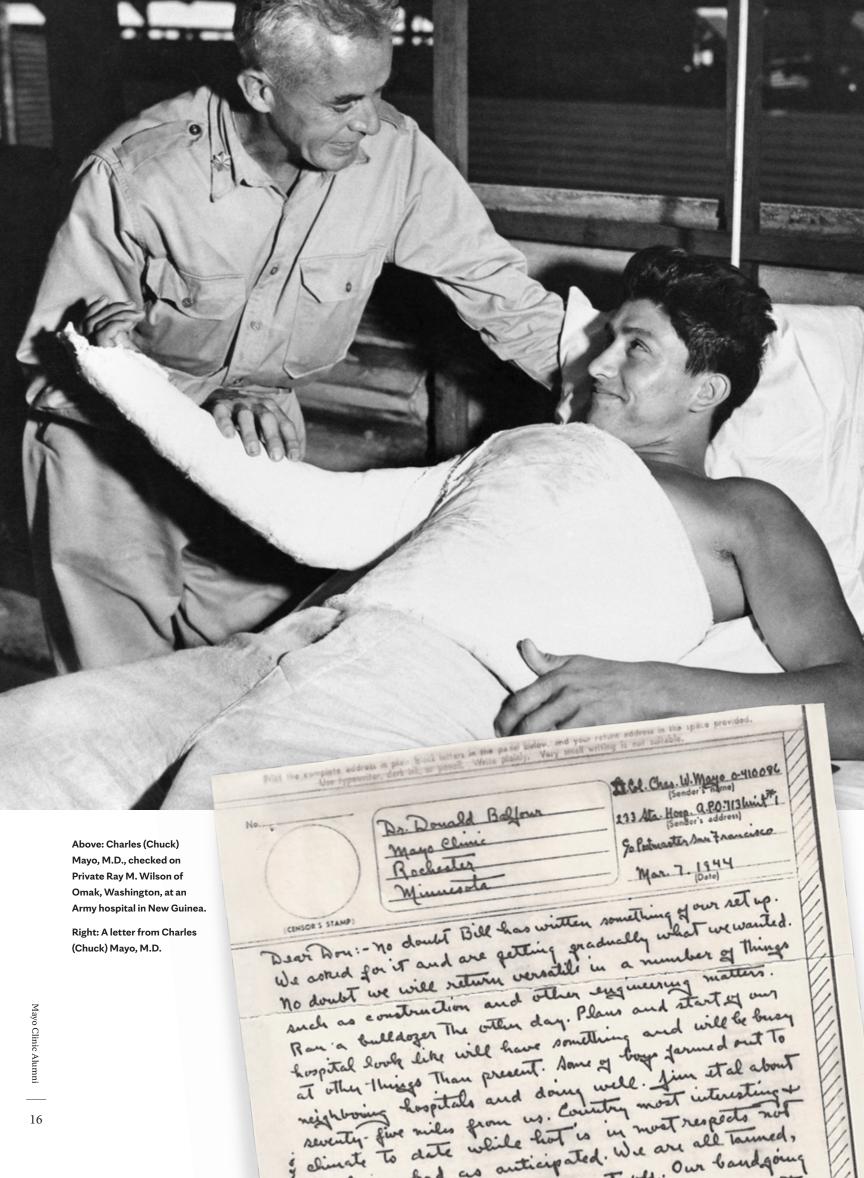
June 4, 1944

Dear Dr. Balfour:

Your grand letter of May 1st reached me several days ago and again I am deeply appreciative of your thoughtfulness in writing. As perhaps you may have heard, I had a grand visit with Jim Priestley, Chuck Maytum, Herb Schmidt, Harry Brown, Burgess Sealy, and Ed Weld. We paused our ship in their port just long enough to pick up some patients but at least I had an opportunity to see them and only regret that all the gang couldn't have come down to the ship. Half had to remain on duty so I missed seeing Ed Judd, [Kinsey] Simonton, and some of the others. Chuck's [Mayo] unit is some sixty miles away so did not see them, much to my disappointment. They all looked grand. All were as yellow as pumpkins but in association with a sun burn it was not at all becoming. As a matter of fact, they would have looked good to me in any form of physical dissolution!

I promise you, we pulled away from the docks with my heart quite heavy. How one does miss the gang from home! My own shipmates are tops, no complaints on my part in the slightest, but they just aren't the same — do not talk the same language — nor have they that feel that you and the other senior staff members have been able to impart to the rest of the group. There is an indefinable something that becomes evident by its absence in outsiders.

Edward Weld, M.D., at the 237th Station Hospital in Finschhafen, New Guinea.



Nostalgia is rearing its head at this moment and I'm not the least sensitive in admitting it. How I would love to see you all — and my family! Going on ten months now since I left home and that's a long time.

Always, Howdie

MEDICAL SERVICES IN THE SOUTH PACIFIC

The two U.S. Army hospital units staffed by Mayo Clinic physicians, nurses and technicians were at that point well trained and anxiously awaiting orders, which finally arrived in December 1943. The 233rd Station Hospital was led by Charles (Chuck) William Mayo, M.D., and the 237th Station Hospital by James Priestley, M.D. Both units were heading for the South Pacific.

Dr. Priestley joined Mayo Clinic in 1928 and received a Ph.D. in surgery from the University of Minnesota in 1932. Known as quiet and introspective with a sense of humor and warmth of character that was cherished by his colleagues, he was in every way the role-model Mayo physician.

Dr. Chuck Mayo was the son of Mayo Clinic co-founder Charles H. Mayo, M.D. While Dr. Chuck Mayo felt the weight and burden of being a third-generation physician in an institution named after his father, uncle and grandfather, he possessed a rare surgical talent and bedside manner that endeared him to others and justified his well-earned seat at a very distinguished table. Dr. Chuck also held the distinction of being a cousin to Dr. Balfour's wife, Carrie Mayo. This distinction resulted in very casual and introspective correspondence between the two men.

On Jan. 4, 1944, the two hospital units boarded a heavily laden passenger-liner-turned-personnel-carrier bound for Sydney, Australia. In time, the 237th arrived in Finschhafen, New Guinea, and the 233rd about 75 miles away in Nadzab, near the airfield of the Army 5th Air Force. Both units were given all the materials to clear the land, construct buildings and form a fully self-contained functional army support unit. A do-it-yourself hospital-in-a-box, as it were. Instructions not included.

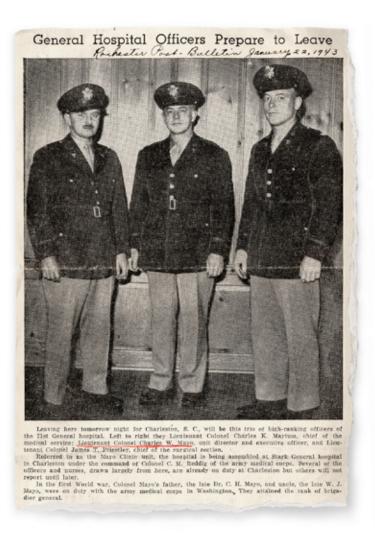
233 STATION HOSPITAL, APO 713, UNIT #1, SAN FRANCISCO March 7. 1944

Dear Don,

No doubt Bill has written something of our set up. We asked for it and are getting gradually what we wanted. No doubt we will return versatile in a number of things such as construction and other engineering matters. Ran a bulldozer the other day. Plans and start of our hospital look like will have something and will be busy at other things than present. Some of the boys farmed out to neighboring hospitals and doing well. Jim et al about seventy-five miles from us.

As ever

Chuck (somewhere in New Guinea)



237 STATION HOSPITAL, APO 322, UNIT #1, SAN FRANCISCO March 26. 1944

Dear Dr. Balfour,

We landed on dark night in the middle of a jungle and were told that this was "our area." We borrowed thirty-five machetes early the next morning and everyone started in to work in some manner and have been continuing to the present time. Naturally, things went pretty slowly at first, but as we acquired a little more to work with gradually, in one way or another, we now have our land pretty well cleared and some of our buildings of prefabricated materials are well underway.

Hear that things have been very busy at home as usual. Hope the boys are not working too hard. Would like very much to receive the clinic bulletin if it is not too much trouble. The Proceedings come through much better than any other medical journal as, of course, they come by first class mail and that makes a big difference. We received the Jan. 12th issue just a couple of days ago. They surely are appreciated by all the boys.

Very best regards, Jim

June 25, 1944

Dear Don.

You will be interested that the 5th Air Force has specifically asked for our unit — what will happen about it I don't know — but I went to them with a plan that I would split our unit



Charles (Chuck) Mayo, M.D., and William Randolph Lovelace II, M.D. (S '41, died 1965), in 1944. Dr. Lovelace collaborated on the development of the BLB oxygen mask, named for Walter Boothby, M.D. (I '16, died 1953), Dr. Lovelace and Arthur Bulbulian, M.D. (OMS '32, died 1996).

into two parts; one fixed, one mobile so that during the period of a fixed air unit before a move forward, we would act as a 500 bed station hospital. I suggested a rotating program so that one of the great objections of doctors in the air corps might be at least partially relieved — like the Clinic on a slightly different scale and time for fellows, we would like to offer the air medics rotating services for varying periods. Well, I sold them on it and am sure we can hold up our end of the bargain should the opportunity come. Chuck

August 27, 1944

Dear Dr. Balfour,

Not wanting to brag, but knowing that you would be interested, the base service commander told me several days ago that our organization was rapidly developing the reputation of the best hospital in the base — which, of course, all the boys were pleased to hear as they do try to carry on with the same spirit and motives that we all have learned in Rochester. At least I think the patients get a little human touch that may not be emphasized too much in some army hospitals.

Sincerely,

Jim

THE RETURN HOME

The focus in Rochester slowly turned to home and all that had been so hurriedly left behind two or three years earlier. There were new challenges: the future of the clinic, expansions and remodeling, the training of fellows and the reduction of patient wait times. At the center of all this energy was Dr. Balfour. Welcoming everyone home, revelling in their stories, and enthusiastically considering their thoughts, he was the relieved father awaiting the return of his scattered Mayo Clinic family.

Dr. Balfour had become director of Mayo Clinic School of Graduate Medical Education in 1935. He was an original member of the Mayo Clinic Board of Governors and served as its chair from 1933 to 1936. When the Mayo brothers died suddenly in 1939, Dr. Balfour was the only remaining original partner.

Dr. Balfour was kind, friendly, courteous and modest. When Mayo Clinic physicians were away at war and their thoughts wandered to a life left behind in Rochester, it was to him that their thoughts naturally turned. In return, the empathy and concern he showed these individuals was demonstrated in the almost 60 letters he personally wrote while they were away. Even if no one else did, as unlikely as that might be, at least he would remember them.

Dr. Balfour's attention turned to Dr. McIndoe when the surgeon received a prestigious recognition for his efforts in treating Royal Air Force burn victims. Dr. McIndoe was awarded the Commander of the Order of the British Empire (CBE) by King George VI. Dr. McIndoe would receive the additional distinction of knighthood in 1947.

MAYO CLINIC, ROCHESTER

October 21, 1944

My dear Mac:

Just a note to tell you how delighted we are to learn of the British honor which has come to you. What a marvelous trail you have blazed from Dunedin to London and you may be sure that all of us here have taken great pride in what the recognition means. This is especially true of those of us who know that these honors only come to those who merit them.

I know you must see, perhaps, the worst side of the war in the kind of injuries you are called upon to deal with and I hope it will not be too long before you can come to America and tell us of the extraordinary experiences you must have had.

With all good wishes to you and Adonia and the children, Sincerely,

Donald Balfour

USS GUAM, FLEET POST OFFICE, SAN FRANCISCO

August 6, 1945

Dear Dr. Balfour,

It is time for my semi-annual report for though it's well over a year since I last saw you, time in some ways has gone very fast. As you see by the name of the ship, she is one of the new ones. We have an amazing sick bay on board. I think it is probably the first time, while designing a ship that the line gave the medical department what they wanted — they did it for us and a better equipped or workable place I cannot imagine. Most of the areas are air conditioned including the operating room and, in intense heat, I find myself doing all the lumps and bumps on board just to keep cool.

I am the only surgeon on board and with over 2,000 men, it has meant a good deal to do — mostly small things but still quite enough to keep from going stale. We are at sea long periods, sometimes 4–6 weeks, on one occasion 10 weeks without sight of land.

My determination to make a go of sea duty has proved very interesting in lots of ways. We were with the USS Franklin in March — then the Okinawa landings. Since then our path is secret as far as the censors go, but at the moment, I am at general quarters so you can guess these moments are active.

Always with kindest regards to Mrs. Balfour and yourself, Lt. Howard R. Ives, MC, USNR

September 20, 1945

Dear Chuck:

Since I wrote you, the excitement seems to be mounting as to when men are going to get out of service. It is wonderful to think of the folks being back, and the executive committee of the Surgical Society are making careful study of how to use the operating rooms to maximum capacity by schedules which will be discussed next week and which will be ready to present to you when you get back.

I wish you were around to feel the thrill of the fellows getting back to take up their fellowships. There aren't enough places for staff and fellows to live, and those members of the staff who haven't a home to go to are in a bad fix. There is literally nothing for them except to buy, and prices certainly have skyrocketed. However, I don't believe that will last long because we have not only approval of building ten houses on the old farm east of town, but the contractor said yesterday he had enough material to complete these probably by Christmas; and if the lid is taken off construction on homes, which I believe is going to be by the first of October, he is of the opinion he can build a hundred houses out there by next summer. Yours sincerely,

Don •

MILITARY MEDICINE SHARING EXPERTISE TO SAVE LIVES



uring World War II, Mayo Clinic participated in U.S. armed services programs to accelerate training for physicians to be prepared to serve in the military as medical officers.

