



Notes from a Medical Journey

September 7, 1956

Dear Jay:

Outside, a steady drizzle is falling from a lead-covered sky, and I am shivering at a temperature of about 52° in this Victorian-style bedroom at the famous Hotel Moscow a few steps from Red Square. You can picture the scene -- muddy cream walls bearing large oil paintings in gilt frames, a 12-ft. ceiling, imitation Persian rugs on the oak parquet floor, sofa and 4 chairs in red plush, dull gold brocade drapes, a round table covered with an embroidered cloth and bearing a large set of plum-colored cut glass, and a desk complete with a massive marble lamp and desk set. In the corner, beyond the maple-stained beds and wardrobe, stands the 9-in. television set that whispers to me in Russian (it won't turn off without pulling out the wire). The sound of the W. C., which also won't turn off, is a cheerful reminder that I have a private bath and lots of hot water.

I am really quite comfortable. Everything is spotless, and the coldness of the room is my own fault because I left the door of my little veranda open this morning when I went out. In half an hour we leave for a press conference with the Minister of Health, Madame Dr. Kovrigina, and I shall wear a sweater under my suit coat against the unseasonably cold weather.

These ten days in Moscow are a busy interlude for me during a month of research in Finland, where Drs. Paul Soisalo and Martti Karvonen have done well in organizing material for our comparative study of people in two parts of Finland who seem to differ greatly in the incidence of heart disease. When I left Helsinki on August 29, Dr. Karvonen and our old friend, Dr. Flaminio Fidanza of Naples, were continuing in fine shape our work on population samples in small towns in western Finland. Dr. Rautajarvi, an electrocardiographer, a technician, and a nurse complete the team.

This Saturday I shall return briefly to Finland, then to Stockholm for the European Congress of Cardiology, and finally back to Finland for our work in eastern Finland which ends October 2. I'll write about Finland in another letter.

In the meantime, Drs. Paul D. White, Howard Rusk, Herman Hilleboe, James Watt, and Mark Field (the latter a Harvard sociologist who speaks Russian) and I are breaking the ice with our Russian colleagues. We have a hectic program of visits to clinics, laboratories, institutes, receptions, and dinners. In the evenings, we just manage to arrive at the opera or ballet before the doors close at 7:30. We have had no time to eat by then but anticipate a big spread at 11 or 12 p.m. As guests of the Soviet government, we are royally treated and our Russian contacts could not be more cordial.

The ballet is, as expected, really great, and the operas are most elaborately staged, though I think the singing is not quite up to the high level of the sets and costumes. Tonight, Paul White and I are released from the theater to dine with academician professor Mjasnikow at his home. This is the first, and only, visit to a private home.

Dr. Mjasnikow is the director of the Therapeutics Division, that is, the Department of Medicine of the First Moscow Medical School. He is the local leader in research on hypertension and atherosclerosis. He is a big, bald dynamo of a man who moves and thinks at high speed and looks as strong as an ox. His forcefulness was demonstrated in two "conferences" when he treated us to several hours of didactic lectures without interruption from us or his top associates, professors Speransky and V. Parin.

There are 3 medical schools here in Moscow with a total enrollment of about 10,000 students in the six-year course. They enter at 18 or 19, and the last year is really a rotating internship so they are ready to practice at age 24 or 25. The more able and ambitious stay on for another three years to specialize, which means they will begin practice at twice the salary of the ordinary doctors just starting.

I find it difficult to untangle the complicated setup of institutes and the extensive organization run by the Academy of Medical Science. Among other things, the top professors have several jobs, with separate incomes from each, so they are really very well paid and are generally pampered as well as made to work hard.

Now I am back from the press conference which went off well with some 30 or 40 reporters, many representing United States wire services and newspapers. Madame Kovrigina was relaxed and friendly, obviously competent, and quite able to handle the rather sharp questions put by some of the reporters. Paul White read a statement from our team which we had agreed on at a breakfast conference this morning. The gist was that we are opening the way for future closer contacts between the American and Russian doctors, discussing with our Russian colleagues problems of research on the epidemiology of heart disease and of rehabilitation, and that we are not competent, after so short a visit, to comment authoritatively on the local medical scene, but that we are impressed with the doctors' and nurses' devotion to their work. Questions and answers followed, and each of us said a few words.

Before the press was admitted, we extended a formal invitation to the Minister to have 4 Russian doctors spend six to eight weeks in the United

States: two in New York, one with Paul White in Boston, and one with me in Minnesota. He had state department clearance on this. Madame Kovrigina immediately expressed her gratification and assured us that her government would accept and proceed with arrangements.

All this was announced to the press conference a few minutes later and created much interest. I shall be curious to know how the newspapers at home report it.

In a few minutes, I must go to dinner with Paul at Professor Mjasnikow's home. Professor Speransky will be there to act as our interpreter, and it is to be a small intimate affair.

Of course, there are many events and impressions to tell you about, and, if time permits, I shall try to add to this letter later, even though it grows over-long, because it isn't often that I can write to you with a Moscow date line.

Later (September 7.)

Before discussing our dinner with Professor Mjasnikow and the farewell dinner of the Ministry, I will go back to the trip from Helsinki and some of the other subsequent events.

First, you may recall that last November I was in Helsinki to give a lecture and to talk about the possibility of some joint epidemiologic research on heart disease in Finland. This was agreed, and the Finnish Heart Association, as well as the Finnish State Pension Bureau and the Society of Finnish Physicians, decided to help. Then, last May, Drs. Soisalo, Karvonen, Fidanza, and I met in Rome, where I was acting as chairman for the Calories Committee of F. A. O. (of the United Nations) and arranged details. The main point at issue was, as I have said, the indication of large differences in heart disease, mainly coronary, between different parts of Finland.

We agreed to meet in September, which would include the dates of the European Congress on Cardiology. In April in Japan, Paul White had told me he wanted to look at our work in Finland and hoped he and I could take a side trip to Moscow. He had long talked about going to Moscow, and, at last, the green light was showing. The result was that the Soviet Ministry of Health first agreed to let us in, and then went further and invited us to be official guests of the Russian government.

So, on the evening of August 29, our Finnish friends drove us to the Helsinki airport and, after a minimum of formalities, we boarded a 2-motor Russian 'plane and set off, somewhat surprised at the absence of seat belts and "no-smoking" signs. The Russians think these precautions tend to produce an unfortunate psychologic atmosphere for the passengers. There were only 8 or 10 other passengers, and we were left to our own devices in the absence of the stewardess who, we were told, had suddenly taken ill.

In no time at all, we were up at the end of the Gulf of Finland, and the lights winking from towns and isolated houses below were, unbelievably,

Russian, and the approaching myriad of lights was Leningrad! Since the 'plane was not pressurized, we experienced alternating deafness and popping of ears, announcing the approach to Mother Earth which we met with a sudden swoop, a rough bounce, and a long taxi along a huge, but deserted, series of airstrips up to an ornate, but also deserted, airport building. Passports were relinquished, money was accounted for, and we ate a pretty good supper in a restaurant resembling a bad imitation of a nineteenth century "grand salon," complete with great marble pillars and fancy plaster arabesques on the walls, all completed after the last war.

