



PROFESSORIAL LECTURE
HEART OF THE MATTER:
DEALING WITH CARDIAC DEATHS

PROFESSOR DR. SAZZLI SHAHLAN KASIM
MBBCh, MRCPI, CSCST (Cardiology), FNHAM, FAAM,
FAsCC, FRCPI, FESC, Msc Health Econs (LSE)

Professor of Medicine and Consultant Cardiologist
Faculty of Medicine UiTM
Director
Hospital Al-Sultan Abdullah UiTM

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Professorial Lecture UiTM

Professor Dr. Sazzli Shahlan Kasim

Heart of The Matter: Dealing With Cardiac Deaths



Program

Program Kepimpinan Perpustakaan Siri 7

Auditorium 1, HASA UiTM

27 September 2023 (Rabu), Jam 9.00 pagi

Nama Professor Dr. Sazzli Shahlan Kasim
Tajuk Heart of The Matter: Dealing With Cardiac Deaths
Jangka masa : 3 jam 10 minit

Transkrip:

- 1:45:44 : Bismillahir Rahmanir Rahim. Assalamualaikum warahmatullahi wabarakatuh. That was a long speech. Honorable Prof. Dr. Mizan Hitam, as the Assistant Vice Chancellor of the Institute of Leadership and Development, UiTM. It is indeed a long speech. I am grateful for the presence of distinguished guests, colleagues from the Faculty of Medicine, colleagues from the Sultan Abdullah Hospital, my beloved family, and also my friends and acquaintances from school, from the university until now. Welcome to the Sultan Abdullah Hospital, UiTM.
- 1:46:35 : I am used to saying that. So, let us begin. First of all, I am grateful to Allah for allowing us to gather here today. I am very fortunate and grateful for all the blessings that have been bestowed upon me. God willing. This morning, I would like to share with all of you, a little bit of experience and also a challenge that I, as a human being, a student, a child, a lecturer, a teacher, a father, have faced in my relatively short life.
- 1:47:24 : This is just the beginning. But before I forget, I would like to express my gratitude to the Ministry of Welfare, Ministry of Finance, Ministry of Health and Welfare, for making this possible. They have been working tirelessly day and night to ensure the floor plan, layout, process, and so on. God willing. Thank you. Okay.
- 1:47:56 : Allow me to speak in English and Malaysian while giving this speech. The heart of the matter dealing with cardiac death. Before we begin, we have to understand where the entity in front of you comes from. As Prof. Nasrul said, five children. Someone next to me said, five? Okay. I wanted to suggest six, but he didn't allow it. At first, I went to a religious school. Unfortunately, it was a St. John's Institution. Why? I grew up in Taman Ibu Kota, in Gombak.
- 1:48:46 : At the time, it was one of the best schools. It has a history. Datuk Seri Najib, our former Prime Minister, has been there with his siblings and relatives. It's one of the best schools. It's still one of the best schools in Kuala Lumpur and Malaysia. The students are very creative. At St. John's, one of the logos we are proud of is the eagle. Eagle. The function of the eagle is it will fly high, it will watch, don't be seen, with sharp eyes.



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- 1:49:19 : When it's hungry, it will jump. It will eat. Then, it will disappear. It's not busy. But people see it, it will fly. It's such a symbolic representation of a person, of life, to be able to oversee in macro and micro manner. That's the eagle. After that, after SRP, I did not do PMR, SRP. Not that young. I emigrated to Taiping, a very rainy city. Many of my seniors and juniors from Taiping are here. Dr. Izzat is my senior.
- 1:49:58 : Luckily, he didn't bully me. Dr. Syafina, my junior. In Taiping, I had other problems than at St. John's. At St. John's, it's a city school. So, the society is different. After school, we hang out, play chess, clubbing, etc. That's the truth. I'm a good boy. Home is far away. In Taiping, the majority of my friends are from... At that time, I met my friends from Kelantan, Kedah, Sabah, Sarawak, etc. It's a bit far from the city.
- 1:50:30 : But, alhamdulillah, they are also my close friends until now. After Taiping, we learned about life. Alhamdulillah, I got a scholarship from MARA and I ended up in Ireland. The story in Ireland is a bit strange. I was only 17 years old. I was about to register with my friends, Hisham Talib, Muhammad Syaril, Hud Azlan, all of them were here for an English course in December. SPM was in November. On the day of registration, the phone rang and I was informed that I got a scholarship to Ireland.
- 1:51:08 : I was happy because I thought I was going to London. London is a big city, magnificent, great, I always heard about it and watched it on TV. When the plane landed on the 1st of January in Ireland, on the 5th of January in Ireland, the plane landed and I looked out and it was green. There were white dots. I thought it was a cloud. It turned out to be a flock of goats. When the plane landed, I looked at Hud with me. Are we being tricked? I stayed there for 18 years after I completed my foundation, leaving cert, degree, subspecialty training, until I graduated. My 18 years of experience in another country has taught me a lot.