These programs, which trained more than 1,500 physicians at Mayo Clinic alone, were a response to the situation in World War I when the medical corps of the armed forces were unprepared to care for the large number of casualties. **Donald Balfour, M.D.** (S '09, died 1963), oversaw the World War II-era training programs at Mayo.

One of those courses focused on anesthesiology, preparing physicians who had no prior anesthesia experience in a 12-week short course in the discipline. John Lundy, M.D. (ANES '24, died 1973), chair of anesthesiology at Mayo Clinic at the time, helped to develop the curriculum and led the course, which trained 184 physicians. They were taught regional and general anesthesia and techniques such as tracheal intubation. Successful completion of the course meant a physician might be allowed to practice away from the front lines, in a safer location.

Those courses represent a small part of Mayo Clinic's rich history of sharing its expertise with the military for the benefit of troops everywhere. Today, Mayo Clinic is involved in training military Special Operations personnel serving in theaters of war around the world, often lacking modern medical infrastructure.

MODERN-DAY VERSION

In 2018, Mayo Clinic established a Military Medicine program, with **Pierre Noel, M.D.** (HEM '86), Division of Hematology and Medical Oncology, Mayo Clinic in Arizona, as medical director (profile, page 28). The program coordinates military-related practice, education and research across Mayo Clinic and provides a central point of contact for the Department of Defense (DOD) and other federal agencies.

The program's centerpiece is education. In 2012, Dr. Noel introduced Mayo Clinic Special Operations Tactical Medicine training for military Special Operations units. The program, which is primarily funded by benefactors, specializes in multidisciplinary training for combat trauma, prolonged field care and critical care in austere environments, tropical medicine and infectious diseases, and the care of chemical, biological and radiological casualties. The program's world-class faculty members, using cutting-edge modeling and simulation tools, have trained more than 1,200 military physicians, physician assistants, medics and troops. Most of the learners have at least several years of experience as medics in combat environments.

According to Dr. Noel, the Special Operations community considers the training at Mayo Clinic to be one of the best tactical emergency and critical care programs. "Our military medicine training programs are held in high esteem because our faculty members are enthusiastic and

Military Medicine leaders ど key faculty



MEDICAL DIRECTOR

Pierre Noel, M.D. (HEM '86)

Division of Hematology and Medical Oncology

Mayo Clinic in Arizona



ASSOCIATE MEDICAL DIRECTOR
Thomas Flipse, M.D. (I '88, ADGM '89)
Department of Cardiovascular Medicine
Mayo Clinic in Florida



ASSOCIATE MEDICAL DIRECTOR
Christopher Russi, D.O. (EMS '05)
Department of Emergency Medicine
Mayo Clinic in Rochester

KEY FACULTY MEMBERS

- Hannelisa Callisen, PA-C, Department of Critical Care Medicine, Mayo Clinic in Arizona
- Thomas Flipse, M.D. (above)
- Richard Fowl, M.D. (VASS '85), Emeriti Staff, Division of Vascular and Endovascular Surgery, Mayo Clinic in Arizona
- Christine Hunt, D.O. (PMR '18, PAIN '19), Department of Pain Medicine, Mayo Clinic in Florida (profile, page 30)
- Daniel Johnson, M.D. (CCM '97), Department of Surgery, Mayo Clinic in Arizona
- William McLeish, M.D. (OPH '91), Department of Ophthalmology, Mayo Clinic in Arizona
- Pierre Noel, M.D. (above)
- Bhavesh Patel, M.D. (I '96, CMR '97), Department of Critical Care Medicine, Mayo Clinic in Arizona
- Christopher Russi, D.O. (above)
- David Seamans, M.D. (11'95, ANES'98, PAIN'99), Department of Anesthesiology and Perioperative Medicine, Mayo Clinic in Arizona
- Ayan Sen, M.D. (CCM '12), Department of Critical Care Medicine, Mayo Clinic in Arizona



Benjamin Daxon, M.D. (CCMA '19), Division of Critical Care Medicine, Department of Anesthesiology and Perioperative Medicine at Mayo Clinic in Rochester, conducts Mayo Clinic Special Operations Tactical Medicine training.

"By sharing the expertise and skills that I and others on our team have honed throughout our careers, we help to make sure that all of our loved ones and those from other countries return home in one piece."

- Pierre Noel, M.D.



professional, our content is cutting edge, and we offer a student-to-faculty ratio that frequently exceeds one-to-one. Our facilities are outstanding, and we use equipment and supplies that duplicate what's available in the field for maximum realism and credibility. Our program is dynamic and continually renewed to make sure it addresses participants' and the military's needs. We ask for feedback daily when we're training, are in touch with active-duty members and can modify the curriculum in 24 hours when gaps in training are identified.

"Our program focuses on managing trauma that could happen in the battlefield. Picture a soldier injured in a mountainous area, days away from possible evacuation to a field hospital. The Special Operations medic must be well versed in tactical combat casualty care and prolonged field care to be able to treat the patient when a hospital is not readily available."

Eleven intense weeklong military medicine training courses are planned for 2023. They'll take place on and near all three Mayo Clinic campuses, with the majority in Arizona, which has mobile and fixed facilities employed as mock surgical suites and safe houses. Most of the

training is hands-on, mimicking conditions, equipment, supplies and situations participants are likely to experience in the field.

The program also provides instruction to representatives from federal and local law enforcement agencies and is applicable to situations they encounter in rural, remote and disaster settings, when they may be hours away from a trauma center.

"It's all about teaching skills at the highest level possible to ensure our course participants are equipped to mitigate injuries in the 'battlefield' — foreign or domestic — and save lives," says Dr. Noel. "Many who serve in the military and put their lives at risk are in their early 20s, and some of them come home in coffins. Two of my sons and one of my daughters-in-law served in active duty and were deployed overseas. By sharing the expertise and skills that I and others on our team have honed throughout our careers, we help to make sure that all of our loved ones and those from other countries return home in one piece. This aligns perfectly with the Mayo Clinic values. We can be proud that our institution values our role in saving lives in the midst of war and chaos."





Aaron Klassen, M.D. (EM '19), Department of Emergency Medicine at Mayo Clinic in Rochester, provides ultrasound instruction to Special Operations course participants.

Other Military Medicine activities

The Military Medicine progam:

- Is developing a **digital training program** to increase the program's education reach. Digital curriculum could be a prerequisite for, adjunct to or substitute for the on-site component.
- Offers a popular **military medicine selective** for Mayo Clinic Alix School of Medicine students to learn alongside military participants in Special Operations Tactical Medicine training.
- Offers a benefactor-funded military medicine fellowship program for former military Special Operations
 members interested in medicine and needing a bridge to redirect their careers.
- Provided virtual webinars on massive transfusions in trauma settings for colleagues in Ukraine.
- Conducts **education-based research**, funded by the DOD, to determine what defines mastery of procedural skills and how to improve skills retention. This work is through a consortium of five leading academic medical institutions. Mayo Clinic is studying mechanical ventilator initiation, monitoring and management (nursing); removal of superficial ocular foreign bodies; ultrasound-guided modified Seldinger catheter placement; and vasopressor selection, titration and physiologic effect.
- Conducts **research addressing the needs of the military**, with several investigators funded by the DOD. Mayo Clinic has made significant contributions to medical research relevant to the military, including work on aerospace medicine and vestibular research, assistive and restorative technology, chronic pain, tissue engineering and biomaterials.
- Collaborates with Mayo Clinic innovation and accelerator teams to facilitate the development of products
 and devices that can be used in the battlefield. External companies bring these products to Mayo Clinic for
 assistance in launching products to the marketplace.
- Assists in ${\bf military\,pilot\,evaluations}$ in complex medical settings.
- Provides consultative services to the Air Force School of Aerospace Medicine, federal air surgeons and NASA.

MILITARY SERVICE AN ENDURING TRADITION

ayo Clinic has a long tradition of service to the military. In 1864, military service took the Mayo family from Le Sueur to Rochester, Minnesota, when President Abraham Lincoln's administration appointed William Worrall Mayo, M.D., to serve as an enrollment surgeon for the Union Army during the Civil War.

During World War I, William J. Mayo, M.D., and Charles H. Mayo, M.D., served in Washington, D.C., with the U.S. surgeon general for medical military preparedness. They were highly decorated by the U.S. and several Allied governments. Mayo Clinic's involvement in the war included several Mayo field units on the Western Front in France. Mayo physician Louis Wilson, M.D. (PATH '05), contributed to the war effort by establishing more than 300 medical laboratories for the American Expeditionary Forces. In 1934, President Franklin D. Roosevelt visited Mayo Clinic to thank the Mayo brothers for their medical care of World War I veterans.

Mayo Clinic physicians were heavily involved in World War II (page 6), and Mayo fielded medical units in the Pacific theater. During that war, Mayo Clinic began its proud tradition of excellence in aeromedical research, including developing the G-suit and Mayo One maneuver to resist G-forces. Both remain in use by military pilots around the world.

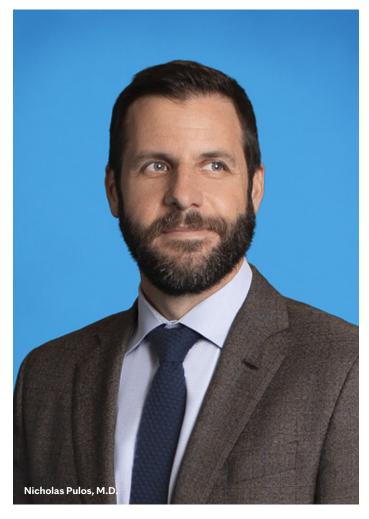
Today, dozens of Mayo Clinic physicians, fellows, residents and medical students serve in the military. Dozens more are veterans, and hundreds more are military family members. Mayo Clinic Alumni magazine shines a light on several of these dedicated individuals.











'So we can bring our personnel back in **one piece**'

ierre Noel, M.D. (HEM '86),
Division of Hematology and
Medical Oncology at Mayo
Clinic in Arizona, is the medical
director of the Mayo Clinic Military
Medicine program. He completed
residency at Mayo Clinic, was director
of the bone marrow transplant
program at Mayo Clinic in Rochester,
and then moved to Mayo Clinic
in Arizona to serve as director of
the Division of Hematology and
Medical Oncology. In 1997, he joined
the Air Force Reserve — upon
special request.

SPECIAL SKILL SET

"I've always been an avid outdoors person and involved in athletic endeavors," says Dr. Noel. "I was interested in medical care in extreme environments and wilderness medicine before the latter was popular. My practice area has always leaned more toward critical care than hematology/ oncology per se. I was something of a pioneer in wilderness medicine and gave lectures on topics such as snake bite management. Word of mouth is powerful because the U.S. military contacted me in 1995 to teach a two-week course in wilderness medicine for Navy SEAL corpsmen in California."

There's a joke here. When Dr. Noel was asked to teach the Navy SEALs, he momentarily thought the invitation was in reference to the mammals. He replied that he didn't know anything about seals.



After a quick clarification, he began teaching the SEALs (Sea, Air and Land). Soon he was asked to teach at the Marine Corps Mountain Warfare Training Center at Bridgeport, California, focusing on the medical aspects of mountain and high-altitude medicine. He was asked to consider joining the military reserves so he could teach on a more official basis, with military clearance.

There was one hurdle — Dr. Noel was a Canadian citizen. He became a U.S. citizen and, within weeks, started the process to commission in the military.

BIGGER ROLE

Dr. Noel continued in the reserves for several years and was then asked to become more involved in military Special Operations. He accepted a position at the National Institutes of Health as chair of the Division of Hematology in the Department of Laboratory Medicine. This position permitted him to spend a significant portion of his time supporting the Air Force Special Tactics Community. Dr. Noel worked in an active duty unit at Pope Air Force Base, North Carolina. He had top secret clearance and was involved in consulting with the National Security Council, Homeland Security Council and various intelligence committees. He also trained Special Operations personnel in austere environment medicine, trauma, prolonged field care and tropical medicine; and

lectured on chemical, biological and radiological warfare. He was deployed to several countries.

"9/11 had just happened, and the country was soon involved in conflicts in Afghanistan and Iraq," says Dr. Noel. "I thought I could provide skills that were in great demand."

RETURN TO 'NORMAL LIFE'

Dr. Noel returned to Mayo Clinic in 2010, having retired from military service as a lieutenant colonel in the Air Force. "I'd been deployed quite a bit and missed my regular practice of taking care of patients," he says. "I had imposed enough on my wife and kids. It was time to normalize my life a bit."

A bit. His involvement in the military didn't end. Dr. Noel remains a consultant to the White House in protective medicine, and trains White House personnel in trauma and critical care. He's a senior visiting fellow in the Atlantic Council's Scowcroft Center for Strategy and Security, whose mission is to develop sustainable, nonpartisan strategies to address the most important security challenges facing the U.S. and its allies and partners.

THE PROGRAM

A Mayo Clinic benefactor who knew of Dr. Noel's renown in military medicine offered to fund a training program for the U.S. military Special Operations community. The first training course in the Mayo Clinic Military Medicine program (page 20) was held in 2012 and included medics, physician assistants and physicians involved in trauma and critical care. Since then, more than 1,200 military medical personnel have trained in more than 40 courses.

Looking back on his 13-year military career, Dr. Noel says he wanted to serve his adopted country in a useful, practical way. "After 9/11, many people talked big, saying they wanted to go to Iraq and 'show them.' I didn't want to be a spectator and saw an opportunity to do my part. A lot of things you do in the military go beyond taking care of people who are in combat or who get injured. The education skill set serves more broadly, including internationally, in developing countries, in areas of disaster, and in rural communities and wilderness environments. I am fortunate to have been able to do all that."