Then, on again, growing more and more sleepy in spite of occasional bumpy pockets until, finally, the lights of Moscow appeared which extended as far as we could see for half an hour before our arrival at 1:00 a.m. Many people are on the ramp, names and handshakes are flung at us, and there is much confusion until we are bundled into big cars and sped on through the night to the Hotel Moscow. Of course, we are tired, but, at 2:30 a.m., we must sit down with our official greeter, Dr. Popoff of the Ministry, to a big supper with wine and toasts in the echoing emptiness of the great dining hall of the Hotel Moscow.

Since then, with interludes for sleep, we have visited clinics and laboratories and conferred and eaten too much and have been greatly impressed with the genuine friendliness of our Russian colleagues and everyone we have met in Moscow. At each visit, there are little speeches telling us that we are welcome to see anything we want and, actually, they have been as good as their word.

The hospitals are big, clean, crowded, and a bit shabby. Paul White took delight in examining patients, and we discussed each case with a crowd of hospital staff members and photographers who were as interested as we were. Naturally, we saw many cardiac patients and there is no doubt that they are plentiful.

Coronaries are managed "conservatively," and we saw quite a few marks of leeches and of cupping, the former over the precordium and the latter on the back. Anticoagulants are given chiefly to patients in their second or third occlusions. Oxygen, too, is only occasionally given, usually by nose-mouth masks apparently, although we saw no apparatus actually in use.

Hypertension is common, and we noted that many hypertensive patients, like some of the coronary patients, were obese. However, we did not find evidence that much attention is given to this problem or that height-weight measurements are used to estimate overweight. One of our omnipresent interpreter-guides, Vladimir, a graduate student in economics, told us about his mother who is in and out of hypertensive heart failure and is grossly obese. She claims that she feels better when she eats a great deal. Apparently, she was never advised to reduce.

Much cardiac and vascular surgery is done, particularly mitral valvotomies and closure of the open ductus arteriosus. Dr. Meschalkim, a kindly and genial thoracic surgeon of 40 years of age, who accompanies us

much of the time but who speaks only Russian, told us that simple digital dilatation of the stenosed mitral valve is always tried first. Only if this is obviously impossible is the valvulotome used. The ductus arteriosus is usually doubly ligatured and severed.

Large scale surveys of blood pressures are made and the incidence of "hypertension," defined as something like 2 standard deviations above the average for the age but without great statistical elaborations, was said to be 4.6 per cent among 200,000 men and women checked in Moscow factories and organizations. Hypertensive workers thus found are given a course of treatment for a month or so, which may be repeated. Therapy involves an attempt to discover and remove emotional tension associated with the job and residence at the "prophylactoria" connected with the place of work. Ordinarily, no dietary measures or drugs are prescribed at this stage, and the local view is that essential hypertension is a psychosocial disorder. Renal disease, pheochromocytoma, and so on are recognized as giving rise to "secondary" hypertension.

Atherosclerosis is considered a metabolic disorder in which liver dysfunction and ascorbic acid deficiency may play a role, aided and abetted by emotional factors and imbalance of the autonomic nervous system. Ascorbic acid, 200 mg. intravenously or 1 gm. orally daily, is said to lower the blood cholesterol and correct the lipoproteins. The latter are estimated in research at the First Medical Clinic by paper electrophoresis -- staining the paper strips and measuring the stain eluted from these strips. This was my friend Swahn's method of several years ago, although his name was not mentioned.

The surgeons were justly proud of some new automatic stitching machines for anastomosis of blood vessels down to a millimeter or so in diameter. The devices are really clever staplers that use fine tantalum wire. We also learned that local anesthesia is used a great deal but not to the exclusion of inhalation and other forms of anesthesia. Two days ago we were shown 4 brain tumor operations in process simultaneously, all under local anesthesia.

Student laboratories are small and pretty elementary, but there is much modern equipment in the research laboratories, some made locally and other items from abroad. We noticed especially fine x-ray equipment from Sweden and Holland, electrocardiographs, such as the "Galileo," made in Florence, Italy, and the "Elema" from Sweden, and a Beckman spectrophotometer from the United States.

The more technical laboratory work is all done by doctors, usually women. At present, 70 per cent of the medical students and over half of the practitioners are women. Surgeons, however, are almost all men. Marriage and children are no deterrent to remaining in full-time medical work, and the wives of many medical school professors are physicians, frequently in specialties other than those of their husbands.

Medical care is free for all and at a common level. In the wards (we saw no private rooms, and most wards had 8 to 16 patients), we found doctors,

lawyers, engineers, chauffeurs, and so forth side by side to everyone's seeming satisfaction. Outpatient services, too, are free except that the patients pay for their drugs which are cheap. Autopsies are said to be universal in all deaths, although we had no details, and this statement was merely made in passing by the Minister of Health. Here in Russia, it is sometimes difficult to discriminate between ultimate goals and present fact.

1 a.m., September 8, Moscow

Stimulated by Borodin's "Prince Igor" at the Bolshoi Theatre, followed by a snack of caviar, smoked salmon, and a glass of white Georgian wine a few minutes ago, I am wide awake enough to add more to the tale of our Russian adventure.

First, the dinner at the Praga Restaurant, given by the Ministry of Health this afternoon, was a memorable occasion with bright sun pouring in the big windows of our top-floor dining room. The table for 26 was bathed in this light and the reflections from the opposite wall of mirrors. The Minister of Health, Dr. Kovrigina, presided and soon a constant round of little speeches were given by most of us, all to the effect that we agree our mission has been a success and that all of us want only peace and friendship and that we hope to meet again.

This sounds trite and stilted, but the atmosphere was anything but that. All of us are going away convinced that these people really are human and really do feel friendly and want to share with us in the common task of making mankind better. This has nothing to do with politics, and several times we — and they — acknowledged the fact that our political philosophies are different. Anyway, I am sure that the people we have met are just like us, that is, simple doctors and university professors whose main interests are professional and whose secondary interests are in common grounds of art and gardening, music and walking in the countryside, football, and literature.

Finally, we exchanged some gifts, and it was wonderful to see Paul White embracing Madame, the Minister, with kisses on each cheek! Later, we had a similar full round at the Hotel Moscow with Professor Meschalkim and his wife, who brought presents on behalf of the Academy of Medical Sciences.

Now, a few more facts about our visit. We made repeated efforts to obtain vital statistics but were only given crude mortality rates (neither age nor sex-specific) for cardiovascular disease and told that life expectation in Russia had been doubled since the Revolution. For all cardiovascular disease, including cerebrovascular lesions, we were given the crude mortality figure of 205 deaths per 100,000 in 1954. This is less than half that for the United States, but, of course, this means nothing without data on the age distribution of the population and the ages of the dying. Furthermore, there is the problem of finding a comparative basis for ascribed causes of death. The Russians do not use the International List of Causes of Death, but I am promised a copy of their own classification. However, their diagnoses seemed to coincide pretty well with our own, judging from the 100 or so patients Paul White examined very briefly.

We were greatly interested in a rural health center and hospital some 45 kilometers, or 30+ miles, from Moscow. Whether it is typical or not I don't know, but they had little time to spruce up the place because we only asked to see such a center the day before, and, obviously, no other foreign delegation had been to this spot.

Most of the trip was along the main highway to Kiev, which was wide enough for 3 lanes each way but not so marked and not necessary with the light traffic. But, when we turned off on the little road to our village destination, we slowly lurched along on a so-called detour, clearly impassable in wet weather.