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- 1:51:51 : Another country. It's true that there's gold in another country and stone in our own country. When I came back to Malaysia in 2012, I felt the same as I did in 2013. It was great, right? But actually, when you're in another country, you don't feel satisfied. Even though you've been working for a long time. Yes. My son agrees. No. Okay.
- 1:52:17 : I'll be quick. You always feel like a second-class citizen no matter what you do. And that's not nice. Because we feel that we have a lot of potential but we don't reach it. There, I did a lot of yoga activities as you can see. It's not a six-pack. It's not a six-pack. Believe me. It's an optical illusion of a big wetsuit in the top right-hand corner.
- 1:52:47 : Okay? When I came back to Malaysia, I joined the Faculty of Medicine in 2012. There, I learned how to be a doctor to teach and take care of patients and perform functions as a heart doctor after getting a degree in Ireland. One of my tasks is to meet patients and conduct tests such as echo, ultrasound, echocardiogram, angiogram and also to open valve channels to form a slow pulse to release an unhealthy heart.
- 1:53:17 : This is the Faculty of Medicine. If you want to see from this picture, in this room, I was met by the late Dato' Khalid Yusuf on Friday, 21 January 2012 for three hours. It's a long story. Before that, a week before that, I went to the CTC building here. Here. On the 4th floor, I was sitting with Dr. Zubin. Dr. Zubin was here. At the time, with Dr. Zubin. He was in training at the time.
- 1:53:51 : I went into Dr. Zubin's office. I saw Dr. Zubin in the office. When I went in, I said to the two elderly on the left, I wanted to meet Dr. Zubin. Oh, he's inside operating. Okay. I met the staff. I wanted to meet Dr. Zubin. Oh, he's inside operating. Okay. I didn't realize the two elderly were actually the late Dato' Khalid and Pak Lah. I was a bit embarrassed at the time. That's why I had to train for three hours in this office.



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- 1:54:19 : MasyaAllah. After that, I immediately joined UiTM. UiTM was lucky because I was about to enter UKM. But UKM was late for the interview. Alhamdulillah. One of my functions as a heart specialist was to take care of heart patients physically as well as do heart procedures such as helping people with heart disease to open the pulmonary duct.
- 1:54:41 : This is a scenario where if I wasn't at the Hospital of Al-Sultan Abdullah, I was at Sungai Buloh, this would be my condition. Or maybe somewhere else. But usually, it's like that when we open the pulmonary duct. I have to thank Dato' Amin, Professor Dato' Amin. Because in 2015, I had to get a slip disc. It wasn't funny.
- 1:55:03 : When we operate a heart like this, we have to wear an iron suit to avoid X-rays from the X-ray machine. If we don't wear it, it's sure to cancel. The iron suit weighs 7 kilograms. 7 kilograms, dear. As heavy as you. When you operate for 2-3 hours, sometimes 4 hours, for a long time, the back of your leg will hurt. I went to Dato' Amin. Dato', I can't operate because my back hurts. Dato' said, it's okay, you can try something else.
- 1:55:30 : So, he bought me a device called Zero Gravity. It depends on X-ray protection from the ceiling to allow us to operate for 4 hours. He doesn't love me. He wants me to die early. Next, I also want to thank Prof. Dato' Fauzi who has a clinic this morning. But we met this morning. Because in 2016, he asked me if I could be the director of UiTM Hospital. I said, I'm not good at it. I can take care of the heart.
- 1:56:06 : But he said, you can. But I said, I have to study. Where do you want to study? I've always wanted to study in London. I was lied to going to Ireland. So, I got to go to London. London School of Economics. Where I did a Masters in Health Economics. Sort of like an MBA. And many more modules. And Alhamdulillah, it was very beneficial. This is the result of the scholarship from UiTM. Sponsored by RM200,000.



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- 1:56:35 : This was in 2020, when I graduated. And after that, I became the director of the hospital. And now, we're busy giving back to the community. Like last week, I gave back to the students in year 4 and 5 in UIA to help them. Okay. That is my story. That is my journey for my life. I can finish the professorial lecture right here if everyone agrees. But I think I'll continue.
- 1:57:03 : Okay. What is cardiac death? What is cardiac death? Cardiac death is when everyone dies. That's the condition. Okay. But we always hear people die of shock. And we always ask if it's because of the heart. You all need to know that the shock usually happens when the heart stops beating. Sometimes, it can be caused by a brain hemorrhage. Sometimes, it can be caused by blood clotting.
- 1:57:30 : Sometimes, it can be caused by aortic aneurysm like what happened to my father. He's still alive. He's at home. I forgot to say hello to them. But that is the cause of death. There are many causes of cardiac death. And unfortunately, sadly, cardiac death is still the number one killer in Malaysia and in the world for the past 20 years. It hasn't changed. Before 20 years, there were diseases like TB, pneumonia, sepsis.
- 1:58:01 : But for the past 20 years, there has been urbanization and modernization. And most of the deaths are caused by cardiac disease. But only last year, COVID-19 managed to cut the death from cardiac disease. We were relieved. Alhamdulillah. As I said, cardiac disease is a killer. Sometimes, we see heart attack or heart disease or heart disease. Or the heart suddenly appears and the disease becomes chronic. After a while, the heart weakens and can't function.
- 1:58:37 : Other organs will shut down and die. But there are also a few people who didn't reach that point. Suddenly, they were found dead. Sudden cardiac arrest. Suddenly, they didn't wake up. Suddenly, after playing football, he fell asleep and didn't wake up. This happens a lot. This is called sudden cardiac arrest. Most of the causes of sudden cardiac arrest are caused by coronary diseases.