SINGLE GOAL

Dr. Noel's drive to improve military medicine is close to his heart. One of his sons was deployed to Afghanistan, and the other to Iraq. His daughter-in-law was deployed to an undisclosed country.

"My entire military service and continued consulting have been and are oriented toward a single goal — improving the quality of the medical care in the military so we can bring our personnel, including my loved ones, back home in one piece."

'I can support those who have **sacrificed so much** for us'

hristine Hunt, D.O. (PMR '18, PAIN '19), Department of Pain Medicine at Mayo Clinic in Florida, says most learners get tired by the end of a day of training. She observes that when she teaches in the Mayo Clinic Military Medicine program, learners remain consistently engaged and highly motivated. More than any other people she has taught, she says, making the experience her favorite in the education realm.

"I'm blown away by how incredibly dedicated they are to each other and to their mission," says Dr. Hunt. "They don't want to let each other down. Teaching them sparks a joy in me that extends to my teaching in the academic medicine setting. There's no greater joy than taking care of patients. Teaching in the Military Medicine program is a close second. With great humility, I can support those who have sacrificed so much for us by teaching in this program."

In Military Medicine, Dr. Hunt teaches a course in musculoskeletal and pain medicine for Special Operations medics and corps, SEAL corps, Pararescue corps, and military physician assistants and physicians. She's taught on all three Mayo Clinic campuses.

"I've learned that if a person serves long enough in the military, they will become injured. Many are silently enduring pain from chronic injury," she says. "I focus on injury prevention, treatment, and rehabilitation and effective pain management — supporting them in having good function and the best quality of life possible."

PERSONAL MISSION

This mission is personal. Dr. Hunt's husband served in the Air Force and then the Army.

"I think of the training and support that he received that was so important to what he did while he was serving," she says. "I do my utmost to provide the highest quality teaching I can while participating in these courses. Support of military service members, veterans and their families is so important to my family. I am thankful that I can extend that to my work at Mayo Clinic.

"Veterans and military service members are extremely tough and stoic and go through more than we civilians can imagine. It's important to me, as a physician working in musculoskeletal medicine, to do everything I can to support them, prevent injury and manage their pain from injury. I'm proud to work for an organization that's dedicated to this cause and engaged in efforts to support our soldiers. Everyone is doing this work for the right reasons — to provide the highest quality teaching so our military learners can put it in practice in the field as quickly as possible. This saves lives and quality of life."



icholas Pulos, M.D. (HAND '17), Department of Orthopedic Surgery at Mayo Clinic in Rochester, has wanted to be an orthopedic surgeon since he was in

"I wanted to be the person who ran on the field to help injured Los Angeles Dodgers players," he says. "I was already in medical school when I realized that person wasn't a physician."

He also wanted to be in the military.

fifth grade.

Dr. Pulos' paternal grandfather, Christo Pulos, was a first-generation American from Greece, living off the charity of the Greek Orthodox Church. He joined the U.S. Air Force when he was a teenager and worked as an aircraft mechanic. He dreamed of becoming an E6, or technical sergeant. He spent 23 years in service and exceeded his dream — retiring as an O5, or lieutenant colonel. In his last post, he was responsible for the development of advanced avionics for the F-15, an aircraft that is still a workhorse in air forces around the world. After retiring from military service, he worked in the defense industry.

INDEBTED

"The military and the opportunities it provided changed the trajectory of my grandfather's and his family's life," says Dr. Pulos. "It enabled him to put his children through college and for them to pursue their interests. I feel indebted to the military for transforming his life and have always wanted to give back."

During his surgical internship year at the University of Pennsylvania, Dr. Pulos joined the Navy Reserve. He completed his residency at Penn, followed by a hand fellowship at



Mayo Clinic. He'd hoped to stay at Mayo Clinic, but there was a need for a hand surgeon at the Naval Medical Center in San Diego, California, and Dr. Pulos volunteered. After six months there followed by six months at Texas Scottish Rite Hospital for Children in Dallas, Texas, completing a fellowship in pediatric hand and upper limb treatment as a Mayo Clinic Scholar, Dr. Pulos returned to Rochester in 2019.

Within a few months, he was deployed to Afghanistan.

AFGHANISTAN DEPLOYMENT

"I'd been in the reserves for eight years and was grateful for the opportunity to serve as the war was winding down," he says. "A physician was going to go to Afghanistan to serve. If not me, then who? I was glad to do my part and honor my grandfather's service." Dr. Pulos spent three months training for deployment and eight months in Afghanistan.

Dr. Pulos worked alongside another orthopedic surgeon reservist, caring for Coalition, American and combatant service members — primarily Afghans. Dr. Pulos says about half of the work was general orthopedic and half hand-related. He stayed in touch with his wife and children — now ages 9, 7 and 5 — electronically.

THE FAMILY LEFT BEHIND

"I'm grateful that my family respects and takes pride in my service," says Dr. Pulos. "That makes it more meaningful and less guilt-ridden for being gone a year."

He points out that deployment can be more challenging for the family left behind. "When you're deployed, you have a single focus. For me, that was taking care of orthopedic-related injuries. Food, shelter and laundry service were largely provided. I didn't have to take care of chores around the house or shuttle my kids to their activities. Typically, people focus attention on the deployed service member, but the family members at home carry a significant burden."

THE MOST FUN

Dr. Pulos, who was recently promoted to commander, says the two weeks a year he spends on reserves duty is the most fun part of his year. "I walk into a new place and immediately know and trust that the other orthopedic surgeon has the best interests of the patient in the forefront of their mind. We formulate a plan for each surgery together. I'm doing what I love and serving alongside people from different backgrounds. As academic or private practice physicians in the reserves, we have experience military physicians don't necessarily have. We get to bring that to our service to provide the best care for our service men and women. With this vast civilian physician experience, the reserves are critical to the military mission."

When Dr. Pulos interviewed at various institutions for a staff position after training, he says not all were as supportive of his military obligation. "I don't know of another academic medical center that is as supportive as Mayo Clinic. It was by far the most encouraging and generous. I also am grateful to my colleagues who took care of my patients and call while I was deployed. I have a lot of pride in working at Mayo Clinic and its long tradition of support for military service."

'I want to know I did the most good I could'

wenty years ago, **Brian**Shapiro, M.D. (I '05, CI '07, CV '09, CVEC '10), Department of Cardiovascular Medicine at Mayo Clinic in Florida, considered entering the military after medical school. But the timing wasn't right. He was beginning his training at Mayo Clinic and had recently started a family. It's the one career regret he'd had in recent years, he says, so he took action, joining the Navy Reserve in 2019.

"I wanted to join as a physician who helps the troops come home safely, not a combat officer," says Dr. Shapiro. "I chose the Navy because Jacksonville is a Navy town due to ocean proximity."

COLLEGIAL SUPPORT

He discussed his decision-making with cardiology colleague **Thomas Flipse, M.D.** (I '88, ADGM '89), who is a captain in the Navy. "Dr. Flipse acknowledged that there are acceptable fears about joining the military, including deployment during war," says Dr. Shapiro. "He pointed out that doing something good for your country can outweigh the fear. He mentored and guided me through the entire process and swore me in as an officer."

Dr. Shapiro says getting credentialed as a physician in the Navy was challenging. He had to show mastery of critical care and internal medicine procedures he hadn't performed in years, including thoracentesis, paracentesis, joint injections and lumbar punctures. "My colleagues embraced my efforts and supervised me in doing many of the procedures," says Dr. Shapiro. "They were phenomenally supportive."

After five weeks at Officer Development School in Newport, Rhode Island, Dr. Shapiro was ready to take part in additional naval activities.

Regarding why he joined the military, Dr. Shapiro says it felt like the culmination of the clinical care he provides. "We physicians raise our right hand and swear to the Hippocratic oath. Not just for some populations but, rather, for all. I enjoy providing care to various populations in different environments. For the last five years, I've complemented my regular practice with volunteer clinical care in the community, including serving people who are homeless via a mobile unit, through the Sulzbacher Center in Jacksonville, and at Volunteers in Medicine. Mayo Clinic supports my doing that and serving in the reserves. At the end of my career, I want to know that I did the most good I could during my time."

Dr. Shapiro was deployed to New York City when the pandemic began in March 2020, spending most of his time at the Javits Center fleet hospital providing intensive care, internal medicine and cardiovascular care. He was deployed there for three months.

COVID DEPLOYMENT

"The health care workforce was quickly decimated when COVID-19 hit the city, and we were deployed to assist those courageous health care providers and staff," he says. "We put together a hospital from scratch and, within a couple of days, had a charting system, call rotations, pharmacy, full nursing staff and consultation service. I led a team that included a





psychiatrist, neurologist, pediatrician and ENT — all military physicians. We used the knowledge and experience from our day jobs to create this comprehensive hospital.

"Usually a fleet hospital is traumabased — stabilizing, operating and transferring military or host-nation patients. There's very little internal medicine or infectious diseases work. This was an entirely different mission. We did advanced hospitalist and critical care work for a civilian population. There was no training or guidebook for this. We helped to save thousands of lives. It was one of the most amazing things I've seen."

STRONG COMMITMENT

In addition to his one weekend a month and two weeks a year service in the reserves, Dr. Shapiro is in the last year of completing a master's degree in defense and strategic studies through the U.S. Naval War College. "I'm in a Navy-related meeting or class every day of the week," he says. "The Navy's commitment to education and leadership is second to none so that leaders stay well trained and indistinguishable from those on active duty in case we need to be mobilized quickly."

Dr. Shapiro says Mayo Clinic has been extremely supportive of his military service. "When I was deployed for pandemic duty, I was out the door within 48 hours. Mayo Clinic had almost no warning. My chair and colleagues and the institution couldn't have been more helpful about letting me go. I hope I've been able to provide Mayo Clinic with enhanced leadership and team-building abilities, gained from my service." •





MERGs support military at Mayo Clinic

ach Mayo Clinic campus has a veterans MERG (Mayo Employee Resource Group) to support the needs of employees who serve in the military, are family members of military service members, are military veterans, or are interested in supporting military and veteran employees.

These MERGs have different names but similar missions. Recent activity undertaken by the MERGs reflects an interest in engaging the broad employee population and specific groups — including medical students — in consideration of military and veterans.

Veterans MERG

he Veterans MERG on the
Rochester campus provided
training to Mayo Clinic Alix
School of Medicine students in the
Wilderness Medicine Interest Group.
In a wooded area near the Saint Marys
Campus, Walter Franz III, M.D. (FM '82),
Department of Family Medicine
and physician chair of the Veterans
MERG, led eight students through
exercises including stopping bleeding,
using a tourniquet, dressing a wound,

treating dehydration, organizing as a team in a nonmedical environment and loading a helicopter. Dr. Franz was assisted by the CUUE (care in underserved and unconventional environments) team that provides clinical simulations for the medical school and other programs.

"The principles of military medicine employed on the battlefield can be applied to wilderness settings, and the skills learned for remote settings can be useful in urban or virtually any other setting," says Dr. Franz. "If you know how to stop bleeding and dress a wound without a lot of resources, you can apply it anywhere."

The Veterans MERG also provides U.S. flags and Mayo Clinic military coins to patients who are veterans and coordinates an end-of-life ceremony for veteran hospice patients, working with the American Legion and Disabled American Veterans.



"The principles of military medicine employed on the battlefield can be applied to wilderness settings, and the skills learned for remote settings can be useful in urban or virtually any other setting."

Going above ජ beyond for military members

In 2022, Mayo Clinic in Rochester received an Above and Beyond Award from the Employer Support of the Guard and Reserve (ESGR)
Minnesota Committee of the U.S. Department of Defense (DOD). The award recognizes employers who go above and beyond the legal requirements of the Uniformed Services Employment and Reemployment Rights Act by providing its guard and reserve employees with additional nonmandated benefits.

Maria Baer, chair of the Veterans MERG on the Rochester campus, has a unique position at Mayo Clinic. A former HR specialist for the military, she now works exclusively to recruit and retain military members and veterans to Mayo Clinic — translating their military skills to civilian roles.

Baer says members of the military and veterans are highly skilled, motivated and agile. "With Mayo Clinic's rich tradition of military service, the values of the two align nicely."

Mayo Clinic participates in the DOD's SkillBridge program, which offers service members opportunities to gain civilian work experience through internships during the last 180 days of their service. The first physician recruited through the SkillBridge program will soon start an internship in the Department of Orthopedics at Mayo Clinic.

"SkillBridge gives service members opportunities to test new skills and gain experience in the civilian workforce and gives Mayo Clinic an opportunity to create a new talent pathway and see these individuals working over 12 weeks," says Baer. "We hired all three participants in our SkillBridge program in 2022."

Opposite: Medical students Eilene Yang and Barbara Hanna learn how to locate a casualty with compass navigation and perform lifesaving treatment.

Above: Walter Franz III, M.D., instructs medical students in concepts of wilderness medicine, including how to request a helicopter medical evacuation.

Right: Addie Sweeney, a student at Century High School in Rochester, and Alexa (Alex) Panrudkevich (MED '26), Mayo Clinic Alix School of Medicine, learn how to transport a casualty on a stretcher they made.





Yellow Ribbon Veterans MERG

he veterans MERG on the Arizona campus organized a personal and household items drive to benefit veterans who are homeless and transitioning to housing. The drive, called Christmas in July, asked employees to donate bedding, dishes and utensils, cleaning products, toiletries and other items. Employees placed items in drop boxes around campus and ordered from an online list. MERG members took donations to MANA (Marines, Army, Navy, Air Force) House, a Catholic Charities facility in Phoenix. Organizers plan to make the Christmas in July drive an annual event.