We had 2 women doctors as guides who spoke only Russian and who were, respectively, the head of the Maternal and Child Health Division of the Moscow Health Region and one of the inspectors. At our destination was an old 2-story stucco building and outlying wooden structures housing 27 inpatients, a polyclinic with dental office, examining room, room for minor surgery, x-ray room, treatment room, laboratory, and a delivery room where 80 to 90 babies are born annually. Major surgery is performed at another center 7 miles away. The whole establishment was fairly rough-and-ready but scrupulously clean and seemingly efficient.

The staff consists of 4 doctors, 8 nurses, and a pharmacist, all women. They care for some 5,000 people in a dozen villages and some state and collective farms. A file is kept on each family, and everyone is supposed to have semiannual health checkups. The patients were cheerful and appeared to be receiving reasonable medical care. We went away impressed, as elsewhere in the hospitals, with the staff's devotion to their jobs. And, as elsewhere, everyone was friendly and unreserved.

Well, there is much more I'd like to report if I had the time, such as the delightful intimacy of our dinner in Professor Mjasnikow's small flat, his remarkable collection of fine paintings, our discussion of the medical problems of presidents and Soviet leaders, the high prices of tawdry clothes, the many shops full of fancy but, to us, expensive foods, the motley picture of all races and nationalities in the Moscow Hotel and among the crowds on the streets, the difficulties of both drivers and pedestrians with the new antinoise law, the lack of anything at reasonable prices to buy to take home, and so on.

The outstanding memory for us will surely be the great cordiality and hospitality we met on every side. We like to think that, in our small way, we contributed something to better understanding and a more friendly future between our doctors and our peoples.

Regards to you and all our friends in Minnesota,

As ever,





Notes from a Medical Journey

September 18, 1956

Dear Jay:

After flying from Moscow to Stockholm for the European Cardio-logical Congress, we have been traveling east again and now in Juuka we are only a few miles from the border of Russian Karelia. In Ilomantsi, where we work later this week, we shall be so close that we must be careful not to stray too far on our after-supper walks. But, there is less fear of the Russians here than in Minnesota. The Finns, after centuries of contact --and conflict--with a difficult neighbor are neither fearful of tough gestures nor beguiled by recent blandishments. Anyway, all is calm and our work goes smoothly.

We are staying at the home of Dr. Paavo Kinnunen and his charming wife. The laboratory is nicely set up in a spare room of the new Juuka school, and the subjects are examined in the local health center across the road. This morning we ended up with 27 farmers plus 6 of their wives who came along uninvited. There is no problem of getting good samples of the population. The preparatory work of the dietary team and much publicity in the newspapers paved the way so well that everyone wants to be counted in.

So, Flaminio (Dr. Fidanza of Naples) and Miss Airi Leets are pipetting serum, our friend and amanuensis, Martti (Dr. Karvonen of Helsinki), and his assistant, Miss Eila Ala-Ketola, are transcribing data, and I take time to write a bit. A warm sun is slanting across the windows and the birch trees glow yellow-gold among the dark masses of the firs and spruces that clothe the gentle hills stretching on to the end of sight. In the foreground, across from the school yard, are houses built of hand-hewn logs standing on the edge of a field dotted with small haycocks, so the scene is rural indeed.

The Stockholm Congress gave us sunshine too and I was tempted to wander in the city streets and parks instead of attending the sessions. However, conscience triumphed so I saw little of Stockholm. I gave a resume of some of our findings in Japan and at the close of the session, I received invitations to lecture and organize research in Yugoslavia, Israel, Austria, and Czechoslovakia!

At this same session, Dr. Toor of Israel reported on different diets of Jews in Israel. It seems to be clear that coronary heart disease is rare among the Yemenites until they change from their traditional low-fat diet to the high-fat diet of the Askenazi (Jews of Europe and America). The serum cholesterol values correspond to the dietary pattern.

Also, during this same session, Dr. Irving Page from Cleveland was asked to say a word and managed to create a minor sensation. He spoke off the cuff about the report, to be published shortly in "Circulation," of the collaborative study on the ultracentrifuge method versus cholesterol measurement for the prediction of coronary heart disease. After three years and maybe a million dollars or so, the conclusion, unhappily for Gofman, is that his fancy "S₁" numbers are no better than simple cholesterol concentration. I recall the scorn I received when I said the same thing three years ago, but now it is official.

The job here in Finland is to compare the peoples of western Finland with those of the east, the starting point being the information that here in the east the incidence of coronary heart disease is far higher than in the western part of the country. This means comparing the diets, blood cholesterols, obesity, and so forth, as well as checking on the mortality and morbidity figures. Fortunately, the Finnish vital statistics and hospital records are unsurpassed anywhere for accuracy and completeness and to these will be added clinical surveys by a team from Helsinki led by Professors Paul Soisalo and Pentti Halonen. Finally, a study will be made in Helsinki itself, including an analysis of a great series of autopsies.

The first dietary phase, directed by Professor Paavo Roine, is finished but the data are still being analyzed. Fortunately, there is sufficient detail to provide data on the different types of fatty acids in the diet, and it may be that in this respect, rather than in simple total dietary fat, that a critical difference between regions of Finland will emerge. So far the data are suggestive.

As for the frequency of coronary heart disease, we can testify that there is no dearth of patients in Finland. We saw 3 times as many cases in a morning in the Kivela hospital as we saw in five weeks in Japan. Also, here it appears that cerebral thrombosis is more common than cerebral hemorrhage. In Japan, it is very much the other way around. This question deserves a lot more study and I hope that Professor Lauri Kalaja of Helsinki will contribute to this, as well as our friends Professor "Jack" Davies in Uganda, Dr. Noboru Kimura in Japan, Professor J. F. Brack in Cape Town, and others. The way it stands now it seems that the frequency of all forms of thromboembolic phenomena in populations is pretty much directly proportional to the frequency of coronary heart disease in those populations. I suspect they share the same etiology, at least in part.

As I have said a dozen times before in these letters, this type of epidemiology is only in its beginnings. There are plenty of headaches, including pitifully small funds and help to do a big and difficult job, but

I think by now it is hard to deny that significant results are emerging. And, I think the accomplishment to be gained in this way in promoting international cooperation and understanding among doctors and medical scientists also will prove to be significant. Anyway, we find fine friends and collaborators all over the world, and I am getting a first-hand view of world medicine at the grass roots.

The foregoing paragraph is the result of sitting here thinking about all the research that ought to be done, all the things I want to do, and the obstacles to be overcome--obstacles of apathy, ignorance, and the proprietary attitudes of certain groups about areas of research, as well as my own personal limitations. Hence, the interpolation of "this I believe" may be understood.

In a few weeks, I shall be in California and then, after a hasty study on California Japanese and lectures there and in Oregon, I shall be home, having missed the part of the year I like best in Minnesota. Right now the countryside here looks like Minnesota, except that there are more lakes and far more forests, but I miss Margaret and the children and all my good Minnesota friends. And I fear I cannot learn to speak Finnish!

As ever,

Axel Keys



Notes from a Medical Journey

September 21, 1958
Bruges, Belgium

Dear Jay:

Since parting at Wold-Chamberlain Field five weeks ago, you on your way to Japan and I off to Finland, the world prestige of the University of Minnesota has not diminished. Dr. Noboru Kimura, who awaited me on arrival at Brussels a week ago, had just flown over the Pole from Tokyo so he was able to tell me that you led the cheers for Minnesota at the Tuberculosis Congress in Japan.