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- 1:59:05 : Problems in the arteries of the heart. I'll explain it in a moment. But it's also caused by genetic diseases. And it's also caused by more strange things. Infections in the body. Infections like COVID. Where many people have COVID. Myocarditis. There are also sudden deaths. That's the story. And even though we have introduced various government policies... ..to reduce the risk and burden of coronary diseases. Policies for screening.
- 1:59:46 : Strategies to ensure patients take their medicines. Policies to avoid smoking. And so on. You can find it on KKM's website. The burden of coronary diseases is not reduced. I took this slide from my colleague, Dr. Faisal. A few weeks ago, we held a conference in KL. Faisal asked me to be online. I and Alan Fong, the president of the National Heart Association who is represented by Mr. Sanichi were in the conference.
- 2:00:20 : And we were busy discussing the burden of coronary diseases. This session was held live on Facebook. Along with a radio broadcast. And I did research on cholesterol. Actually, the government and other countries' interventions have their benefits. If we look at those who have heart attacks those who are coming in with a heart attack. we can see that their cholesterol levels are lower than those who don't take their medicines, for example.
- 2:00:53 : Meaning, people who are at risk get their medicines. And their cholesterol levels are lower than before. Therefore, the burden of heart attacks is actually lower. If we look at the population level in Malaysia the burden of heart disease is like smoking, high blood pressure, cholesterol, diabetes. It's increasing. One in five have diabetes.
- 2:01:19 : Okay? And that is a problem. It's not cheap. When I was a hospital director I saw that the cost of diabetes and heart treatment was high. They prescribed. I had to countersign. It was millions. The impact on the government was billions. If we look at the burden of healthcare financing indirect costs. Meaning, if you have a heart attack, you can't work.



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- 2:01:51 : Right? If you have a heart attack, you can't work for a month or six months. If you have a bypass, you can't work for three months. Right? Sometimes six months. You have to do cardiac rehab. If you have a heart attack, you can't work anymore. You can't. You have to apply for a pension. That's loss of economic income. Loss of productivity. If you die, you can't work. You have to leave your kids. Or you can't come to work.
- 2:02:14 : Those are all indirect costs. Direct costs in terms of hospital admission is also high. Billions. And because of the high cost the health white paper we're waiting for was born. Okay. The problem in terms of policy to implement it to the whole country is indeed difficult. My wife and I. My wife, Dr. Mazlena, in a green shirt with a small child. She works at KKM, NIH. We always fight at home.
- 2:02:48 : What else does KKM want to do? You know it's not difficult. Why don't you do this? It's a boring conversation at home. But that's the reality. We are both fighting the same battle. We want to reduce death. We want people to live longer. We want people to live healthier. But it's impossible. It's challenging. It's very, very difficult. Because of all the weaknesses that you can see on the slide here. All the threats that you can see on the slide here.
- 2:03:17 : We want to ban smoking. We can't do that. We try to enforce a rule. Reverse. We try to prevent people from smoking in restaurants. People still smoke. They don't care. They are not brought up the same way as other people. Japan can do it. In Ireland, in 2005 smoking ban. The whole country. You can't smoke in closed buildings.
- 2:03:38 : Everyone complies. Two years later I was a heart trainer at the time. You can sleep soundly. You don't have to go in and out of the building in a hurry. In cases of heart attacks. You can fall down. That is the benefit of a strong policy. But we don't have it. God willing. I'm showing you this building again because this is where I first started in 2012. I've mentioned this level. That's where checking out the football field at KSKB with Dr. Zubin.



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- 2:04:06 : This is a historic moment. Because if it wasn't for this moment I don't think I would have joined UiTM. I would have joined UKM. Zubin said, after operating the heart here, we can go down to play football. I haven't reached that level in 12 years. Just by looking at the level. Until now, I'm still sore. Anyway. In 2012, after I went to the Keslab facility in Sungai Buloh in January.
- 2:04:39 : A week later, Dato' Khalid called me for an interview. Two weeks later, I was formally called for an interview at the Faculty of Medicine. Two weeks later. Mr. Rizal, please take note. Two weeks, Dato' Rizal. We were formally called for an interview at that time. A month later, I received an offer letter. That was how serious UiTM was at that point. And I have a lot to be grateful for to the late Dato' Khalid.
- 2:05:08 : Because when I joined. I didn't know him. And everybody said, are you sure you want to go to UiTM? Dato' Khalid is difficult. Okay, let's try. And he said, it's easy. Sazzli, this is cardiology. You build it up, he said. Okay, what do you want me to do? You build it up. Very simple. Isn't that right, Dato'? That's what he said. But I didn't know he was looking at me from afar. From level 9. Just by looking. By looking at the statistics. But we have a very strong team. We have very strong nurses. Capable nurses.
- 2:05:45 : Motivated people. We were able to build from scratch in 2012. We started Cabbage with the presence of Prof. Zamrin and team in 2013. And we started Primary Angioplasty in 2013 as well. And from there on, we just grew. Sungai Buloh is quite unique. It's an existential issue. It's a life or death situation. That's how it is.
- 2:06:10 : The funny thing is, I'm from Sungai Buloh. That's why I'm confused. We've established a Faculty of Medicine in Sungai Buloh. We've established a hospital which the KPT doesn't know about, by the way. We withdrew the budget from the university. The university was frustrated. We operated a heart centre with the intention of saving lives. So, the university couldn't shut down. We did a lot of weird things.