"We had an excellent response from generous Mayo Clinic colleagues," says Candice Ramey, Yellow Ribbon Veterans MERG chair. "We think a broad activity such as this can help keep veterans and their struggles and needs top of mind."



Lorenzo Carlson transfers donated supplies to MANA House in Phoenix.



MERG members Daryl Elder (front, center) and Robert Rennells (center), MERG secretary, unload supplies donated for veterans, with assistance from others.

SOAR MERG



MERG member Linda Mc Cray practices using a tourniquet while fellow members Jacquelyn Gardner, MERG secretary, and Brian Baker, MERG vice chair, observe.

he veterans MERG on the Florida campus organized a Stop The Bleed event for employees, sponsored by the Center for Military Medicine. Jessie Milaski, a Military Medicine fellow from Mayo Clinic in Arizona, led the training. Stop The Bleed is a program of the American College of Surgeons that trains people in how to stop bleeding in a severely injured person — the leading cause of preventable death after injury.

"It was a great way to introduce employees to Military Medicine, the principles of which have so many applications to civilian life," says Susan Nist, SOAR MERG chair. "As COVID-related restrictions allow, we hope to offer more of these training sessions employees can participate in."



Susan Nist, MERG chair, and MERG members Jacquelyn Gardner and Steven Magargle learn Stop The Bleed techniques.

Global Bridges

Spreading Mayo Clinic expertise even farther



or the first decade of its existence, Global Bridges focused on tobacco cessation.
With funding from Pfizer, Global Bridges created a network of health care professionals around the world committed to tobacco dependency treatment. Richard Hurt, M.D. (I '76), Emeriti Staff, was the Global Bridges founder and medical director and was followed in the role by J. Taylor Hays, M.D. (EM '91), current chair of Global Bridges — both world-renowned experts in tobacco cessation treatment. They were assisted by Executive Director Katherine (Katie) Kemper.

A PIVOT

Beginning in 2019, Global Bridges transitioned away from tobacco cessation as a focus to become a global network of health care professionals and organizations dedicated to advancing evidence-based diagnosis and treatment through medical education and quality improvement in three key areas:

- 1. Oncology
- 2. Amyloidosis
- 3. Antimicrobial stewardship

To a large degree, Global Bridges is a grant-making entity. It issues requests for proposals in certain geographic

areas and awards projects for as long as two years. The goal is to improve the diagnostic and therapeutic capabilities of physicians and other health care providers around the world through sustainable improvements in medical education. Improved education, presumably, leads to improved health care outcomes. Awardees independently run the programs, with access to Mayo Clinic technical and administrative support, and are expected to report on the results of their projects. Pfizer provides Global Bridges with substantial financial support, along with funding from other companies, foundations, universities and nongovernmental organizations.

Since 2019, Global Bridges has awarded more than \$4.8 million in grants to 12 amyloidosis projects and 11 antimicrobial stewardship projects globally. It expects to award \$1 million between 2023 and 2025 to fund as many as 20 oncology projects in sub-Saharan Africa.

"The people and institutions we work with on Global Bridges projects are typically in countries that Mayo Clinic doesn't otherwise reach," says Kemper. "Our projects have helped to establish amyloidosis centers in Romania and Ghana, a tobacco cessation training hub in the Middle East and an amyloidosis regional training center in West Africa. Global Bridges projects allow Mayo Clinic to spread its global expertise farther than it otherwise could."

Global Bridges impact

MEDICAL RESOURCE DISPARITY

Few resources are allocated to the people with the greatest need

84% of the world's population lives in low- and middle-income countries

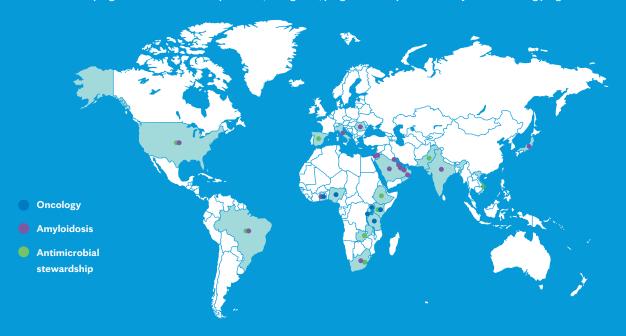
5% of the world's medical resources are in low- and middle-income countries

••••••

70% of cancer deaths are in low- and middle-income countries

INITIATIVES ACROSS THE WORLD

The focus of the program has been in three specialties, with grants, program development and Mayo Clinic training programs



GLOBAL BRIDGES RESPONSE

Grants are issued for proposals in certain geographic areas

\$4.8 million

has been awarded to 12 amyloidosis projects and 11 antimicrobial stewardship projects globally since 2019

\$1 million

will be awarded between 2023 and 2025 to fund as many as 20 oncology projects in sub-Saharan Africa

A look at **focus areas & projects**

ONCOLOGY

MEDICAL DIRECTOR: Kenneth Merrell, M.D. (RADO '16), Department of Radiation Oncology, Mayo Clinic in Rochester

Eighty-four percent of the world's population lives in low- and middle-income countries with less than 5% of the world's medical resources. And 70% of cancer deaths are in low- and middle-income countries. The most common cancers in Africa — breast, cervix and prostate cancer — are twice as deadly as they are in the U.S. Half of all African countries have no comprehensive cancer facilities.

"Imagine going to a part of the world where cancer resources are antiquated — by 20 or 30 years. That's what our collaborators in

Africa face," says Dr. Merrell, oncology medical director of Global Bridges. "They are knowledgeable and aware of the resources that are available; they simply do not have access to them. Despite these significant limitations, they go to work every day and give their all to treat their cancer patients. They need resources and training — they need our support. We can help them modernize their cancer care to today's standards. They're very precise in what they want to learn from Mayo Clinic and are very grateful for these opportunities."

Dr. Merrell and colleagues are reviewing more than 200 grant applications from sub-Saharan Africa, with plans to fund as many as 20 projects related to quality improvement and medical education. The Global Bridges



Kenneth Merrell, M.D., discusses radiotherapy management of bone metastases with Ghanaian physicians Sibyl Akua Brempongmaa Preko, M.D., and Abena Yeboah Aduse-Poku, M.D.

oncology grant program received more applications than any other in the history of Global Bridges, highlighting the overwhelming need to increase grant funding and resourcesharing in Africa.

In addition to offering a path to grants and program development, Dr. Merrell and his colleagues support African institutions that are part of the Global Bridges oncology network with Mayo Clinic training programs.

These include:

Global Bridges oncology core lecture series

- Ethiopia, Ghana, Kenya, Rwanda, Tanzania
- 150 participants: clinical oncology trainees, junior and senior faculty, nurses and other health care workers

- 4- to 6-week blocks of weekly lectures on multidisciplinary aspects of cancer care, from diagnostics to therapeutics, oncology nursing and medical physics
- Hosted by Dr. Merrell, Joseph (John) Lucido III, Ph.D. (RADO '15), and colleagues

Cancer researcher training program with remote mentoring

- Ethiopia, Ghana, Kenya
- 17 junior learners selected by a Mayo Clinic review committee
- Graduate school-level statistics and mentorship from research and cancer experts from Mayo Clinic, Harvard and University of Pennsylvania to promote and build capacity for cancer research
- Led by Dr. Merrell and **Kebede Begna, M.D.** (HEMO '01), Division of Hematology, Mayo Clinic in Rochester

Preceptorship

- Ghana, Nigeria, Uganda, Tanzania
- Started in 2019; 26 cancer care providers have come to Mayo Clinic for visits ranging from 2 weeks to 2 months; more scheduled for spring 2023; participants chosen based on commitment to sustained learning of home institutions
- Funded for several more years to expand reach and access to other regions of Africa
- Led by Dr. Merrell, Allison Garda, M.D. (RADO '21), Department of Radiation Oncology, and Lionel Aurelien Kankeu Fonkoua, M.D. (HEMO '21), Division of Medical Oncology — all at Mayo Clinic in Rochester

AMYLOIDOSIS

MEDICAL DIRECTORS:

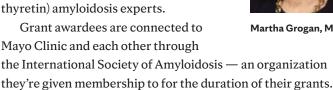
Hematology, Mayo Clinic in Rochester, the Mayo Clinic Roland Seidler, Jr. Professor of the Art of Medicine Honoring Michael Brennan Martha Grogan, M.D. (1'87, CV'94), Department of Cardiovascular Medicine, Mayo Clinic in Rochester

Morie Gertz, M.D. (HEM '83), Division of



Morie Gertz, M.D.

The focus of Global Bridges' work on this disease is to raise awareness and close knowledge gaps to reduce the time it takes for patients to be correctly diagnosed, and to make treatment more accessible by building the global network of TTR (trans-





Martha Grogan, M.D.

C.K. Tedim University of Technology and Applied Sciences, a grant recipient in Ghana, proposed raising awareness of TTR amyloidosis to promote early detection, diagnosis and treatment in health care and research communities and the public. There are few research findings or publications on TTR amyloidosis in West Africa, where six countries in the region (Ghana, Nigeria, Sierra Leone, Guinea, Ivory Coast, Burkina Faso) have relatively high prevalence. A pre-project survey determined that 82.3% of health and science professionals and students in Ghana had never heard of TTR amyloidosis.

In 2022, participating health and science professionals from five public universities and 10 regional/municipal hospitals in Ghana have been trained with the expectation of returning to their institutions to train staff and commence interprofessional collaboration to enhance early detection and diagnosis.

ANTIMICROBIAL STEWARDSHIP

MEDICAL DIRECTOR:

Nathan Cummins, M.D. (TRNM '08, NEPH '09, INFD '11, CTSA '14), Division of Infectious Diseases, Mayo Clinic in Rochester



Nathan Cummins, M.D.

Low-resource institutions don't have equitable access to effective, holistic antimicrobial stewardship programs,

which means patients from racially and socioeconomically disadvantaged populations may get suboptimal care for infectious diseases. The Global Bridges antimicrobial stewardship program supports novel quality improvement projects to reduce these health disparities in populations that have limited or no access to effective programs. Sixty-six percent of the project proposals for antimicrobial stewardship programs came from Africa and the Middle East; 50% from low- and middle-income countries. These proposals ranged from capacity building to implementation of novel information technology solutions to improve care in hospitals and health care systems.

Workeabeba Abebe, M.D., a pediatric infectious diseases specialist in the Department of Pediatrics and Child Health, College of Health Sciences at Addis Ababa University, proposed implementing an antimicrobial stewardship program in the pediatric oncology inpatient unit at Tikur Anbessa Specialized Hospital (TASH), a tertiary care hospital in Addis Ababa, Ethiopia. The program, which received a Global Bridges grant, intends to reduce unnecessary and potentially harmful antimicrobial consumption and improve the quality of care in vulnerable pediatric cancer patients who have febrile neutropenia.

Global Bridges

Connected at the LINAC, friends for life

o one is quite sure who this sentiment is attributed to, but it fits this story: "A stranger is a friend you just haven't met yet."

A chance meeting on a hotel shuttle bus fostered by a gregarious individual led to a close relationship between a Mayo Clinic physician, his colleagues and staff members from a hospital in Ghana, Africa.

The hospital, Komfo Anokye Teaching Hospital (KATH), had an 8.5-ton problem. A highly sought-after linear accelerator (LINAC) was gathering dust. Why? Because the government had secured the equipment for the hospital, but no funding was available for training. LINACs are uncommon in Africa, so training would need to come from elsewhere. Cancer care in many African countries is decades behind Western countries due to a lack of resources. KATH had a state-of-the-art resource but not the commensurate knowledge about how to use it.

Because of the series of events that emanated from that chance meeting four years ago, KATH now provides state-of-the-art radiation therapy and is recognized as a center of excellence and regional training center.

THE STORY UNFOLDS

In 2018, **Kenneth Merrell, M.D.,** oncology medical director of Global Bridges, went to the Greater Horn Oncology Symposium in Tanzania in East Africa. On the shuttle bus to the hotel, a stranger struck up a conversation to break the silence, asking the other travelers where they were from. That stranger was Osei Acheamfour, a medical physicist in radiation oncology from KATH in Kumasi, Ghana.

"Dr. Merrell introduced himself as being from Mayo Clinic, and I was so impressed," says Acheamfour. "Of course, I knew about the famous Mayo Clinic but had never met anyone from there. I considered us to be new friends, based on that conversation. Later, in the hotel restaurant, we were seated next to each other, watching a World Cup soccer match."



While watching Argentina defeat Nigeria and after exchanging pleasantries, the new friends discussed the situation at KATH. It had a new LINAC for radiation therapy that had been sitting in a box for several years, waiting for a new facility to be built and then for staff training.

"We had fancy new equipment but no funds for training in the equipment's proper use," says Acheamfour. "So, we continued to use our cobalt equipment and were unable to offer patients more advanced care."

ONE THING LED TO ANOTHER - A PLAN HATCHED

Dr. Merrell listened to Acheamfour describe his hospital's workflow and training problem. The two men brainstormed about ways to collaborate and share resources.





"Hearing how they did things at KATH was eyeopening," says Dr. Merrell. "They had expensive new equipment but needed training and supplies. I figured we could help. Osei and I put our heads together and sketched out a plan on cocktail napkins in the restaurant."

One thing led to another, and Dr. Merrell proposed a four-point plan to address his new friend's problem. The plan included Acheamfour visiting Mayo Clinic to explain his hospital's situation, Dr. Merrell visiting KATH to get boots-on-the-ground understanding, a team from KATH visiting Mayo Clinic for intensive LINAC training, and establishing a LINAC training center at KATH to assist other African countries.

Serendipitous friends Kenneth Merrell, M.D., and Osei Acheamfour photographed during Dr. Merrell's fall 2022 trip to Ghana. Acheamfour proudly wears a Mayo Clinic-logo necktie.