For the first time in many weeks, Copenhagen enjoyed fine, sunny weather on the day of my arrival and, until yesterday, all this part of the world has basked in warm sunshine ever since. Even Helsinki, at 61° north latitude, was minus topcoats, and I did not die from the shock when I plunged into the Gulf of Finland on the sixth of September. Of course, that was after half an hour in the sauna at 205° F., which helped. All northern Europe had a miserable cold and rainy summer so the change of weather put everyone in good humor. Anyway, my lectures were well received, and the conferences about future heart research in all of these countries wound up with full accord and some definite plans.

Next year will see the initiation of epidemiologic research on heart disease, blood lipids, and the diet in Norway and the Netherlands, with Sweden and Denmark, in all likelihood, refusing to be left behind. As for Finland, the success of the work we began there in 1956 has impressed everyone, and a larger scale, long-time program will start there at the end of next summer under the sponsorship of Drs. Martti Karvonen, Paul Soisalo, Pentti Halonen, Niilo Pesonen, Paavo Roine, and Lauri Kalaja, plus the Finnish Heart Association. And, there will be plenty of younger assistants and collaborators trained for the job -- Drs. Esko Orma and Sven Punsar, who have just finished a year with me at Minneapolis; Drs. Rautaharju and Härtl, who will arrive in Minnesota around Christmas-time; and Miss Maija Pekkarinen, a top-flight dietitian.

So far our work in Finland has shown that (1) myocardial infarction is excessively common among the hard-working farmers and loggers (and also

among city folk in Helsinki); (2) serum cholesterol values are higher in Finland than we have found anywhere else in the world; (3) the diet in Finland averages a little lower in total fats than the Minnesota diet but is the highest in saturated fats that we have recorded -- butterfat accounts for the latter; (4) in all groups in Finland, the cigarette smokers have higher serum cholesterol concentrations and slightly lower blood pressures than do the nonsmokers; (5) serum cholesterol is higher in East than in West Finland, and this corresponds to reported but not clearly proved difference in the frequency of coronary heart disease between the two regions; (6) the diet in East Finland seems to be considerably lower in iodine and somewhat higher in saturated fatty acids than that in the West, but surveys in all seasons of the year are needed; and (7) bigger thyroid glands and a higher frequency of thyroid deficiency in East than in West Finland has been reported many times; now it appears that, among people dying in Finland, the thyroid glands of the coronary patients are considerably bigger, on the average, than in those dying from other causes.

You will understand why it is important to do a lot more research in Finland, especially follow-up studies. They have a good medical organization, a high percentage of autopsies, and a very stable and cooperative population. The only difficulties are the language and the location, distant from most of Europe and a long way from the Twin Cities. To the handicaps we might add the climate (mostly bad) and the roads ("paved" with clay that turns to dangerous, slick goo in wet weather, which is most of the time). Anyway, as I have said, we hope to start the big long-time push in Finland in September next year. Just preceding this, I shall try to arrange a meeting in Helsinki of the Research Committee of the International Cardiology Society. Dr. Michael Oliver of Edinburgh and Professor John Brock of Cape Town hope to participate in the start of the new research program in Finland, and other members of the Research Committee -- Malmros of Sweden, Puddu of Italy, and our own Paul White -- think they could make it also, and Kimura would attend the meeting and help in the subsequent research in Finland if we can find the money for the trip from Japan.

Things are looking up in Sweden. Dr. Arthur Engel, director general of Swedish Medical Services, is much interested in promoting our type of heart research. Professor Harald Cramer, chancellor of the Swedish universities, gives it his blessing, and our collaborator, Gunnar Biorck, has just succeeded to the chair of Medicine in Stockholm. Of course, good friend Professor Haquain Malmros of Lund is enthusiastic. Besides, the proud Swedes do not relish seeing the Finns and the Norwegians going ahead in a new line of research with no competition!

All the interested people in Oslo are agreed that they must join in the fund -- Gedde-Dahl of the Heart and Chest Diseases Society (the powerful former TB Society now strong for heart work); Ustvedt, Dedichen, Salvesen, C. Müller, and Blegen of internal medicine and cardiology; Nicolaysen of nutrition; Tonnes Ore, Paul Quale, and Julie Backer of statistics and insurance; Per Hanssen of the Geriatrics Society (and medicine at Stavanger); O. Torgersen of pathology; and E. Pedersen of

epidemiology. Also, we can count on support from Axel Ström, now in a second term of three years as dean of the Oslo University Medical School, and Professor P. Owren, the hematologist.

You will understand that the three days in Oslo were busy. Ernest Klepetar and Edith joined me there (and have continued to travel with me since), so the Norwegian actuaries and insurance people increased the social as well as the professional doings. You may recall that the Klepetars joined us for the work in Naples in 1954.

A research program in Norway has several reasons for interest: (1) they have a very low mortality rate, especially in middle age, and coronary heart disease has not been a great problem until lately but now increases by leaps and bounds; (2) the parallelism between coronaries and the fat in the diet, with great changes in World War II and after, is striking; (3) there would appear to be big regional differences in the diet (fisher folk versus dairy farmers, etc.), but neither this nor the regional heart picture has been studied properly; (4) Norway has an excellent medical organization, a high frequency of autopsies, and has demonstrated ability to get fine population cooperation in medical surveys; and, finally, (5) the top people in all of the disciplines involved in such research can be counted on to pull in a team.

Denmark has a special place in my affections dating from my year with August Krogh in Copenhagen in 1930 and 1931, so it was good to greet there old friends and new -- Paul Brandt-Rehberg and the staff of my former headquarters at Juliane Maries Vej 32, all still appearing young through my bifocals; Professor Torben Geill and P. From Hansen at De Gamles By ("Old Town," a 2,000-bed home and hospital for the aged from which we in Minnesota can learn much); Dr. Carl Johan Møllenbach, the able deputy director of Health for Denmark, who is pushing hard for a heart research program with the Danish people; and many others. I was especially pleased to have all three of the professors of medicine -- Eric Warburg, Brøchner-Mortensen, and Møller -- turn up at my lecture and afterwards express great interest. Plans in Denmark are still nebulous, but I hope that Dr. Tybjaerg Hansen, of whom much is expected, will be in the picture. Dr. From Hansen and his wife, a G.P., hope to drive their new Citroen to join us in Jugoslavia in October to learn about field surveys.

Dr. P. Muntendam, director general of Health for the Netherlands, had arranged a fine conference for us with the right people at The Hague, where it was good to see my old friend Professor R.C.F. Janssen of Amsterdam (he first isolated thiamine when he was chief of the Eijkman Institute in Java), J.M.L. Dols (often a comrade-in-arms in the Committees of WHO and FAO of the United Nations), van Eekelen, Den Hartog, F. S. P. van Buchem, and J. Groen (now professor of medicine in Israel). Dr. Louise Dalderup, who worked hard with the team in Calabria (southern Italy) last year, is much junior among these august professors, but she is full of steam to carry the ball for the projected research program for the Netherlands. Now to provide the details for a concrete plan! Like Norway, the basic medical organization is excellent; the leaders of the various

disciplines and organizations will work together; and there is a history of diet and heart disease frequency changing in parallel.

After all this and the great concourse of people (3,000 plus) gathered for the Third World Congress of Cardiology at Brussels, there was neither time nor energy for the sights of the World Fair, though one could admire the huge silver balls of the "Atomium," glistening in the sun by day and twinkling with lights by night, high above the exhibition buildings of some 50 nations laid out in a great park for the delectation of 30 million visitors in six months. Half of the Congress members are angry about poor accommodations, high prices, or just no place at all within twenty miles to stay.