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- 2:06:34 : But the intention is important. To help people. To save people from heart disease. Why? Because at that time, the Faculty of Medicine was located at Sungai Buloh and Selayang. A lot of heart patients who went to those facilities were forced to be referred to Serdang Hospital. It's far. It's hard for people to park here. Imagine if you had to park at Serdang. It's hard to park for an hour's travel.
- 2:06:56 : But, praise be to Allah. I've been with the Faculty of Medicine for 10-11 years. I've learned a lot. One of them is clinical trials and research. In which a variety of publications were conducted together in international journals. Because this is a professorial lecture so I have to include academic and research elements. And it has given a big return to the cardiology unit. 3.7 million for the past 11 years. It's not going up.
- 2:07:29 : And not only that. The clinical trials have also given a big return. 60 million for the past 11 years. And it's the biggest contribution between the cardiology unit and the cardiothoracic unit at Sungai Buloh to finance the hospital at Sultan Abdullah. So, praise be to Allah and thank you to all the teams of the heart facilities at Sungai Buloh. They're wonderful. They didn't complain even when they got to work at 3 AM. They didn't complain even when they got to work at 8 AM. They didn't complain.
- 2:08:01 : It's amazing. It's hard to find people like them. In 2016, when I was asked to be the hospital director it was a bit strange. Before I was appointed, there was a pro team committee chaired by Mr. Dato' Bakar. And there was also Dato' Amin. And I was given a portfolio responsibility. Sazzli, you're in charge of the hospital. Okay. Where's the hospital? It's not there yet.
- 2:08:21 : What do I have to do? You look at the layout and interact with the end user. This is Dato' Amin's line. I'll repeat it. You look at the layout and interact with the end user. It's easy. Dato' Amin's line. Thank you, Dato'. A bit more than that. But alhamdulillah, it was made very easy. Our first office is at level 6. That's me and Mrs. Rosalina Rokli. FTE half of the time with me. Half of the time with the Faculty of Medicine.



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- 2:08:50 : They helped a lot. And one of the early tasks was first, to make sure the hospital meets the vision and mission of UiTM. That is number one. In the early stages, the hospital was beautiful. But the interior was a mess. So, when we look back we revised the layout. And we used C-CAP as an excuse. Remember, I went to St. John's. A creative school. Dato' Seri Najib was there. So, we went down and looked at the layout. We told the contractor and TRI.
- 2:09:25 : The layout doesn't comply with C-CAP. It doesn't comply with the regulations. You have to change it. Really? You don't have to change it. You have to change the regulations. So, he changed it. He shouldn't have changed it. Alhamdulillah. Because of that, a lot of what you see in front of you takes place. In terms of the design. The fit out. The layout. There are some hits and misses. You can't get 100%. And for that, I have deep regrets.
- 2:09:58 : But I think we can be satisfied with what we have now. At the beginning, I was with Prof. Abdul Rahman Omar. Tree planting. Willow tree. This willow tree has a very deep history. It has a history of 10,000 years. Why? The bark of the willow tree produces one component. Salicylic acid. Salicylic acid. In the time of Pharaoh before he went to war he took the bark of the tree and put it in his pocket. He put it there. His pocket. He used it. When he went to war, he fought and got hurt. He took the bark and bit it.
- 2:10:41 : Because of the salicylic acid. Which is aspirin. Which is a painkiller. Which is the medicinal property of the willow tree. So, when we planted the land, we planted three willow trees. Those three trees were big and were in the concession area. They were too big. They couldn't be transferred here. But that is the starting point. Standing on top of the world. I didn't build this hospital alone. No, no, no.



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- 2:11:10 : I sat on shoulders of Dato' Amin, Dato' Bakar, Dato' Khalid, Dato' VC, chairman, minister. All these people who have worked hard for UiTM to get this hospital. It's a long story. If you want to know, you can read Ibrahim's book about the struggle to get this land to build this hospital here. This is the output. I can't put it in the index. There's no ISI. There's no impact factor. But this is what you have.
- 2:11:43 : And this is an effort from all of you. From all of you. And for that, I have to say thank you for giving me the best cooperation to get here. If anyone is depressed, you can see Dr Faizah. We have a psychiatric ward too. So, hospital construction took place in 2016. And then it was due to complete in 2020. And then COVID hit. When COVID hit, we were puzzled. Who will take care of COVID in Sungai Buloh? Who will take care of COVID in Puncak Alam? Can we open a hospital in Puncak Alam? It was very stressful. We said, okay, we have to take part in taking care of patients from MAEPS. For example.
- 2:12:34 : For this, I have to mention a few key team players. Medicine, respiratory. Anesthesiology, Prof. Haris and team. Respiratory. My staff nurses in Sungai Buloh at that time. Without dropping the baton at all. We said, we have to convert 10 more ICU beds. The next day, it's done. We said, we have to open ward 4, level 4. Open 10 beds. Take all patients with high flow nasal cannula. The next day, it's done. Amazing.
- 2:13:14 : When we wanted to open the vaccination centre that was something else. That was an experience that I will never forget. Because it was not just me, but the whole of the university. Not just the whole of the university, but the whole of the community. Even the ministries. To initiate the vaccination centre. PPV, mega. We said, mega. UiTM. From that activity alone, we were able to vaccinate about 100,000. Not as much as Dato' Irma Hizam. The World Trade Centre KL.



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- 2:13:48 : That is megatron. The level of Pusat Vaksin. But we aspire to be. From that experience, we made many, many friends. Alhamdulillah. Now, the topic is heart disease. I've shown you how, despite all our policy we have not been able to reduce heart disease. I've shown you, how one of our UiTM contributions. We produce cardiology. We produce researchers. We produce the cardiothoracic team. We produce the staff with the ability. We produce master students.
- 2:14:20 : But we are still not seeing a drop in cardiovascular disease. Maybe too early. What can reduce cardiovascular disease? This. COVID. A microscopic virus that you cannot see. Took the whole country by surprise. Focus on this graph. Bottom left. That is the number of heart attacks. During the lockdown in 2020. It actually dropped. This is the number of stents that the heart doctors put. It actually dropped. Many cardiologists are ready to go to the hospital. Especially in private.
- 2:14:56 : Loss of income. Cannot put stents. Universities don't care. It actually dropped. Another evidence is fasting during Ramadhan. Those who fast... ...the risk of heart attack is also reduced. Those who have high blood pressure know this. When they fast, their blood pressure is okay. They don't smoke. Their blood sugar is controlled. We know this when we are in a hurry. The number of heart attacks is also reduced. We can relax. We can go home early. Standby to break the fast.
- 2:15:30 : That is the reality. Two very strong interventions. The rest doesn't really work. Why? Because of our attitude. Because of our upbringing. Because of our the way I think it's our school. I have to be careful. My mother-in-law is here. Dr. Maznah Halimunda. She used to be the head of education. Technology. She was a lady boss. When you have a lady boss as a mother-in-law you know who is the boss at home. It's not me. Some of the achievements at HASA there are many.