BOOTS ON THE GROUND

Four months later, Acheamfour went to Mayo Clinic in Rochester in the first step of the plan. He presented about the workflow at his hospital to a team of physicians and physicists. Soon thereafter, Dr. Merrell visited KATH. He says he was impressed by how well, with limited resources, the staff cared for patients.

"The staff works hard and diligently to make a difference for patients. Seeing their example made me want to be a better physician," says Dr. Merrell. "Visiting the hospital made me realize that we have more than enough in the U.S. and should be able to lend a helping hand. We're privileged at Mayo Clinic to have all the resources we need at our fingertips. I saw the tremendous need in Ghana and what a difference we can make.

"During one of my first trips to Africa, I went to an oncology unit in Ghana. I saw families rolling out mats to sleep in the parking lot. Patients travel to the limited facilities — usually located in major cities — by bus or train for many hours and then learn that the wait for cancer care may be months. They have nowhere to stay, so they sleep outdoors until their turn. Most patients are diagnosed late, when their disease is advanced. As a result, the outcomes are poor. That drives team members there to work hard to

improve things. When you see that, you want to help make it better. Hundreds of people at Mayo Clinic have assisted in our efforts with KATH and beyond. Helping them brings immeasurable joy to our oncology practice."

INTENSIVE TRAINING

Some of those hundreds lent a hand when two medical physicists, two radiation oncologists and a radiotherapist from KATH visited Mayo Clinic at the end of 2019. KATH team members were paired with Mayo Clinic counterparts for an intense two-month hands-on experience.

"We had basic knowledge in medical physics, but it was all new with the LINAC," says Acheamfour. "They taught us from scratch."

Eric Addison, Ph.D., chief medical physicist at KATH, visited Mayo Clinic for a preceptorship. "Dr. Merrell came along at the right time," he says. "His intervention was timely in being able to lift us up to treat our patients. Going to and being supported by Mayo Clinic was a big breakthrough for us. Otherwise, our LINAC would've remained a big white elephant."

The KATH team treated its first patient while still in Rochester. "We planned the patient's treatment in a video





Opposite: Kenneth Merrell, M.D., and Bismark Amo Dwobeng, M.D., an oncologist at Komfo Anokye Teaching Hospital (KATH) in Ghana, review a patient's radiation therapy delivery plan at the linear accelerator control panel. Above: "Dr. Merrell's bell of hope" at KATH.

call with our colleagues back home," says Prof. Addison.
"We can now better target cancer, spare surrounding
normal tissue and penetrate greater depths in patients for
fewer side effects and more effective, faster, improved
treatment. Mayo Clinic has provided us with immobilization
devices to make our treatment even more precise and our
patients more comfortable."

CONFIDENCE BOOST

To date, 10 medical physicists have been prepared in a trainthe-trainer scenario at KATH that has enabled them to treat about 400 unique patients each year.

"Being trained at Mayo Clinic boosted the confidence — and competence — of our physicists and radiation oncologists and has had a ripple effect," says Prof. Addison. "When people in Ghana heard we were at Mayo Clinic, our reputation soared. To have had that opportunity to train was a big plus. We're confident we can treat patients to the international Mayo Clinic standard. And Dr. Merrell's contribution to our research and publishing is enormous."

In Ghana, there are three LINACs installed and functional. Located in the center of the country, KATH typically provides care for patients from the northern part

of the country and neighboring countries that don't have radiotherapy facilities. Acheamfour says KATH has had increased patient volumes and referrals since establishing care with the LINAC.

"The one-on-one training we had at Mayo Clinic was of the highest caliber," says Acheamfour. "We learned about the patient-first attitude and a discipline we came to admire so much. Everyone was friendly and made us feel at home. Dr. Merrell helped us get two video conferencing devices to use for lectures, tumor board meetings and telemedicine. Now, when we encounter difficulties, we can contact our friends at Mayo Clinic, and they promptly assist us.

"I don't think of Dr. Merrell as my friend — I think of him as a brother. He welcomed us to his home and shared meals with us, all at the same table."

Dr. Merrell went to KATH in October 2022 to continue training his Ghanian colleagues.

"I am so proud of the radiation oncology staff at KATH," he says. "When I met Osei in 2018, they didn't know how to optimally use their new equipment. Now, they not only excel in that area, but they also have become a regional training hub, sharing what they learned at Mayo Clinic with surrounding African countries to help improve outcomes for all."

THE BELL OF HOPE

When they were at Mayo Clinic, Acheamfour and his KATH colleagues were charmed by the bell that patients ring at the end of radiation therapy. Before the team left Mayo Clinic to return home to Ghana, Dr. Merrell surprised them with a bell to install at their hospital.

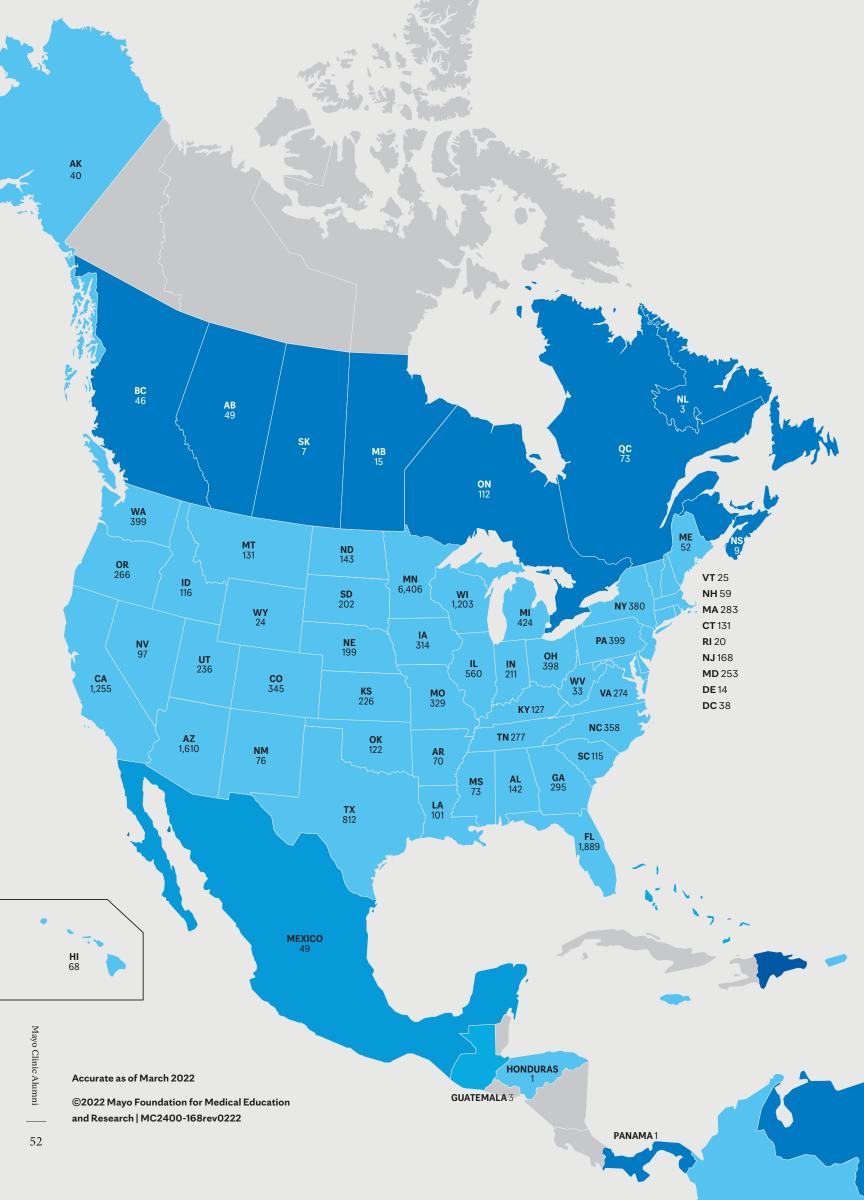
"The presentation of the bell was very emotional, especially when Dr. Merrell talked about how far we'd come in such a short time," says Acheamfour. "We never expected to get a bell of our own. Now, our patients ring the bell at the end of their treatment, and everyone stands up, claps and wishes the patient well. Patients invite their family members to see them ring the bell. It's the only bell like it in Ghana — and possibly in Africa — and it has become a big part of our radiotherapy tradition. Our relationship with Mayo Clinic has been phenomenal."

Prof. Addison says ringing the bell signifies that patients were treated well, are happy with their treatment and have hope. "There's hope in the treatment we delivered."

The plaque above the bell at KATH reads, "Dr. Merrell's bell of hope." ullet

Seeking Africa connections

Mayo Clinic alumni who live in or are from Africa and are interested in learning more about teaching in Dr. Merrell's lecture series for African cancer care providers are encouraged to contact the Alumni Association, mayoalumni@mayo.edu. Indicate Africa lectures in the subject line.



34,200 alumni across the globe

A much-traveled Mayo Clinic consultant, returning from an extended trip, once remarked, "When I travel, I never really leave home." His point was that the more than 34,200* members of the Mayo Clinic Alumni Association located around the world and in every U.S. state are eager to hear from other current and former students, trainees and consulting staff members of Mayo Clinic. Current distribution of alumni is shown on this page.



Mayo Clinic Alumni

Brotherly love

Bond between alumni twins strengthened by 'doing the right thing'





n medical school at Mayo Clinic in Rochester,
Minnesota, in the late 1970s, the Strathy twins were
best friends and study partners, encouraging each
other academically.

"We didn't want the other brother to know thins

"We didn't want the other brother to know things the other one didn't," says **Kevin Strathy, M.D.** (MED '80), admitting to friendly competition to push each other to get better and better.

ONE BROTHER DOES SURGICAL TRIPS & TRAINING

After completing an orthopedics residency at Mayo Clinic and starting practice at Park Nicollet Clinic in St. Louis Park, Minnesota, **Gregg Strathy, M.D.** (MED '80, OR '85), embarked on the first of five surgical trips to the Comoro Islands off the southeastern coast of Africa. "Those trips, which took

place over a six-year period, were a tremendous opportunity to work and serve," he says. "I met a bright young surgeon there. He didn't have orthopedic experience. We talked weekly after my first visit. He'd tell me about a case, and I'd tell him what I would do for the patient. After my second visit, when he'd call about a case, he'd tell me what he thought he should do for the patient. After my third visit, he'd call and tell me what he'd done for the patient. It was a beautiful example of how one person can share knowledge, keep open the link to communication and teaching, and have a big impact in a low-resource part of the world."

After a 31-year career, Dr. Gregg Strathy retired in 2016. He retired early because his wife and former medical school classmate, **Janette Hansen Strathy, M.D.** (MED '81, OBG '85), was diagnosed with ovarian cancer. She died in 2018.



Kevin Strathy, M.D. (opposite), and Gregg Strathy, M.D., have a shared medical school education and, later in life, a commitment to pass along their knowledge and skills to help others.





Opposite: Kevin Strathy, M.D., and his wife, Natu, established Liberia Medical Relief in 2014.

Left: Gregg Strathy, M.D. (left), and Kevin Strathy, M.D., with Janette Hansen Strathy, M.D. (now deceased), in the late 1970s when they were medical students.

THE OTHER BROTHER FOLLOWS SUIT TWO DECADES LATER

In a parallel career, Dr. Kevin Strathy was practicing plastic and reconstructive surgery nearby in Minneapolis. He performed most of his surgeries at North Memorial Medical Center, which is where he met his wife, Natu, a surgical nurse, in 1993. They married in 2001 and three years later moved to Sebring, Florida, to establish a private practice.

Natu Strathy was born and raised in Liberia but left in 1989 when civil war broke out in her country. With the civil war over and the Florida practice going well, the couple ventured to Liberia for two weeks in 2013 — the first time Dr. Kevin Strathy had taken off that long from work.

He says the trip was an eye-opener. "Post-war, Liberia is one of the poorest countries in the world, with tremendous need in every sector of life. An estimated 200 physicians — many poorly trained — served a population of 4 million, often in suboptimal conditions and with few medical supplies. Suffice to say that we saw that we could do a lot to help people there."

The couple commenced twice yearly visits of increasing duration to Liberia and, in 2014, established Liberia Medical Relief, a 501(c)(3) organization providing medical support. They sent the first of many shipments — 500 tons to date — of medical supplies to Liberia. When the country was wracked by Ebola between 2014 and 2016 and the couple's visits were curtailed, they continued to send supplies including bleach and body bags.

In their post-Ebola visits, Dr. Kevin Strathy focused his attention on surgical reconstruction after burn injuries. "I saw deformity and disability we'd never encounter in the U.S.," he says. "The mortality rate for serious pediatric burns was 80%. There are no burn units, care is delayed, the severity of contractures is dramatic and mortality is high. After each visit, I knew I was leaving behind much undone work. I couldn't wait to go back. Our long-term plans include establishing a burn unit."

In 2018, Dr. Kevin Strathy began training Liberian surgical residents at John F. Kennedy Medical Center in Monrovia, Liberia. Natu Strathy began teaching surgical nurses.

CALLED TO ESTABLISH NEW HOSPITAL

In 2019, the now-president of Liberia, George Weah — then a senator and formerly a professional footballer — asked the Strathys to help establish the country's first military hospital. Natu Strathy has known Weah since childhood.

The Strathys provided supplies and medical, nursing and administrative leadership. They were on site for eight months, setting up the 14 Military Hospital in Schieffelin in preparation for its September 2021 opening. By then, Dr. Kevin Strathy had retired from his practice and the couple had moved to Liberia. They return to the U.S. a couple of times a year to fundraise and collect medical supplies.