Margaret arrived on Sunday morning direct from Minneapolis, with news that all was well at home (except for Little Rock, Quemoy, and the Near East), and the whirl of the Congress engulfed us. As usual, in such affairs, the scientific program was confusing, and we learned far more in private walks, talks, and hotel bedrooms than in the lecture halls. The joint meetings of the Research and Social Committees, which I had the responsibility for arranging, were fruitful and resulted in a report which may do some good in stimulating international research and the standardization of methods and research reporting.

So here we are in Bruges, seeing the sights in a gentle rain, which seems appropriate to the old town, dreaming of five hundred years ago when it was one of the greatest commercial centers of the world and Van Eyck, Memling, and Gerard David were painting their masterpieces. Nobura Kimura is with us. Last night we were guests, with Dr. S. Padmavati of New Delhi, of Professor Renee Pannier, who has a fine old home here, and tonight we dine with Martti Karvonen and a Belgian friend at Damme; the fag end of the Congress is still with us. Monday, we pick up the new car we bought in Brussels and hurry to Zagreb and the Yugoslav research job.

Drs. Henry Blackburn and Josef Brozek of our Minnesota staff will be there when we arrive, I hope, and Dr. Ratko Buzina will be rushing around with all the last-minute jobs to be done before leaving Zagreb for the field. Paul White will be with us a couple of days but cannot stay longer.

How the world has shrunk since the war! Even Moscow gets closer and sent 11 delegates from there and other parts of Russia to the Congress. We had a private lunch, as guests of the Whites, with the four members of the Russian Academy of Medical Sciences who were here.

I shall try to write again from Yugoslavia after the field operation gets running smoothly in high gear. In the meantime, all good wishes to you and all in Minnesota.

As ever,





Notes from a Medical Journey

Tucepi (Makarska), Jugoslavia
11 October 1958

Dear Jay:

Our work in Dalmatia began in confusion because of delay in the arrival of essential equipment, but we soon caught up to the theoretic schedule. Now all goes so smoothly that today I am staying behind in the hotel to do "office" work -- and get an extra swim in the blue Adriatic below my balcony -- while the team examines the last 30 men in the village of Podgora a third of the way up the steep wall of mountain behind me.

Drs. Henry Blackburn and Josef Brozek of Minnesota, Flaminio Fidanza of Naples, and Eric Zetterquist of Stockholm are there with the Yugoslav team -- Dr. Ratko Buzina, who is the general manager; the internists, Drs. Arpad Hahn (professor of medicine at Zagreb), Ivica Mohacek, and Svonimir Grgic; the nutritionist, Dr. E. Ferber; and Dr. Diefenbach, hematologist. Then there are four dietitians plus Miss Pekkarinen from Helsinki, who ran our dietary surveys in Finland two years ago; two medical students, who labor mightily as technicians; and a car driver and handy man. Temporarily, we also have with us two nutritionist-physicians, Drs. Milan Mitrovic of Belgrade and Vera Ragazzi of Ljubljana. Eunice Brozek frequently drives one of the cars over the local goat tracks. Margaret is under far less pressure as laboratory manager and general pinch-hitter than in our previous field operations; she was laid up with pneumonitis for a few days but now seems to be fully mended.

So, we are quite a party when we sit down to dinner each night. This isolated hotel was developed for communist big-wigs, but lately it has been opened to the general public. Tucepi is rather remote for most of the world's tourists, but the magnificent scenery, climate, and bathing would attract them by the thousands if travel here were easier. Boat service from Italy, 150 miles across the Adriatic, is scarcely worth mentioning. By rail, one must start from central Jugoslavia to end 40 miles north at Split, and the roads are unbelievably bad. Now it is the end of the season and we have the place to ourselves save for occasional motorists, mostly Germans, who arrive weary and dust-covered, recuperate for a few days, and

regretfully start back again on the long trek to paved roads and more familiar languages.

Our interest here is in the fact that this is olive oil country, with a stable and extremely cooperative population who get plenty to eat and whose diet is very high in oleic acid but which provides little meat and dairy products, that is to say it is very low in saturated fats. After the work is finished here, the team will move to another part of Yugoslavia where the people and mode of life are much the same except for a diet relatively rich in animal fats. In each area, we have chosen a group of villages to contain about 750 men 40 through 59 years of age, and we hope to examine practically all of these men. I was skeptical whether we could better the record we made last fall on the island of Crete (97 per cent of all men of given age examined in our 13 villages), but so far we are batting 100 per cent and the Yugoslavs insist that this will continue. The population is so stable and cooperative that apparently we can count on a complete follow-up in the years to come. The idea is that the Yugoslav doctors will check the health status of these men yearly, and then, in about five years, we shall repeat the whole business. In the meantime, dietary surveys will be made to cover all of the seasons of the year. We have the same plan in mind for several areas in Finland, where heart disease is very common, as well as in Italy, Greece, Norway, the Netherlands, and Japan. All this is contingent on finding the money to finance these operations on a long-term basis; in each area, there is some local support but a central pool of funds is essential.

On this side of the Adriatic, a wall of jagged stone, a mountain range 3 to over 6,000 ft. high skirts the shore line. The pale gray cliffs seem to plunge straight down into the sea with only a narrow girdle of dark green at the water's edge to break the descent. Actually, the dark green proves to be a strip of pine woods and behind this on slopes reaching up to the foot of the cliffs and extending up ravines to over 1,000 ft. are olive trees, almost as gray in foliage as the rock and stone-terraced vineyards. Here and there, perched on spurs of the slope, are little groups of white houses and above them one can make out a faint lighter-gray line doubling back on itself in ascending zig-zags before disappearing in the shadows of a notch in the ridge far above us. That is a stony track over which one can go by car -- with a strong low gear, stout brakes, and a good head for heights -- to the mountain villages on the other side of the range. The main road to Dubrovnik, 100 miles south, is much the same, high above the sea for the most part, and our survey villages are along this road or not far from it.

All of this sounds as though we are going to a lot of trouble to find difficult terrain, but these geographic features contribute to the stability of the population and their diet. A few of the young men leave to seek their fortunes elsewhere; some of them manage to send home money from Australia or South America, but they seldom return and, beyond the age of 30 or so, the people stay put. We find them universally kind and cooperative, less exuberantly gay than the Italians with whom we have worked so much but hospitable and completely reliable in providing information and keeping appointments. They work hard but one seldom sees extreme physical exer-

tion, and there seems to be plenty of time for sitting around talking and, in the evening, singing. Any small group of men will provide at least a good quartet, even without the spur of alcohol, though this last is apt to be involved too. Alcohol consumption is high and there is plenty of drunkenness, especially on Saturdays and Sundays. The local wine is rough but very cheap and slivovitz (plum brandy) provides the extra "shot in the arm."

Medicine is largely socialized; the doctors have official jobs but can have private consultations in their spare time. Everywhere here, the work day begins at 7 a. m. and ends at 2 p. m., and almost everyone uses the afternoon and evening to supplement the income. Farmers, however, mostly work on their own and are no longer "collectivized" in this part of the country. Much of their produce they sell directly to the consumer in the local markets, and there is a constant stream of horse- and ox-drawn wagons and hand-pulled carts going into the towns in the mornings and back to the farms in the afternoons. Automobiles are so scarce that there is little "discipline" on the roads, so one drives with one hand on the horn and a quick foot on the brake.