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- 2:16:08 : And the proudest of it all was our auditorium next door. Last year, 23 July. The inauguration of di-Pertuan Agong. I don't think it has ever happened in the history of UiTM where two "Duli Yang Maha Mulia". His Majesty The Yang di-Pertuan Agong and Sultan Selangor, and Permaisuri came down to inaugurate the hospital. It's very historic. We have also conducted clinical operations.
- 2:16:34 : Right now, we are at almost 200 beds at HASA. We are at about 60 beds in Sungai Buloh. Sungai Buloh has challenges. But, God willing, by the end of next year or early 2025, we will try and achieve full capacity which is 400 beds. Okay? God willing. But the journey in HASA has been really something else, I have to say. We started small, with clinics. And then, we opened the internal health care. And then, we opened daycare. And then, we opened OT. And then, we opened ICU. And then, lastly, we opened emergencies. We lived the disaster till last.
- 2:17:10 : Because, emergencies have different resources. It requires it's a mini hospital. It cannot shut down 24/7. So, therefore, we really had to plan. And for all of those who work in HASA you all know how much we love planning. But, sometimes shocks hit our system. Shocks are things that we cannot notice. For example, COVID is a massive shock. We were attacked in Sungai Buloh recently. That's a massive shock. Things that we cannot predict will happen. Those are shocks.
- 2:17:43 : What determines and what defines us as doctors, as health care providers how do we negotiate those shocks? So, it's very easy. Because, as I said we have passed COVID. We passed it. And I think we handled it well. With Sungai Buloh. With Dewan Berlian. With the hospital. With our colleagues. With KKM. With other universities. And so on. We handled it very, very well. Alhamdulillah. And we got away lightly. My wife worked back to defer.



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Jangka masa : 3 jam 10 minit

Transkrip:

- 2:18:13 : But, from a university point of view I think we did very well. And those are some of our challenges in this hospital. Right now, we are moving towards MSQH. To get a benchmark. We want to be like our brother in UKM. Because we need quality care. I am part of the problem. I'll tell you why. When I joined in 2012 at that time, we didn't have a regulatory. No framework. Remember, Dato' Khalid told me, you build cardiology. Very simple.
- 2:18:43 : How? I don't care. Who? Up to you. You build cardiology. I'll watch you. But you build cardiology. So, it's up to me. Network. Find friends. Find colleagues. Find members and so on. When we do things that way without framework sometimes bad things happen. The intention is important. We want to help people. But sometimes we cannot see things that we don't know. The fourth quadrant. There are always things that we don't know. We don't know that we don't know. Even worse.
- 2:19:15 : Being part of the problem being part of the culture when we join HASA, we want to change. And that's why all of you will know that we will be going for our MSQH accreditation. God willing. And pray for our success. Because that will be the stepping stone for HASA to go to the next level. God willing. Okay. I see that everyone is asleep. I will go a bit faster. This is our strategic blueprint. We have mapped it to the university. In HASA, we want to be the best.
- 2:19:44 : We have our mission and vision. Our vision is to be the premier academic centre. We have four missions. To lead in terms of healthcare service. In terms of research. In terms of teaching. And also in terms of healthcare financing. I think there is no healthcare financing in other universities. But we put it as our mission. That is part of our mission. And we have all these strategic trusts that will guide us to that mission. Thank you, Prof. Raya for helping with these slides. Prof. Raya is head of our network engineers.



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Transkrip:

- 2:20:17 : And she helped me with all these slides. And there's a lot of other products in our pipeline. Not only are we producing providing clinical service but we also save the government 100 million from our own IT centre that we developed. We will be among the three centres in the country that will have a Phase 1 clinical trial lab with our BE Centre in Sungai Buloh. We have a project with Pfizer and also the Majlis Perbandaran Kuala Selangor to do health screening on a monthly basis. Part of our research activity.
- 2:20:48 : We have launched our full-paying patient. The first university hostel to do so. Where we will generate more revenue. And also we have started providing health screening to our staff and patients. Where do we go from there? As a hospital provider is the next step. So we have proposed another 600 beds. We have proposed a science park and also a faculty of medicine. We also have proposed a community centre at Pintu Satu, Puncak Alam. To reduce the burden on the patients.
- 2:21:25 : When people come to the hospital we should avoid people coming to the hospital. They should really go to their primary community carer. Because when they come to the hospital it's expensive. Especially when we charge here. So it's not a good idea. So we try to decongest the hospital. And we hope to be the catalyst of what we call the medical city that will attract innovation. That's number one. And this is what I ask from all my staff. On a weekly basis.
- 2:21:51 : We do monthly meetings every month. We say the same thing every month. We will promote research. We will promote innovation. We will promote new things. Because why? It will generate visibility. Trust. And also economy. Now we are collaborating with a lot of companies. Pfizer. Pharmaniaga. All the local international. Philips. So that industrial training can be done. Research can be done.



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2:22:18 : Innovative ideas can be transferred. Commercialisation can be faster. So all these things are taking place in the background as we speak. Because we need to go further. Hospitals are not enough. The burden of heart disease is still high. And we have identified our strategy. We have three steps. We will promote digital health. Our second step, natural compound. We will work together to plant chilies. Organic chilies, for example. And then hopefully we can achieve the aspirations that Yang di-Pertuan Agong made last year.