"It **meant everything** to have him here. He's not just my brother **he's my best friend.** We really enjoy working together."

- Kevin Strathy, M.D.

BROTHER JOINS IN

In early 2022, Dr. Gregg Strathy offered to help, as might be expected of a brother. He spent five weeks in Liberia, performing orthopedic surgeries and training Liberian surgeons.

"Orthopedic care is difficult to get in Liberia, and pediatric orthopedic care has been nonexistent," says Dr. Kevin Strathy. "Gregg was our guinea pig in having U.S. physicians do visiting stints at our hospitals. We'd like to bring in other physicians a couple of times a year to train local physicians.

"It meant everything to have him here. He's not just my brother — he's my best friend. We really enjoy working together."

Dr. Gregg Strathy explains his motivation. "Liberia was a vibrant, progressive country before the civil war that lasted more than a decade. The country's infrastructure



Opposite: Kevin Strathy, M.D., oversees unloading donated equipment at John F. Kennedy Medical Center in Monrovia, Liberia.

Left: Kevin Strathy, M.D. (left), assists Gregg Strathy, M.D., in a clubfoot surgical repair in March 2022 at the 14 Military Hospital, Schieffelin, Liberia.

was decimated. Many good people there are dedicated to restoring the country to what it used to be, including the health care system. My brother and his wife are involved in those efforts, and I'm happy to be a small part of that."

Dr. Gregg Strathy says the Liberian orthopedic surgeons he's training aren't quite ready to operate without him, so he plans to return in early 2023. "Having been there, I have a better understanding of their needs and limitations."

He explains that they need a sterile bolt cutter to cut surgical screws to the appropriate length for each patient. "Without a depth finder, they have to guess at screw length. In the U.S., we have 150 screws in 2-millimeter increments in every surgical set. The Liberian surgeons are very resourceful. They also need a C-arm X-ray machine."

Dr. Gregg Strathy contributes to the effort while he's home in Edina, Minnesota. He recently hosted a fundraiser for Liberia Medical Relief.

"We have a caring, close family that has always been about doing the right thing," says Dr. Gregg Strathy. "I try to help people and do the right thing to make the world a better place. Kevin and I have always had a great relationship. This has given us one more important and powerful thing to share, which only strengthens our bond."

Dr. Kevin Strathy seconds that emotion. "There are opportunities around the world for everyone to help in some way. As I teach the young surgeons here, I recall my experiences with the likes of **Drs. Michael Kaye** (S '74, died 2017), **John Woods** (S '66, PLS '68, died 2019), **Tony Edis** (PHYS '70, S '74), **Dwight McGoon** (S '57, died 1999) and others. They were superb role models. We've had the unique opportunity to be educated at one of the finest institutions. For the good of mankind, each of us can consider how we can pass along our knowledge and skills to the next generation." •





ome people run toward areas of conflict to help. James Munis, M.D., Ph.D. (ANES '01), Mayo Clinic Emeriti Staff, is one of those. In 2017, he went to Mosul, Iraq, to provide surgical services in a war zone for several months through Samaritan's Purse, a humanitarian nongovernmental organization (NGO). Prior to that, he provided overseas humanitarian medical and logistical services to victims of terrorism through other NGOs.





James Munis, M.D., Ph.D., with Ukrainian trainees Inna Strechen, M.D., Solomiia Zaremba and Khrystyna Ometyukh during his visit in March 2022. Dr. Munis returned to Eastern Ukraine in October 2022 to provide surgical assistance. Photo courtesy of Samaritan's Purse.

Dr. Munis set up a makeshift classroom and taught physiology to as many as 15 Ukrainian medical student volunteers at night in the field hospital.

"It's a joy to be around physicians, nurses and others who help in places that others don't want to go to — running toward where the fighting is to lend a hand," he says.

In March 2022, Dr. Munis went to Ukraine for five weeks as part of a disaster assistance response team through Samaritan's Purse. His team established an emergency field hospital in Lviv, with two operating rooms and a recovery room in the basement-level parking structure of a mall.

In Lviv, Dr. Munis put his teaching hat back on. Recently retired from practice and teaching physiology at Mayo Clinic Alix School of Medicine, he set up a makeshift classroom and taught physiology to as many as 15 Ukrainian medical student volunteers at night in the field hospital.

RUNNING TOWARD EDUCATION

Ukrainian medical students Inna Strechen, M.D., and Solomiia Zaremba were providing care to refugees at a train station. The two students were in their final year of medical school when war erupted and their education was disrupted.

"In one day, everything changed," says Zaremba. When their medical school offered students credit for volunteering, the two sprang into action.

"We're medical workers and wanted to be helpful," says Zaremba. "It helped our mental health to be busy. When volunteering, we had less time to check the news. At the station, we met thousands of refugees headed to Poland and other parts of Europe. They'd left their lives behind and needed to eat and talk to someone."

Dr. Strechen says she and Zaremba wanted to help in some way. "Our parents were worried about us being in a dangerous situation, but we needed to make our own decisions, and that's where we wanted to be."

Dr. Strechen got a letter from her aunt, informing her about the emergency field hospital opening in Lviv, which needed medical workers and Ukrainian translators. She and Zaremba applied and were among a group of medical students who got volunteer positions as translators and nurses.

Zaremba describes the time at the field hospital as therapeutic. "In war, you feel upset, anxious and depressed. We went to the field hospital daily to help the doctors and communicate with patients. Being there provided a sense of calm — a safe world. It was therapy for us."

Dr. Munis says the students in the improvised night school classroom were eager, enthusiastic, curious and bright. "Their education had been disrupted by the war, and they seemed happy to continue learning. They soaked in the information and asked and answered questions."

The lecture series he started in Lviv continued after he left, with surgeons, pharmacists and others teaching the student volunteers.

"Engaging with eager students is one of my greatest joys," says Dr. Munis. "It was doubly rewarding to combine my passion for being useful to patients with my passion for being useful to students, no matter where they are in the world." ●





Mayo Clinic

Distinguished Alumni Award



2022 Mayo Clinic
Distinguished Alumni
Award recipients
Nicholas LaRusso, M.D.,
Ann Stroink, M.D.,
Sir John Hardy, Ph.D.,
Misael Uribe Esquivel, M.D.,
David Piepgras, M.D., and
Zbigniew Wszolek, M.D.

HONORING EXCELLENCE IN PATIENT CARE, RESEARCH & EDUCATION

The Mayo Clinic Board of Trustees established the Mayo Clinic Distinguished Alumni Award in 1981 to acknowledge and show appreciation for the exceptional contributions of Mayo alumni to medicine, including practice, research, education and administration. Individuals who have received the award have been recognized nationally and often internationally in their fields.

Sir John Hardy, Ph.D.

Chair, Molecular Biology of Neurological Disease Reta Lila Weston Institute of Neurological Studies University College London London, England

Mayo Clinic: Joined staff, Department of Neuroscience, Mayo Clinic in Florida, 1996; consultant, 1996–2001; professor of pharmacology, 1996–2001; chair, Department of Neuroscience, 1999–2001

Doctorate: Ph.D., neuropharmacology, Imperial College, London, England

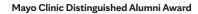
Undergraduate: Leeds University, Leeds, England

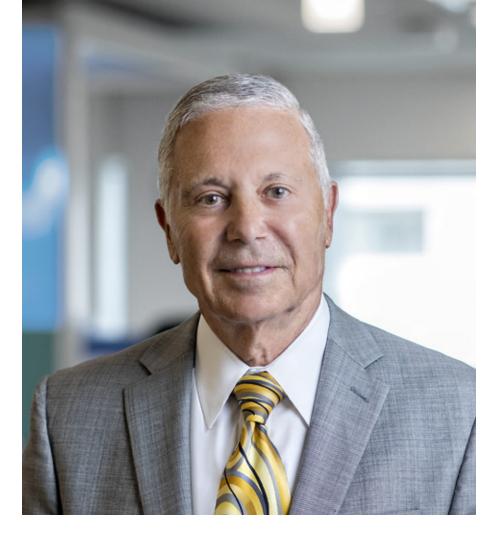
Hometown: Lancashire, England



LUMINARY NEUROGENETICIST

Sir John Hardy, Ph.D. (PHAR '96), is a world-leading neurogeneticist in neurodegenerative diseases — one of the most distinguished people in Alzheimer's disease research. He began work on the genetics of Alzheimer's disease in 1985 at Imperial College in London and led the group that discovered the first mutation in the amyloid gene that causes the disease. That discovery led him to formulate the amyloid hypothesis for the disease. Dr. Hardy was recruited to Mayo Clinic in Florida to develop a basic research program in neurodegenerative disease. His research focused on identifying risk genes and the genetic basis and mechanisms involved in tipping the balance from health to disease. He was instrumental in the growth of Alzheimer's disease research at Mayo Clinic. He led a team that was considered by the National Institutes of Health as the premier neurodegenerative research program in the U.S. Dr. Hardy and his Mayo Clinic research and clinical colleagues received the first nationally based center grant funded by the NIH. In 2001, Dr. Hardy was recruited to the National Institute for Aging at the NIH as chair of neuroscience and the Laboratory of Neurogenetics. In 2007, he returned to his roots as chair of molecular biology at the Reta Lila Weston Institute of Neurological Studies at University College. His discovery that Alzheimer's disease could be inherited in an autosomal dominant manner was a seminal event in the understanding of this disease. The recent first disease-modifying therapy for Alzheimer's disease was based on this discovery. Dr. Hardy has received many prestigious awards and was elected a fellow of the Royal Society in 2009 and knighted by Queen Elizabeth II in 2022 for services to human health in improving understanding of dementia and neurodegenerative diseases. His influence on the next generation of Alzheimer's disease investigators cannot be overstated.





PILLAR OF LIVER & GI WORLDS

Nicholas LaRusso, M.D. (I '72, GI '75), defines the field of hepatology. His recognition and leadership in this area are exemplified by his presidency of the American Gastroenterological Association (AGA) and American Association for the Study of Liver Disease (AASLD). His contributions to research, practice, education and administration during 50 years at Mayo Clinic have resulted in innovative, enduring and widely acknowledged contributions to the institution and his subspecialty. Dr. LaRusso was the first in the country to isolate a homogenous population of bile duct epithelial cells. He has played a prominent role on the world stage in conceptualizing, developing and promoting the field of cholangiocyte pathobiology. He helped describe primary sclerosing cholangitis (PSC) and wrote the textbook on its clinical presentation, natural history and complications. His PSC seminal studies and clinical trials created international awareness for the disease and made Mayo Clinic a leading referral center for the condition. Dr. LaRusso chaired the Mayo Clinic Division of Gastroenterology and Hepatology, which has remained at No. 1 in the U.S. News & World Report rankings for 30 years, and the Department of Internal Medicine — each for nine years. Under his leadership, the Department of Internal Medicine increased NIH funding by four times. Dr. LaRusso was the founding medical director of the Mayo Clinic Center for Innovation and the first medical director of the Center for Connected Care. The AGA bestowed upon Dr. LaRusso its most prestigious research recognition, the Julius Friedenwald Award.

Nicholas LaRusso, M.D.

Division of Gastroenterology and Hepatology, Department of Internal Medicine Charles H. Weinman Professor Mayo Clinic Rochester, Minnesota

Mayo Clinic: Joined staff, Division of
Gastroenterology and Hepatology, Mayo Clinic
in Rochester, 1975; consultant, 1977–present;
professor of medicine, 1985–present; chair,
Division of Gastroenterology and Hepatology,
1990–1999; professor of biochemistry and
molecular biology, 1992–present; chair,
Department of Internal Medicine, 1999–2008;
medical director, Mayo Clinic Center for
Innovation, 2009–2013; medical director, Mayo
Clinic Center for Connected Care, 2013–2014;
Charles H. Weinman Professor, 2006–present

Fellowship: Research, George Morris
Piersol Teaching and Research Scholar,
American College of Physicians;
Department of Biochemical Cytology, The
Rockefeller University, New York, New York;
gastroenterology research, Mayo Clinic
School of Graduate Medical Education,
Rochester, Minnesota

Residency: Internal medicine, Mayo Clinic School of Graduate Medical Education

Internship: Metropolitan Hospital Medical Center, New York, New York

Medical school: New York Medical College, Westchester County, New York

Undergraduate: Boston College, Boston, Massachusetts

Hometown: Brooklyn, New York

David Piepgras, M.D.