But to get back to medicine and the doctors, the average technologic level is kept down by the paucity of modern equipment and the limitations of laboratory training in the schools. Here, of course, we see real rural medicine. When Margaret was ill, Henry Blackburn wanted a good "work-up" -- x-ray, hematology, blood culture, etc. Even though it was Sunday evening and the movies were on, the facilities of Makarska (population 4,000) were quickly put at our service. Dr. Jurela and his staff at the local "health home" rallied 'round; hematology was done without the help of a mechanical stage on the microscope, and the chest film was taken by positioning Margaret in front of the tube and the doctor holding the cassette against her chest with his bare hands while the exposure was made. Of course, all is very different in Zagreb and the other big cities, but, even there, the practice of medicine gets along with much less of the expensive gear which we have become dependent upon at home.

As to the disease picture, it is far too soon for us to say much except that in these villages, as in Crete and southern Italy, it is remarkably hard to find any cases of definite coronary heart disease and all abnormalities in the electrocardiogram seem to be pretty rare. Every man is getting an exercise test, but postexercise ST depression is anything but common. The clinicians are finding it pretty dull, I fear. The monotony of negative findings and normal ECGs is occasionally relieved by a patient who has heard of this work and has traveled from Split or elsewhere to beg for an examination, sometimes with his electrocardiogram in hand. In the villages, we have found some cases of hypertension and several mitrals but no infarcts, no angina pectoris, no bundle-branch block -- this for the first 270 men, average age 50. What surprises me most is the fact we have found no real invalids among the men aged 40 to 60 in these first three villages, the nearest approach being an asthmatic, several moderately severe (but still working) bronchitics, and quite a few residues and mutilations from war injuries.

This region was the site of continued, savage fighting during the war and practically all the men -- and many women -- were either fighting soldiers or at least part-time guerrillas. As a result, many villages lost a fourth of the entire male population, and it is rare to find a family that did not have at least one person killed by the Germans; one of our local colleagues lost five brothers. So, the men we study are what the statisticians would call a "population of selected survivors." Perhaps some of our most indefatigable critics will suggest that the Germans managed to kill all the men who otherwise would have survived to have heart disease now!

This last is the kind of nonsense that provokes Ernest Klepetar, our actuarial colleague from Saint Paul, to his most derisive laughter, but, as he points out, some few but noisy statisticians are capable of just that frenetic interpretation in the effort to deny that there are great differences in the frequency of coronary disease between peoples who subsist differently. Incidentally, the Klepetars, who have been with us for a month, have just left for Austria, but we shall meet them soon again in Italy.

But now the time is short if I am to have my swim. I want to do a deep dive off the little stone pier of the hotel to touch bottom. The water is so clear that I can easily see the occasional sea urchin among the white stones at the bottom, but it must be 15 or 20 ft. down.

All the best,

As ever,

Armed Keys



Notes from a Medical Journey

Naples, Italy
26 October, 1958

Dear Jay:

We are just back from a Sunday picnic on the Sorrento Peninsula; the moonlight sparkles on the Bay of Naples; lyophilizing of the food samples from Dalmatia is almost finished; notes from Henry Blackburn and Josef Brozek in Yugoslavia bring good news; a letter from Henry Taylor in Minnesota says all is well under the stadium; and we look forward to a good dinner at 9:00 p.m. In other words, our only care is the prospect of the confusion tomorrow when we load all our gear on the "Guilio Cesare" for the trip home. On the boat there will be work to do, including reviewing a stack of fellowship applications for the American Heart Association, but the pressure will be off.

For our last evening in Yugoslavia, the officials of Makarska and the local doctors gave us a nice dinner, with "Good Bye" worked in a design of flowers on the table, and presents, including a huge photograph of Makarska signed by all. The speeches were few and simple, but then someone started to sing and it all ended in a regular song fest, mostly Yugoslav folk songs but interspersed with New Orleans jazz rendered by Henry Blackburn on the clarinet and Eric Zetterquist on the piano.

After driving to Split, we took a local boat for the fifteen-hour trip to Rijecka ("Fiume") and loading the car was something to remember--driving up two long and wobbly planks at an angle of 30 degrees while a dozen men screamed instructions in Croatian and then caught the car at the top and proceeded to manhandle it aboard in a space with only inches to spare. Everyone, including myself, was dripping with sweat by the time the impossible had been accomplished, but the sailors were in high spirits, especially when I gave them the half bottle of slivovitz I had in the car--they promptly up-ended it, washed out the bottle, and returned it with thanks!

We were "de luxe" with a tiny cabin, but every inch of public space on the boat was jammed with people and their baggage -- trunks, suitcases, jugs of wine, sacks of potatoes, baskets of grapes, etc., so that getting from one end to the other of the narrow passageways was a gymnastic feat

involving ten minutes of saying "excuse me" in every language we know. But, even after all night in such quarters, everyone was in good humor and eventually they were all ashore on the dock at Rijeka, the gangway was removed and replaced by planks, the car was manually heaved around until it was poised at the top, and down I slid into the seething mob below.

Crossing the border took only five minutes (no questions even about currency) and then we were racing along a fine Italian highway, reading signs in a language we could understand, and feeling as though we were practically back in Minnesota. At Padova, we met the Klepetars exactly as scheduled and went on to Bologna for talks about heart research with our old friends, Drs. Arrigo Poppi and Teodore Posteli. They are keen to start a program near Bologna modeled after ours in Yugoslavia and elsewhere, and I want to help because the local situation is interesting in that part of the Po Valley. More animal fat is eaten there than anywhere else in Italy, and there is certainly much more coronary heart disease in the hospitals than in Naples, Sardinia, and Calabria where we have worked before. But the diet has not been studied accurately, and no proper survey of the frequency of heart disease has been made.

And so to Rome and many conferences, especially with Dr. Vittorio Puddu, the new general secretary of the International Society of Cardiology, and Dr. Wallace Aykroyd, director of the Nutrition Division of the Food and Agriculture Organization of the United Nations. The plan for a systematic program of international research on the epidemiology of heart disease, on which I have been working hard, is coming more and more into focus and we have strong backing in Italy. A team organized by Dr. Flaminio Fidanza has made a trial of our new scheme of trying to examine all men in a pre-selected area; they missed only 1 man out of 790 aged 45 to 65 in the chosen area in the Province of Marche!

In Rome, we agreed that Professor Gino Bergami of Naples, at one time or another minister of Food, of Education, and of Health for Italy, would be the ideal chairman for the Italian Committee, so I was delighted when, at Naples, he immediately assented. Accordingly, on the boat home, I shall ponder the details for a five-year plan for Italy to mesh with all the other plans, even though we still have no guarantees about the necessary funds. Among other things, we suggest that the Naples Institute could be the central reference laboratory for Europe, doing most of the cholesterol and food analyses from all over, because Fidanza can maintain meticulous precision and the going rate for a good technician is under \$100 a month. And, at only twice that salary, we can employ full-time, good, young internists with several years of special training in cardiology!

The salaries in Yugoslavia are even less, but there are too many other complications in that country -- money control, lack of all kinds of material supplies, red tape, and vast delays in sending anything in or out across the frontier. A first-class airmail packet (printer's proofs of our new book, "Eat Well and Stay Well") took three weeks from Makarska to New York, and a cablegram from Helsinki took a week to reach me! The note I just received from Henry Blackburn took less time, but you can never tell what to expect.