2:22:48 : That is to produce our own medicines and vaccines. Which is challenging. Okay. With that I shall give you two minutes to enjoy this next slide.

[Video Playing]

Okay, now comes the second part. Instead of being a professor, director of I'm now a clinician. This is Dr. Sazli and this is what we are going to talk about, heart disease.

2:28:00 : Heart disease kills, sometimes it takes people away, your loved ones from you. Dramatically, suddenly, sometimes you're waiting and it just happens. Here, thank you to Dr. Hanis, two of his friends, almost 36, 36 year old, healthy people, playing football, one waiting for his wife in the car, found dead, leaving small children.

We've heard of celebrities, Ashraf Sinclair, taking a nap after a shower and then found by his wife, tak bangun tidur. Bob Lokman is a patient of ours, patient of Zubin and myself, we look after him for many, many years. He's got heart failure and one day he just passed away at home, had a very weak heart.

Bottom left is my neighbor, who I look after. A very young, she came to see me two years ago, she's actually part of my book and thank you to my neighbors for allowing me to use a picture, where she suffered from heart failure after pregnancy, what we call postpartum cardiomyopathy. Despite medicine, one day I received a phone call at 3 o'clock in the afternoon, saying Rina tak boleh bangun.



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2:29:21 : So I came back from hospital, I went into the house and she was there on the landing. She was already cold, her downtime was more than 30 minutes. The ambulance came, they asked me if I wanted to resuscitate, I said there's no point. I know her history, I know she has a very weak heart and her son, who was two at that point, was sitting at the corner crying. This is the saddest, that's my cousin. His parents are here.

One day while I was in Bangkok, I received a phone call saying, after Asar, he prayed and he just didn't wake up. He's such a good boy. And he died in his sleep, just like that.

2:30:33 : Very sad. Sudden cardiac death is no joke. It's underappreciated. We don't understand it, we don't know who can get it. We have very, very poor framework here in Malaysia. When I was in Dublin, I trained in TALA for about a year with a mentor who was screening young people with cardiac death, family.

We were drawing family trees for three, four generations, trying to look for a mutant gene that can increase your risk of dying suddenly. There's a lot of disease we know of that is hereditary, genetically driven, that can cause sudden cardiac death and these are the ones that attacks people who are younger than 35. Above the age of 35, most of the time, the causes of cardiac death, whether it's sudden, whether it's a heart attack, is going to be from what we call atherosclerosis.

In my CV, you would know that I'm the chairman, I was a past chairman for Malaysian Society of Atherosclerosis, which is part of NHAM, where we try to address and raise awareness to people to get their cholesterol reduced. The strongest intervention that we have, which is very straightforward, fire and forget, is to use a drug called statin, which reduces your cholesterol. Fire and forget.

That's one risk factor that you can control. There are 12 more, there's 11 more and some of those are impossible to control. For example, air pollution, noise, poor sleep, stress, these are the things that you cannot control, impossible.



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Transkrip:

: With cholesterol, you can. Blood pressure, technically you can, but sometimes you forget your medicine. You forget it for one day, your blood pressure surges. It's that quick. Cholesterol medicine is slightly different. Diabetes, technically you can, but let's face the facts.

You're in Malaysia, you have nasi lemak, roti canan, teh tarik, kopi tarik. All of us are exposed to those things. If you have diabetes, dietary intervention is nearly impossible.

2:32:45 : These are my friends, Robert Olakonstan, 2008. I call them my friends because when they published this paper, I was part of it, but they never mentioned my name. Not so much friends.

But we look at the incident of sudden cardiac death in Ireland and we found that the majority are due to coronary disease. Some are caused by other things, like genetically driven, thickened heart muscle, inflammation, short-circuiting of your electrical system of the heart. Those things can cause sudden cardiac death too.

2:33:21 : When you talk about cardiac death, the majority would happen above the age of 35. That's when the graft starts to spike very, very quickly. There's some in the very, very young group, cardiac death.

And in the very young, it's usually due to congenital. Babies are born with holes in the heart, vessels that's overlapping sideways, and chances of survival is going to be very low. In the elderly above the age of 35, most of the time it's because of atherosclerosis.

If you want to talk about wellness, that's what you have to address. How do you achieve and reduce the burden of atherosclerosis? Remember, atherosclerosis, what it means is that those cholesterol that you eat from your food, most of the time if you're healthy, it'll do nothing. It's absorbed by your gut, it goes to your liver, it's excreted back into your gut, it goes out in your poo.



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Transkrip:

: The fat that you eat will go out in your poo. Some of it converted for healing, some of it converted to cure dead cells and stuff like that, but most of it is excreted. But if you have inflammation, what is inflammation? Radang. You know radang? You fall, your hand is red, you get hurt, it's red. Radang, on the skin. The same process happens inside the body.

2:34:46 : You smoke, those toxins causes radang to the blood vessel. You stress, your stress level releases a lot of stress hormones that causes radang to the blood vessel, in patches, not all at the same time. Tak cukup tidur? Sama. Terlebih berat badan? Sama. Obesity leads to inflammation. Diabetes? Sama.

Can you control these things? No. Impossible. How can you reduce it? Eat healthy. Makan sayur ajalah. Tak boleh makan nasi lemak. Is that good enough? Can you survive it? Jangan minum teh tarik. Exercise setiap hari. I try to, it's not easy. Not easy. When the heart stops, it usually goes into this rhythm, what we call ventricular fibrillation. Okay, I have a nice video, but the video does not want to play. I will describe to you. Top right hand corner is an ECG. You go to a doctor, complain of chest pain, you get an ECG.