Emeritus professor of neurosurgery Mayo Clinic College of Medicine and Science Rochester, Minnesota

Mayo Clinic: Joined staff, Department of Neurologic Surgery, Mayo Clinic in Rochester, 1974; consultant, 1974–2009; professor of neurosurgery, 1988; chair, Department of Neurologic Surgery, 1992–2004; John T. and Lillian Mathews Professor of Neuroscience, 1994–2009; emeritus professor of neurosurgery, 2009–present; supplemental consultant, 2010–2020

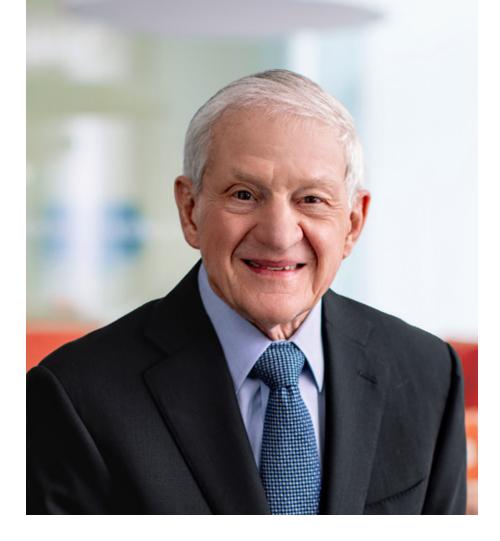
Residency: Neurologic surgery, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota

Internship: Mary Hitchcock Memorial Hospital, Lebanon, New Hampshire

Medical school: University of Minnesota Medical School, Minneapolis, Minnesota

Undergraduate: University of Minnesota, Minneapolis

Hometown: Luverne, Minnesota



NEUROSURGERY GIANT

David Piepgras, M.D. (NS '74), is a giant in the field of neurosurgery — one of the best known and most respected neurosurgeons of his generation. He is internationally renowned for his career as an academic neurosurgeon, specializing in vascular and intracranial neurosurgery and making significant advances in the management and understanding of unruptured aneurysms and the spectrum of intracranial hypotension and cerebrospinal fluid leaks. The legendary neurosurgical cerebrovascular group he led at Mayo Clinic with Thoralf Sundt Jr., M.D. (N'64, NS'65, died 1992), became a national and international referral center for complex cerebrovascular disease. Dr. Piepgras' work on innovative revascularization procedures, decision-making and performance of intracranial and vascular neurosurgery over four decades is groundbreaking. His studies and publications changed the management of cerebrovascular disease and continue to be the benchmarks and key references. His leadership in the International Study on Unruptured Intracranial Aneurysms led to worldwide more conservative management of small aneurysms. He was chair of the American Board of Neurological Surgery and received the Founders Laurel from the Congress of Neurological Surgeons and a Distinguished Service Award from the Society of Neurological Surgeons. During his tenure as chair of the Department of Neurologic Surgery, the caseload of surgeries was among the largest in the Western world. He never lost sight of the fact that the patients and families in his impressive clinical workload were frightened and would benefit from adequate time with him to understand the nature of their concerns. He helped them understand that their care would be personalized and their healing enhanced by the excellence of the staff, teamwork, innovation and integrity of the care team in the Mayo model of care.





Fellowship: Pediatric neurosurgery, Hospital for Sick Children, Toronto, Ontario, Canada

Residency: Neurologic surgery, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota

Internship: Mayo Clinic School of Graduate Medical Education

Medical school: Southern Illinois University School of Medicine, Springfield, Illinois

Undergraduate: Illinois Wesleyan University, Bloomington, Illinois

Hometown: Bloomington, Illinois



A FORCE IN NEUROSURGERY ADVOCACY

Ann Stroink, M.D. (NS '85), has reached national and international peer recognition for her leadership and clinical practice. She is president of the American Association of Neurological Surgeons — only the second female neurosurgeon to serve in that leadership role. Dr. Stroink is a force, advocating for neurosurgeons and championing causes for patients, bolstered by her expertise in health policy and legislative matters. She is chair of the Neurosurgery Delegation to the American Medical Association (AMA) and was appointed to the AMA Council on Legislation. She has chaired the Council of State Neurosurgical Societies, where she distinguished herself as an inclusive leader who engages diverse representation. She also chaired the Washington Committee for Neurosurgery, the group entrusted with promoting sound federal public policy that supports neurosurgeons and their patients. Her efforts have made organized neurosurgery stronger and more reflective of its membership. Dr. Stroink built a multi-neurosurgeon practice, Central Illinois Neuro Health Sciences, in Bloomington, Illinois, from the ground up. Dr. Stroink also is system medical director, Neurosciences Quality and Educational Program Development for Advocate Aurora Health in Bloomington, directing strategic planning for neurosurgery services across the system. She co-founded the Central Illinois Neuroscience Foundation, a not-for-profit organization dedicated to enhancing neuro health care through education and research. Her relationships in the medical and university communities led to the development of undergraduate and graduate degree programs, and recruitment of neuroscientists with active preclinical research laboratories and federal grant funding. She has been a leader in telemedicine and helped to develop a lab to study vascular pathologies in neurosurgery and ensure that involved undergraduate students had access to mentorship and support.

Misael Uribe Esquivel, M.D.

Board chairman Médica Sur Mexico City, Mexico

Fellowship: Gastroenterology research, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota

Residency: Internal medicine, gastroenterology, National Institute of Nutrition and Medical Sciences, Mexico City

Medical school: Medical School of Tampico, Autonomous University of Tamaulipas, Mexico

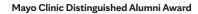
Undergraduate: Autonomous University of Tamaulipas

Hometown: Madero, Tamaulipas, Mexico



NOTABLE LEADER IN MEXICO & BEYOND

Misael Uribe Esquivel, M.D. (GI '76), is a thought leader in the fields of fatty liver disease, hepatic encephalopathy and cholelithiasis. He has been closely involved with national and international medical societies, with leadership roles including the presidency of the National Academy of Medicine of Mexico, one of the most prestigious academic organizations in Mexico. In this leadership role, he had the opportunity to represent his colleagues in Mexico and used the platform to impact the future of health care delivery in his country. Dr. Uribe also was president of the International Medical Association of Mexico, Mexican Association of Hepatology, Association of Members of the National Institute of Nutrition, and Latin American Association of Liver Disease. Dr. Uribe has held research and teaching positions in gastroenterology and hepatology at leading medical institutions, including serving as chief of gastroenterology and hepatology at the National Institute of Nutrition and Medical Sciences in Mexico City. Dr. Uribe is founder and chairman of the board of directors of Médica Sur in Mexico City — ranked as the No. 1 hospital in Mexico in 2022. He established Médica Sur in the spirit of Mayo Clinic values, setting it apart from other major hospitals at the time, including a commitment to education and innovation, and the highest ethical and quality standards for patient care. Under his leadership, Médica Sur has become an international member of the Mayo Clinic Care Network. He has promoted the hospital's stronger collaboration with Mayo Clinic to pursue medical quality and patient experience improvement. Médica Sur continues to train the next generation of health care professionals.





Department of Neurology
Haworth Family Professor of
Neurodegenerative Diseases
Mayo Clinic
Jacksonville, Florida

Mayo Clinic: Joined staff, Department of Neurology, Mayo Clinic in Florida, 1998; consultant, 2001–present; professor of neurology, 2002–present; chair, Division of Movement Disorders, 2009–2012; Haworth Family Professor of Neurodegenerative Diseases, 2019–present

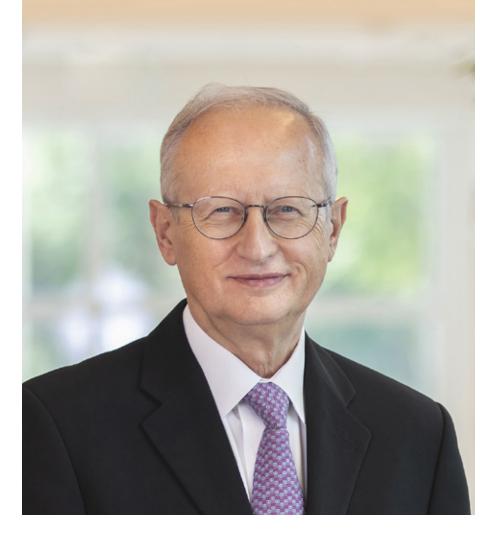
Fellowship: Clinical neurophysiology, Mayo Clinic School of Graduate Medical Education, Rochester, Minnesota

Residency: Neurology, University of Nebraska Medical Center and Creighton University School of Medicine, Omaha, Nebraska

Internship: University of Nebraska Medical Center; Complex of Health Care Hospitals, Bytom, Poland

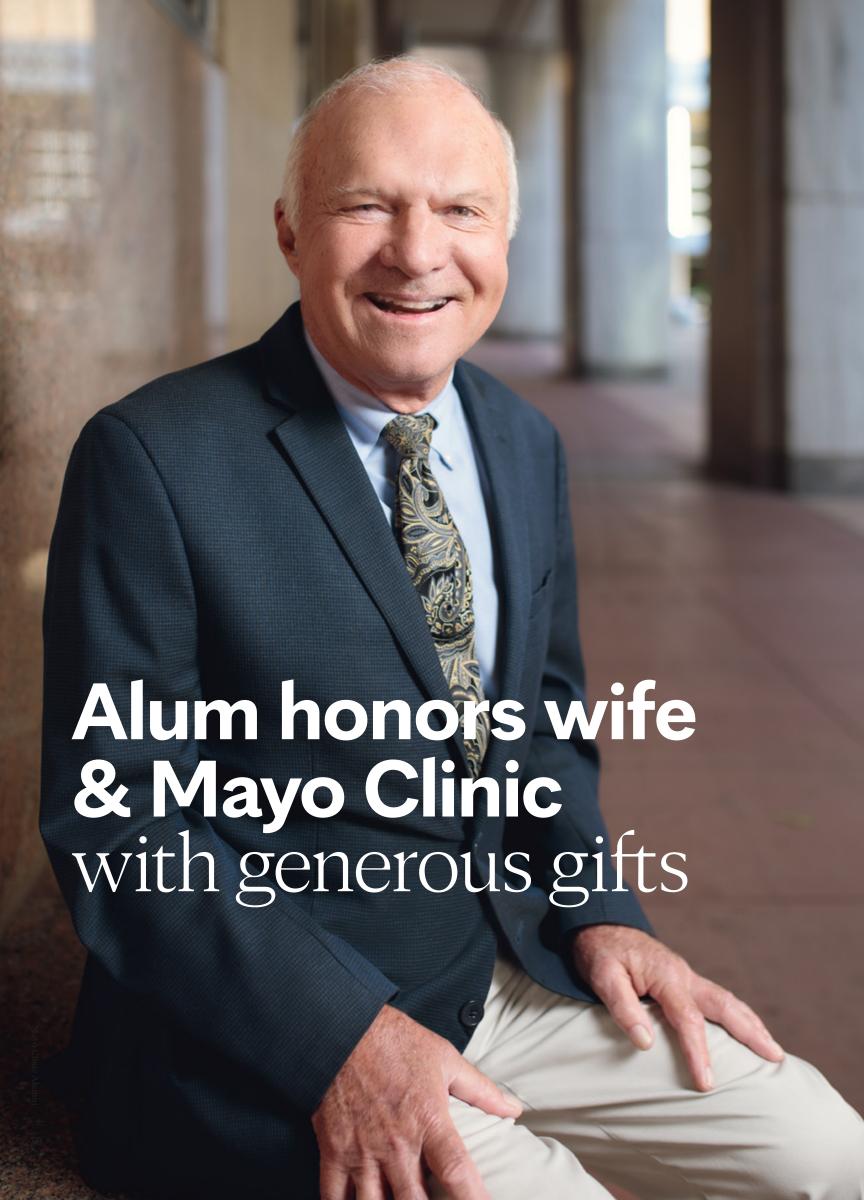
Medical school: Medical University of Silesia, Katowice, Poland

Hometown: Zbroslawice, Poland



ICON IN NEURODEGENERATIVE RESEARCH

Zbigniew Wszolek, M.D. (EEMG '91), is arguably the most influential clinician scientist in establishing the genetic basis for Parkinson's disease and other neurodegenerative conditions. Foremost is his work identifying, collecting and investigating kindreds with unique neurological disorders, which is unequaled in the field of movement disorders. His dedication and love for research have led to contributions that have enhanced the care of patients at Mayo Clinic and around the world. Dr. Wszolek has contributed discovery related to the genetic basis of Parkinson's disease and parkinsonism-related disorders. He was one of the initial investigators to appreciate the influential role that comprehensive genealogical studies play in identifying familial neurologic movement disorders. His pedigrees and brain banking have resulted in seminal discoveries that will forever affect understanding of neurodegenerative disorders. Two of "his families" were the first to demonstrate an abnormality in the LRRK2 gene that resulted in late-onset Parkinson's disease. Until that time, clinicians didn't realize that this genetic variation is a typical genotype for Parkinson's disease. Dr. Wszolek's work demonstrated the variability and pathologic features accompanying the atypical Parkinson's disease phenotype. The LRRK2 gene is now recognized as the single most common genetic cause of Parkinson's disease worldwide. Dr. Wszolek's work has been critical in identifying genetic causes for Parkinson's disease and parkinsonism. His translational research provides the opportunity to offer therapeutic intervention before the nervous system has been irreversibly damaged. Most recently, his work has led to the discovery of the CSF1R-related leukoencephalopathy and a treatment paradigm that can positively impact patient outcomes. Dr. Wszolek is a founding officer of the International Association of Parkinsonism and Related Disorders.



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"Mayo Clinic was such an important part of my life. The money is going back to where it came from — the reason for my success."

- Gary Pies, D.D.S.



Gary Pies, D.D.S., with his wife, Marcia, the inspiration for his benefaction to Mayo Clinic.

ary Pies, D.D.S. (OMS '72), says the three best things to happen in his life were meeting his wife, serving in Vietnam and going to Mayo Clinic for training as a fellow.

He met his wife, Marcia, who died in 2014, when they were juniors in college. They married after his first year of dental school, and Marcia worked as a teacher. They were married for 51 years and had two children.

Dr. Pies says he was concerned about going to Vietnam, where he served as a general dentist in the Army for a year. But, he says, it turned out to be a very positive experience that gave him confidence to apply to Mayo Clinic.

"I was discharged from the Army in November and started my residency in January," he says. "I went from the tropics to Rochester. It took a long time to warm up."

He was a fellow in oral and maxillofacial surgery from 1969 to 1972. "My wife and I loved Mayo Clinic and Rochester," says Dr. Pies. "I took out a loan to start a private practice back home in Cincinnati, Ohio. At the time, the Doctors Mayo Society was forming, and I wanted to be a charter member. It cost \$10,000, but I could only give \$1,000. They told me I could make up the rest of it in my own time. That was very kind of them, and I gave the remainder quickly."

Dr. Pies and his wife continued giving routinely to Mayo Clinic throughout the 50 years he practiced.