Henry's note, by the way, informs me that the record of 100 per cent response in the examinations has continued to almost 700 men, and, so far, not a single infarct has been found. In a couple of days, the team will have finished the Dalmatian area, being helped by Dr. P. From Hansen and his wife, a general practitioner, who arrived from Copenhagen for the last two weeks of the work. Then Henry will hurry to Rome to review the records from Marche as well as to go over the chest films of the men we studied in Calabria last fall. He and Puddu, who is also chairman of the Committee on Nomenclature for the International Society, will have a good opportunity to make a practical test of the ECG classification system we are tentatively proposing for population studies.

The second phase of the Yugoslavian research operation, identical to that in Dalmatia but situated in an area of Croatia where the diet is different, will start about November 10 with the same team plus Dr. Rautaharju of Helsinki who, in spite of his youth, is increasingly recognized as the coming man in electrocardiography in Finland. In January, he will come to Minnesota to stay the better part of a year with us at the lab. He may take part in studies on the hypoxia test with Ernst Simonson and on vectors with Otto Schmitt but will spend much of his time on the big job of analyzing the ECGs from Yugoslavia and the most recent series from Italy. We are anxious to compare these with the records on some 1,500 railroad employees obtained by Henry Taylor and the crew of our railroad laboratory during this past year.

We had hoped to see Arrigo Poppi again here in Naples on his way back from a trip to Sicily, but he 'phoned from Messina to say he is delayed. Poppi is in a predicament peculiar to academic life here in Italy. All heads of departments in the Italian universities are drawn from a pool of men who have been certified as eligible for such responsibility by committees of professors in the several fields who, moreover, place the candidates in a kind of rank order of choice. Poppi was so certified in the top bracket for internal medicine about three years ago but until now has not been called to a chair by one of the universities, and the rub is that this certification has a time limit of three years, after which one has to begin all over again. So, as the deadline draws near, poor Poppi has been frantically rushing all over Italy to find a medical school that will give him a chair. Generally, each school has 2 chairs in medicine, 1 for theory and 1 for practice, so there are some 40 chairs in all Italy. Since Poppi is certainly one of the best of the younger men in academic medicine here, a fine clinician and teacher and very active in research and writing textbooks and monographs, he ought to be a prime choice. But he is identified as espousing the specialty of cardiology, and this is viewed by men of the older school as being a threat to "compartmentalize" the all-embracing art of medicine. The same view is by no means unknown in the United States, but it does not have such serious consequences. We have far more good jobs, and the difference between a department head and everyone else in the school is not nearly as great as in Europe.

Flaminio Fidanza has just come in bringing a new Italian coffee machine as a present to Margaret and a batch of mail, including a long letter from Paul White full of talk about the new organization of the International

Society of Cardiology, my responsibility as co-chairman of the Research Committee, and his desire to get collaboration from the Russians and the Red Chinese. We thought for a moment that we might see Paul here in Italy because, when the Pope was stricken, the Italian newspapers said that Dr. White might be flying to Rome. But Dr. Galeazzi Lisi, the Pope's personal physician, did not summon him.

Incidentally, Galeazzi Lisi is in a real mess -- to the delight of many -- and has been kicked out of the Vatican and may well be publicly denounced by the Rome Medical Society. For years, he has offended by his blatant self-advertising, including his name in bronze letters 2 ft. high running all around the building where he has his offices in the Piazza Barberini, and he is reputed to have been connected with all sorts of dubious drugs and money-making treatments with outlandish claims. But the commercialization of his personal account of the last hours of the Pope, death-bed microphotos, etc., was just too much. When the storm broke, he returned uncashed a very large check for his exclusive story about the end of the Pope, but it was too late.

And now it will be too late for dinner if I do not sign off. I shall see you soon in Minnesota where, I fear, we may exchange freezing weather for the golden days and warm nights we have been enjoying in Italy.

As ever,

Arvid Keyes



Notes from a Medical Journey

Geneva, Switzerland
19 March 1959

Dear Jay:

Cynicism is the prevailing mood about international conferences on the political front but not in science and medicine where politics, at least of the governmental sort, are out. When we go off to a World Health Organization meeting to plan research programs, as I did last week, we really expect to accomplish something. We are all of one mind about health and disease and about understanding and harnessing nature for the common good of mankind, and there are no conflicting ideologies in such a meeting.

Yesterday we finished the sessions of the Scientific Group on Cardiovascular Diseases to advise the director general of WHO on research programs. I hope we did accomplish something, but, at this time, the outcome seems far short of preconference aspirations. This is normal, at least for me; an incurable optimism is bound to be disappointed in the immediate aftermath, especially when, as today, Lake Geneva is a leaden sheet under low clouds that obscure the surrounding Alps and the promise of spring seems to be forgotten. Still, the buds are swelling and anemones are thick in the woods, and I do not doubt that the vague generalities of our report will give way to more useful details some day.

The whole idea of research is relatively new to WHO, which, until lately, has been devoted to international cooperation in the application of established medical knowledge, particularly in communicable diseases. But that is not enough. Though governments may drag their feet, the peoples of the world demand a pooling of resources to tackle the big problems that dominate the health of today in the more developed countries and that of tomorrow in the underdeveloped countries.

This is a hasty trip. On the jet 'plane from New York, I had barely finished the after dinner coffee when it was orange juice and "What will you have for breakfast, Sir?" The longest spell of leisure was

waiting at London Airport for the 'plane for Copenhagen. I had 'phoned Copenhagen from Minneapolis, and, when I got there, I found Finnish and Swedish as well as Danish colleagues foregathered to discuss plans for collaborative research on heart disease, diet, and related matters. What I really wanted was sleep, but anyway we are now all set to start a long-term study in Finland in September, with five or more years of follow-up, on all men aged 40 to 59 in two rural areas, and the same plan, with only money needed, is fully developed for Italy and Yugoslavia. I expect Drs. Mollenbach and From Hansen will soon be ready with a program for Denmark, where the official mortality from coronary heart disease is low, though the hospitals are full of it. Perhaps the Danes are just tough, but their vital statistics embarrass me because they have a rather high-fat diet (but lower than ours). They do ride bicycles, which pleases Paul White.

In between things in Copenhagen, Dr. Martti Karvonen (Finland) and I saw Dr. Tybjaerg Hansen do a double heart puncture, one needle in the left auricle (via the suprasternal notch) and one in the left ventricle (anteriorlateral approach between the ribs). They have done several hundred of these now, all smooth and apparently easy. In the 35-year-old woman in question, the pressures showed clearly that her mitral commissurotomy, performed sometime ago, had done the job. The patient's vague complaints developing in recent months were put down as probably psychogenic.

In between things in Copenhagen and here in Geneva, I noted universal enthusiasm engendered by the newspaper reports of the "Health for Peace" bill in our Senate, sponsored by Lister Hill and our own Hubert Humphrey, plus 54 other senators. The peoples, as well as the doctors and medical scientists of the world, are eager to accept this kind of American leadership and imagination, even though the Russians may splutter that it is unnecessary for them. The suggested initial price, \$50,000,000 a year, could do wonders if properly administered. This is really a bargain basement opportunity for making friends and advancing medical knowledge. We must be grateful to Paul White and Howard Rusk as well as to Senators Hill, Humphrey, and the rest who have labored to develop the idea.