2:35:52 : Usually it looks like that. The spikes are regular. When your heart decides to stop, the electricity in your heart fires in a chaotic manner, which is the ECG at the bottom, which is pictured at the bottom. So instead of contracting like this, your heart is now doing this. It's not pumping. You're not getting any blood into your brain, and if you read from my book, you start losing consciousness.

When we operate in the cath lab, we're dealing with people's heart. We put up little balloons to open up the blood vessel. When the balloons goes up, blood does not flow down the artery, meaning your heart muscle is deprived of oxygen for a few seconds.

We do that intentionally to open up the vessel. Sometimes it doesn't go very well, because we have to open up for a long time, or when the balloon goes up, it causes a lot of clots to travel down the artery. What happens then? The muscles deprived of oxygen, instead of pumping, it stops.



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Transkrip:

: Instead of getting blood to your brain, you're not getting blood to your brain. What happens next is exactly like this. The patient will check up and then, all of a sudden, his eyes will start rolling backward.

He'll start having a seizure. He'll do this. And if we don't intervene there and then to raise up the blood pressure to return cardiac output, the patient will surely die.

That's what we face in the cath lab. Those three boys sitting there, the cardiologists, hello. Those are the things that they have to be wary of when they do the procedures.

That's the risk that we take when we deal with these things. I tell you this, why? Because the majority of you, men, unfortunately take it too easy. When we have, when you are in my shoe, having to deal with scenarios like that, from very, very young people, age 30, age 40, age 20, with a heart attack, and you know that they are this close to death, that can be avoided if they look after themselves.

You don't want to wish that on anyone. So that's ventricular fibrillation. These are some pictures of atherosclerosis where this is the main blood vessel.

You have all this gunk at the aorta. What it causes is it causes a narrowing of the blood vessels at the feet. Sometimes it can cause narrowing of the blood vessels at the brain, causing stroke.

This is an aneurysm. This is your main blood vessel at the stomach, the aorta. It goes down like this.

It splits into two, left and right, and this part is swollen. My dad had an aortic aneurysm. It actually leaked in 2016.



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Transkrip:

2:38:42 : He nearly died. Alhamdulillah, he survived through a miraculous operation. But he was diagnosed with undiagnosed hypertension. His son is a doctor. The two of them, me and my brother-in-law, both didn't know he had high blood pressure. But that's part of the reason why he had that aneurysm. He survived. Alhamdulillah. I'm very big into atherosclerosis.

2:39:06 : I talk about it all the time. This was a couple of weeks ago when we gave a lecture at KL. And I will bore you with this process because you need to know. What will happen when you eat fat is that it will be absorbed by the heart. The excess goes into the blood vessels. LDL cholesterol, your bad cholesterol itself, most of the time, if you're healthy, tak ada radang, tak ada masalah.

Tapi kalau salur darah itu ada radang, because of misal rokok, stres, tak cukup tidur, diabetes, obesity, dan sebagainya, it starts to attract all this bad cholesterol to stick to the blood vessels. And that's the problem. This is why you have this process.

2:39:42 : That bad cholesterol will start to go into the surface and it is eaten up by one of the cells. It becomes a foam cell, a macrophage. It builds up, it builds up, and builds up, and builds up. Lama-lama, salur darah itu sumbat. And the process carries on. And you have various different stages of atherosclerosis.

Daripada normal, when you are in the womb, and when you are born immediately, atherosclerosis process starts taking place. And the ones that gets to our attention in the cath lab or cardiology service are usually like this. Kalau dah macam ini, kadang-kadang terus hantar kepada Prof Dr. Raja Amin, Prof zambin, for bypass.



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Transkrip:

2:40:22 : But that's not much we can do. This slide is to show you that the burden of heart disease has not dropped for the past 20 years. You have various types of heart attack. Ada STEMI, ada non-STEMI, just in case you want to know. This is an example of what we do. Bila orang sakit dada, sakit jantung, kita akan buat ECG.

So for anyone yang kenal siapa-siapa sakit dada, terus pergi jumpa doktor, buat ECG cepat mungkin. Why? Because you want to pick up certain patterns like this ST elevation, ST elevation, ST elevation dekat sini. And what it shows is that daripada ECG ini, kita sudah boleh agak sumbatnya di belakang kanan ke, bagian depan ke, bagian belakang ke.

And bila kita buat angiogram, kita terus boleh tahu. Bila sakit jantung, bila jumpa saya, saya nak buat angiogram secepat mungkin. Sebab kalau ada sumbat, saya nak buka secepat mungkin. Sebab apa? Sebab lagi cepat saya buka, lagi laju saya boleh pulangkan oksigen kepada otot-otot itu, lagi selamat, lagi lama saya boleh hidup. Kerosakan pada jantung itu akan jadi sangat kecil. That's what we want.

2:41:16 : Sometimes kita capai, sometimes kita tak capai. Okay, here's a scenario. Orang ini kena sakit jantung, darah mengalir tapi slow. Next picture, kita dah letak STEM. You boleh nampak STEM kat sini. Kita dah sedot all this clot dalam salur darahnya.

Kita letak STEM kat sini, tiba-tiba lepas itu salur darahnya mengalir lancar. Nampak kan? This is an angiogram. This is what happens when you have a heart attack. You have a blocked artery, you have an open artery. Very simple. This guy nearly died, but he did. Remember, 50% of people yang kena heart attack will not make it. 50%. A lot of the time yang datang hospital itu, they will have a mortality rate of between 10% to 20%, depending.