"My wife was a strong partner and enthusiastic about our giving to Mayo Clinic," says Dr. Pies. "She was a great saver and excellent manager of our money." The couple remained Mayo Clinic patients through the years.

Several years ago, in Marcia's memory, Dr. Pies made a donation to establish the Marcia S. Pies Fund in Breast Cancer Research. More recently, he made a gift that would have surprised even Marcia. He established a \$2 million charitable remainder trust, an irrevocable trust that generates a potential income stream — in this case, for his adult children — with the remainder of the donated assets going to breast cancer research at Mayo Clinic. Dr. Pies says the Mayo Clinic Office of Gift Planning helped him determine the best way to make his gifts.

"I was blessed to work for a long time, making this gift possible," says Dr. Pies. "When my wife died, I was glad I still had my work. In fact, I still wish I were working. I do not love retirement.

"Mayo Clinic was such an important part of my life. The money is going back to where it came from — the reason for my success." ◆

Disparities in opioid treatment access remain

ew Mayo Clinic research found that women and Black and Hispanic populations don't have equal access to potentially lifesaving buprenorphine, a medication approved by the FDA that effectively treats opioid dependence or addiction.



Molly Jeffery, Ph.D.

The research team used the OptumLabs Data Warehouse to examine 3,110 filled prescriptions of buprenorphine from 72,055 emergency department visits across the U.S. from 2014 to 2020. While access to the medication increased over time for all groups studied, it was consistently lower for people 41 and older, women, and Black and Hispanic people. These disparities remained relatively steady over the years studied.

"The persistence of the disparities is frustrating. This is a truly lifesaving treatment," says Molly Jeffery, Ph.D., scientific director for Mayo Clinic's Division of Emergency Medicine Research and the study's senior author. "But it does appear that all groups are gaining access over time, which is what we want to see."

The researchers note that people with socioeconomic advantages — white, male or younger — were more likely to get buprenorphine. "These findings are not surprising, given that patient- and system-level barriers for accessing buprenorphine often disproportionately impact vulnerable populations," they write. According to the researchers, obstacles to receiving the drug include systemic racism, mistrust of health care professionals and the health care system, not enough clinicians able and prepared to prescribe buprenorphine in the emergency department, regulatory requirements, reimbursement issues, and addiction and mental health stigmas.

"The laws that limit access to buprenorphine are a legacy of an earlier opioid epidemic from literally 100 years ago," says Dr. Jeffery. "Those laws are based in mistrust of physicians and patients and a fundamental misunderstanding about substance use disorders. Making it easy to access safe and effective treatment is the best way to fight the epidemic of opioid overdoses, which has worsened during the COVID-19 pandemic."

The FDA approved buprenorphine to treat opioid use disorder in 2002. The National Institutes of Health points to several studies showing the drug's efficacy in treating opioid addiction and thereby reducing opioid overdose deaths. A 2014 meta-analysis study showed that patients receiving buprenorphine were 1.82 times more likely to stay in treatment than those who received a placebo.

"We know exactly what to do to close the gap: Get more health care providers, particularly primary care providers, involved in prescribing buprenorphine," Dr. Jeffery says. "Mayo Clinic recognizes the importance of primary care access to buprenorphine, and our clinicians are addressing the disparity gap by prescribing buprenorphine whenever appropriate and providing it through a

Emergency Department Entrance

primary care program and an addiction clinic."

Dr. Jeffery says another way to close the gap is to remove policy barriers, such as additional requirements for clinicians to prescribe buprenorphine beyond what's needed for an opioid prescription. She says policies like that needlessly limit access to a safe and effective treatment and increase stigma.

Mayo Clinic & Médica Sur expand relationship to advance cancer care

ayo Clinic has expanded its collaboration with Médica Sur in Mexico City. The expanded collaboration will advance cancer care at Médica Sur and is initially centered on enhancing breast cancer care. Plans include adding other forms of cancer and additional medical specialties.

Mayo Clinic will take a comprehensive look at Médica Sur's breast cancer care and exchange best practices in areas including diagnostics, protocols, workflows and

quality. The organizations also will explore ways to incorporate innovative technology into patient care.

Médica Sur, the first international member of Mayo Clinic Care Network, joined the network in 2013. Newsweek ranks Médica Sur the No. 1 hospital in Mexico.

"Médica Sur and Mayo Clinic have Decker, M.B., B.Ch. long shared a vision of working together to advance the quality and delivery of health care," says G. Anton Decker, M.B., B.Ch. (TY '96, I '99, GI '03), president of Mayo Clinic International. "This new relationship builds on that collaboration to enhance care to benefit patients."



Preeclampsia linked to increased markers of brain cell damage & inflammation

ayo Clinic researchers found that women with a history of severe preeclampsia have more markers linked to brain cell damage and inflammation compared to women who had uncomplicated pregnancies.

Preeclampsia can cause long-term damage to a woman's kidneys, heart and brain. Preeclampsia also has been associated with elevated risks of heart disease, stroke, cognitive decline and smaller brain volumes later in life. However, no reliable early markers are available to determine which women

In this study, researchers explored whether extracellular vesicles of brain cell membranes circulating in the blood could be found in women years after their affected pregnancies.

Using health record data from the Rochester Epidemiology Project, a cohort of 40 women — 33 with a history of mild preeclampsia and seven with severe preeclampsia - was matched to 40 women who had uncomplicated pregnancies. Compared to the control group, women with a history of severe



Vesna Garovic, M.D., Ph.D.



Sonja Suvakov, M.D., Ph.D.

preeclampsia had a significantly higher concentration of extracellular vesicles that were positive for amyloid beta, a toxic brain protein believed to be an essential component of Alzheimer's disease.

The presence of amyloid indicates brain cell damage and inflammation. The researchers found that levels of amyloid circulating in the blood also were increased.

"These markers of brain cell damage and inflammation in the blood of women with a history of preeclampsia may lead to new diagnostic and therapeutic strategies to improve women's cognitive health over their lifetimes," says Vesna Garovic, M.D., Ph.D. (NEPH '99),

chair, Division of Nephrology and Hypertension at Mayo Clinic in Rochester, and senior author of the study. "Further validation is needed to determine the role of these markers in predicting cognitive decline."

The researchers also observed that higher levels of these markers were associated with lower volumes of total gray matter of the brain.

"The science of identification of circulating extracellular vesicles in the blood is rapidly evolving for many diseases," says Sonja Suvakov, M.D., Ph.D. (NEPH '18), a Mayo Clinic postdoctoral research fellow in nephrology and first author of the study. "These vesicles facilitate intercellular transport and communication. In some diseases, production of extracellular vesicles increases, along with a change of their content, which is why they are frequently viewed as markers of cell damage. Future research is needed to determine their importance in the context of cognitive decline associated with a history of preeclampsia throughout a woman's life."

Family medicine residency program in Mankato transitions from U of M to Mayo Clinic

new Mayo Clinic Family Medicine Residency in Mankato, Minnesota, kicked off in July, the culmination of a process that began two years ago. The residency was a University of Minnesota family medicine residency program that transitioned to Mayo Clinic College of Medicine and Science. Mayo Clinic hired the university's faculty members and recruited and selected the inaugural class of 15 residents to train

in the new program. Mayo Clinic's **John McCabe III, M.D.** (FM '04), is director of the new residency program.

This move helps to advance Mayo Clinic's three-shield mission, focusing on community-based clinical practice, research and education, across southwestern Minnesota.



John McCabe III, M.D.

Mayo Clinic receives first-of-its-kind accreditation for diagnosis of primary

ciliary dyskinesia

ayo Clinic's Department of Laboratory Medicine and Pathology has been accredited as a diagnostic site by the PCD Foundation. Mayo Clinic is the first and only center of excellence to receive this accreditation for the diagnosis of primary ciliary dyskinesia (PCD), a rare and debilitating lung disease.

"This recognition of our laboratory services by the PCD Foundation is a clear reflection of our shared commitment to serve the needs of these patients and their families," says Joseph Maleszewski, M.D. (CPTH '10, MGP '14), Division of Anatomic Pathology at Mayo Clinic in Rochester.

Mayo Clinic pathologists are experienced in diagnosing PCD, given the number of cases they receive annually through Mayo Clinic Laboratories, the reference laboratory of Mayo Clinic. The diagnostic process begins with electron microscopy testing and is followed by thoracic pathologists providing expert ultrastructure interpretation, an especially complex reading of the results due to the nature



Joseph Maleszewski, M.D.

of the disease and symptom presentation. Mayo Clinic is evaluating additional tests to diagnose PCD.

Once accredited, testing sites must maintain a high level of quality and lend their expertise to ongoing quality improvement efforts to better support diagnosis of PCD.

Mayo Clinic Board of Trustees adds public trustees

The Mayo Clinic Board of Trustees added two public trustees in November:

Julie Louise Gerberding, M.D., was director of the Centers for Disease Control and Prevention from 2002 to 2009. She is CEO of the Foundation for the National Institutes of Health (NIH), which creates and manages research alliances with public and private institutions in support of the mission of the NIH. Previously, she was executive vice president and chief patient officer at Merck & Co.



Julie Louise Gerberding, M.D.

Martine Rothblatt, Ph.D., is chair and CEO of United Therapeutics Corp., which saves countless lives per year with medicines for pulmonary hypertension and neuroblastoma and restores otherwise discarded donor lungs for transplant. She also created SiriusXM Radio Inc. and led the efforts to create the first genetically modified porcine hearts and kidneys transplanted into humans — xenotransplantation.



Martine Rothblatt, Ph.D.

Mayo Clinic ranked No. 1 hospital in the nation by U.S. News & World Report

ayo Clinic has been ranked the No. 1 hospital in the nation for the seventh consecutive year in U.S. News & World Report's 2022-2023 "Best Hospitals" rankings.

U.S. News & World Report first published state rankings in 2012, with Mayo Clinic in Rochester ranked No. 1 in Minnesota since the beginning. This year marks a decade that Mayo Clinic in Arizona has ranked No. 1 in the state. Mayo Clinic in Florida has ranked No. 1 in the state of Florida for six of the past seven years.

Mayo Clinic in Arizona has again been ranked on the "Best Hospitals" Honor Roll list — the sixth consecutive year that Mayo Clinic in Arizona has been named a top-20 hospital in the nation. Mayo Clinic Health System in Eau Claire, Wisconsin, has been recognized as a "Best Regional Hospital" in northwestern Wisconsin, and Mayo Clinic Health System in Mankato, Minnesota, has been recognized as a "Best Regional Hospital" in southern Minnesota.

"We're proud to again be recognized as the No. 1 hospital in the nation," says Gianrico Farrugia, M.D. (I'91, GI'94),



president and CEO, Mayo Clinic. "This honor underscores the incredible commitment of our staff to deliver the highest standard of care to our patients each and every day. Our staff are truly at the heart of this achievement."

Obituaries

Gregory Angstman, M.D. (MED '82, FM '85), died July 31, 2022.

Jerry Chutkow, M.D. (N '69),

died July 10, 2022.

Norman Dunitz, M.D. (OR '58),

died Sept. 10, 2022.

Raul Eduardo Espinosa, M.D. (N'61),

died Sept. 17, 2022.

Everett Hendricks, M.D. (U '55),

died Dec. 3, 2021.

Rollin Hughes Jr., M.D. (1'65),

died Oct. 13, 2022.

A. Creig MacArthur, M.D. (OR '73),

died May 25, 2021.

Ronald MacKenzie, M.D. (ANES '74),

died Aug. 21, 2022.

William Nichols, M.D. (HEM '76),

died Sept. 7, 2022.

Thomas Peyla, M.D. (PD '64),

died March 29, 2022.

Edward Rosenow III, M.D. (1'65),

died Dec. 21, 2021. Dr. Rosenow received the Mayo Clinic Distinguished Alumni

Award in 1998.

Albert Tahmoush, M.D. (1'69),

died April 13, 2021.

Gary (Curtis) Walker, M.D. (PMR '93),

died Sept. 2, 2022.

NIH renews Mayo Clinic's \$48 million Clinical and Translational Science Award

ayo Clinic's Center for Clinical and Translational Science has renewed funding for its research grant from the National Institutes of Health (NIH) National Center for Advancing Translational Sciences for five more years. The funding award of \$48.2 million is one of Mayo's largest NIH grants.

"We are very pleased with this news and the continued support from the National Center for Clinical and Translational Sciences," says Claudia Lucchinetti, M.D. (N'94, NIMM'95), director of Mayo's Center for Clinical and Translational Science, chair of the Department of Neurology at Mayo Clinic in Rochester, a Eugene and Marcia Applebaum Professor of

Neurosciences, and principal investigator on the grant. "This will allow Mayo to continue to provide core resources, mentoring and training, and opportunities to



Lucchinetti, M.D.

develop innovative approaches and technologies for our investigators."

Mayo Clinic was one of 12 institutions to receive the Clinical and Translational Science Award when the program began in 2006. Since then, the NIH has renewed Mayo's award three times, most recently in 2017.

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ROCHESTER CARILLON

The inscription on carillon bell number 23 in the Plummer Building at Mayo Clinic in Rochester reads: Dedicated to the American Soldier by William J. and Charles H. Mayo.

In 1928, the Mayo brothers gifted the original 23 bells of the carillon with the intention that its music would be enjoyed by people throughout Rochester. Dr. Will said, "Today we dedicate this carillon to the American soldier, in grateful memory of heroic actions on land and sea to which America owes her liberty, peace and prosperity."

The carillon now boasts 56 bronze bells weighing 40,000 pounds in total and having a 4.5 octave range. Thanks to the internet, people around the world can enjoy live and recorded music of the Rochester Carillon. Every official recital of the Rochester Carillon begins with "My Country 'tis of Thee."

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