This fits in with the new look toward research of WHO, of course, though how it will all mesh in terms of operations remains to be seen. WHO has had many limitations in its first ten years of life, and it is still woefully short of staff and experience in the research field. Now there will be committees and boards, memoranda and reports, and all sorts of tiresome but necessary bureaucratic maneuvers before real things happen, even after (and if!) Congress passes the bill.

Naturally, I hope the end result will make it more readily possible to proceed with our master plan for studies on the development of heart disease in a dozen cohorts of men representing population contrasts in the frequency of heart disease and the mode of life. Tonight I fly to Rome where our Italian and Yugoslav colleagues will be ready with plans and preliminary data on the populations sampled in the last eighteen

months. I already know we can count on magnificent cooperation from the populations (96 to 99 per cent of all men responding) as well as enthusiastic collaboration from the professional groups involved.

Before leaving home, Henry Blackburn, Ernst Simonson, and others checked and rechecked the 12-lead electrocardiograms, before and after an exercise test, on 1,054 men aged 45 to 59 in our two areas of study in Yugoslavia (98 per cent of all men of the age, sick or well, in the areas). They found a total of 12 probable or possible old myocardial infarctions. This is something like one-third the frequency of such findings on the men of that age in active service in the U. S. railroads now being studied by Henry Taylor. Much the same discrepancy holds for ST and T changes. We are all anxious to see what happens to the men with ST and T abnormalities in all of these series. The follow-up program we hope for would give the answer.

And so to Rome, and sunshine I hope, but alas! for only 2 days, and I shall miss Easter Sunday there, with the great throng in St. Peter's Square and the fashionable parade and sidewalk tables on Via Veneto and a thousand bells ringing.

As ever,

Armed Keys



Notes from a Medical Journey

Lisbon, Portugal
13 September 1959

Dear Jay:

It is only 9:00 A.M. but I am grateful for the lacy shade of a pepper tree that filters the Portuguese sun from my wicker chair in the garden. This is the home of the Leite family whose 17-year-old son, Tony, lived with us last year in Minnesota. I am stopping here twenty-four hours on my way home from another hasty medical journey, mainly to start our new long-time research program on heart disease in rural Finland. Lectures and conferences filled up all free time along the way, and the final high point was a long-awaited wedding yesterday in Rome.

My former student and perennial collaborator in Naples, Flaminio Fidanza, seemingly a hopeless case of misogamy at nearly 40 years of age, finally went to the altar with all the trimmings--church full of flowers, big wedding reception, and the ceremony blessed by a telegram from the Pope. Best of all, the bride seems to have just the right temperament to balance (or control?) Flaminio's exuberant personality. So, Paul Dudley White and I were delighted to stand at the altar as "testimoni" and to sign the legal documents for the marriage of "Fidanza, Flaminio, and Alberti, Adelberta."

Since both families are prominent in the medical world of Italy, the wedding brought doctors and professors from all over the country. The doyen of the throng, Professor Gasbarini, who retired from the chair of medicine at Bologna some years ago, gave the principal toast to the newly-weds. The bride's father, who is a senator of Italy as well as the professor of the history of medicine at Rome, gave a sparkling and erudite response as host. The champagne flowed and my cheeks were lacerated from kissing wire-bearded Italians. But, only the ladies kissed the bride.

Before the wedding, I flew to Geneva with Dr. Vittorio Puddu, secretary-general of the International Society of Cardiology. There we met Paul White and Dr. Pierre Duchosal, vice-president of the society, for

talks with officials of the World Health Organization. We are concerned to have the society apply its good offices in the new orientation of WHO toward cardiovascular and other noninfectious diseases as well as to its original emphasis on sanitation and old-fashioned public health work in the family of nations. The World Health Assembly has directed WHO to get busy in this new direction, including research. In the cardiovascular field, WHO has recently acquired an able young staff member, Dr. Fejfar of Czechoslovakia, but otherwise lacks personnel who know the subject. So WHO must lean heavily on outsiders and cannot, or should not, attempt to leave developments in the hands of public health administrators and statisticians. As you know, I insist on the great value of biostatistics in planning and analyzing research, but I do know also that some statisticians are unaware of their limitations and they are apt to be the most arrogant in their pronouncements and the most forward in attempting to direct research.

Geneva was only exploratory. Later in the month, some of us will meet again in Mexico City with Drs. Ignazio Chavez, Gunnar Björck and others with responsibility in the society to discuss what can and should be done. Besides concern that WHO capitalize on the good will and expert knowledge of the members of the society, my own interest is that both the society and WHO promote the kind of international collaboration in epidemiologic research that engages me so much.

So, tonight I fly home to clear the desk a bit, gather a fresh supply of shirts, and take off for Mexico with Margaret who stayed home thus far to see the children settled in schools and colleges. Anyway, this trip was all work and no play, that is, except for a lot of excellent dinners and good talk after hours.

As usual in Finland, some of the best fellowship was associated with sauna baths. When men share the sauna together, body and mind relax and wit and wisdom as well as perspiration emerge. The weather turned (from about the hottest summer on record) the day after I arrived in Finland, and the north wind turned the water in the gulf upside down. As a result, my sauna that night involved a nice thermal contrast -- 240° F. in the sauna and 40° F. in the water into which we plunged afterward.

My last sauna, a week later, was at a logging camp deep in the Karelian woods 10 miles from the Russian frontier. Afterward, we sat in the camp kitchen and watched in amazement while the forestry superintendent and assistants ate slabs of high fat cheese and ultrathin slices of black bread hidden under a quarter of an inch of butter and washed it down with extra rich milk.

These are representative of the men we found to average 292 mg. of cholesterol per 100 cc. of blood serum. Our host, aged 50 or so, had already had one coronary occlusion, which is considered about "normal" in that part of the world, just as we would accept bifocal lenses at the same age. These are tough men who work hard at everything, including

fighting Russians, and philosophically accept their major health hazards of coronary heart disease and the accidents of their occupation.

Anyway, the research program is going beautifully, mainly thanks to Dr. Martti Karvonen, the tireless support of Professor Paul Soisalo, and Professor Paavo Roine's excellent organization for dietary studies. We are confident that we shall cover at least 98 per cent of all men aged 40 to 59 in the selected region. This will mean about 800 men, and the follow-up over the next five years as well as the prevalence findings in this year's survey should teach us much. An exactly parallel study will start next month in rural West Finland, and all of this work is coordinated with identical programs in rural areas in Italy, Yugoslavia, and Greece.

In between things on this trip, progress is being recorded on forthcoming foreign editions of our book, "Eat Well and Stay Well." Dr. Magnus Pyke is nearly finished with the British adaptation and the Karvonens are not far behind on the translation into Finnish, so both of these editions should be in print before many more months. The Spanish and Portuguese editions are less far advanced. The Italian edition, which I thought would go rapidly with Puddu, Fidanza, and Arrigo Poppi doing the translating, is still in negotiation and nothing definite has been arranged about other translations under consideration -- French, German, Swedish, and so forth. However, it is clear that physicians, their patients, and just plain people in many areas are interested in adjusting the diet to reduce both body fat and blood cholesterol. United States sales of the book are 30,000 plus in the less than six months since publication.

Now the car is waiting for a drive to the seashore and a lobster luncheon. I may write again from Mexico.

As ever,