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Transkrip:

2:41:57 : A lot of them would actually succumb to sudden cardiac death. Yang tiba-tiba mati mengejut di rumah, tak bangun dan semua itu, chances are it's a heart attack. Especially early in the morning.

Why? Early in the morning, about four o'clock in the morning, your body releases a lot of cortisol. And with this cortisol, your blood pressure goes up, your heart rate goes up, your body gets ready for, your body is trying to get ready to get ready for the day, but that is when radang can sometimes become unstable. You have a blocked artery.

Can you reverse atherosclerosis? The answer is yes. You can use medications such as statin, where after many, many years, this is a study, not by us, but sometimes we see this when we do our intravascular ultrasound. After many, many years of being on a statin therapy where your LDL is really, really low, ideally less than 1.4, you can get plug regression.

Why? All these plugs, all this cholesterol, all the cholesterol that is sticking to the artery, the body tries to heal by either taking it out back into the blood vessel in the lumen itself or by absorbing into the vasa vasorum, which is a little, little blood vessel that supplies nutrients to the coronary arteries. So that process takes place all the time. So with intense statin therapy, you can see that in patients with high risk plugs, when they go on statin therapy, the plug volume actually improves.

You can open up your blood vessel. You must avoid inflammation. You must avoid triggers for atherosclerosis in the first place for that to happen.

I show you this slide because this is new knowledge to me. We focus on bad cholesterol, which is LDL. My question is always, patients with diabetes, their LDL is low, but when it enters the heart, all the blood vessels are smooth. From the stomach to the brain to the legs, everything is smooth. Why? Because of this. LDL is a molecule that needs inflammation to enter the blood vessels.



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Transkrip:

2:44:05 : Remnant cholesterol, which is everything else apart from LDL and good cholesterol, your triglycerides and so on, actually doesn't need inflammation to enter the blood vessels. It will pass through the heart. That is part of the mechanism why diabetics get diffused coronary disease.

2:44:21 : Therefore, we have to refer them to our surgeon. Because if we were to put in stents, it's not just one. It's actually 10 or 12 stents, which is very unhealthy, very expensive. One stent is RM5,000. 10 stents is RM50,000. If you do it in private, it's RM500,000.

2:44:36 : So, that's important. Statins can help reduce your LDL and also reduce your triglycerides. Sometimes, when I talk about sudden cardiac death and risk of cardiac death, we know, as I said earlier on, there are genetic problems that can cause a short circuit to the heart.

There are problems that can cause the heart to be thick. There are also times when it gets infection or inflammation. Myocarditis, for example. Here's an example of a case that we did. We published this. Very young fellow. 25 years old. His father died at the age of 49 with a heart attack. Suddenly, he was diagnosed with a heart attack, a heart attack. We brought him into the operating room and did an angiogram. We saw a narrow blood vessel in the front. This is called a widowmaker. Widowmaker is the main killer of men, especially those who smoke. He didn't smoke. This 25-year-old boy didn't smoke. Why do we call them a widowmaker? Because it affects the very top of your blood vessel.

2:45:35 : This is like if the patient's doesn't have any water, then, one of the vessels doesn't have any water. He was buried there. Yeah? So, he was safe. We couldn't understand. But what we found was that his cholesterol was super high. 12. He had bad cholesterol. You all have bad cholesterol. It's probably between 2 or 4. If you take a sedative, it reduces by 50%. When it's 12, if you only take medicines, it might not be enough. Therefore, we were very lucky. I showed you earlier on that we do a lot of clinical trials.



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Transkrip:

2:46:12 : At that point in time, we were doing clinical trials on a new drug, a monoclonal antibody, which you inject into your tummy every month. That drug is super powerful. It can reduce your cholesterol by up to 90%. When we were screening patients, recruiting patients, even one patient said to me, this is a good drug, doctor. Why? Oh, my sex life is good. Suddenly, my hair grows.

Okay, this is all a side effect of the drug. Positive side effect. They like it. But because of financial reasons, we were only able to give that particular medicine to the boy for about six months. After that, it stopped. But what we found was that even giving and lowering cholesterol by using those injectables for a short duration, we were able to reduce that level for up to one year when we followed him up, just by taking all the tablets alone. He's still doing very, very well. This is not a nice scenario. This man was watching TV with his father and suddenly did what I showed to you just now.

2:47:20 : His brother was a nurse, performed CPR straight away, and he was resuscitated for 40 minutes. Then he came to us along the way because we had to do his angiogram. Initially, ECG was normal.

Later on, we found that he has an abnormality in the ECG, which can lead to sudden short circuit of the artery. He was diagnosed with Brugada syndrome. For this genetically inheritable condition that causes short circuit electrical conduction in your artery, in your blood, in your muscle, in your heart, we have to utilize a battery called an ICD. Expensive. Also expensive. About RM60,000

Heart disease is never cheap. That's part of the problem. There's also other genetically inheritable conditions like this ventricular cardiomyopathy, which I bring out here because we had an interesting case. This boy was suspected of a heart attack. Collapsed. When we asked his history, and this is the importance of taking a medical history. 10 years ago, his brother also died in the same way.



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Transkrip:

2:48:38 : Luckily, there was a post-mortem at that time. And, when we look back, apparently, his brother had a genetic problem. ARVC diagnosed on biopsy. And then we had to implant another battery into him to prevent him from collapsing again from ARVC. So what have we learned so far? Heart disease kills. There's two main types of heart disease. The one that's caused by atherosclerosis and the one that causes death in young people, which can be due to genetic, can be due to an electrical problem, can be due to a muscle problem, can be due to a valve problem, can be due to inflammation, radang. Despite all that we have done, we have not been able to reduce heart disease except for COVID. And I don't think anybody here wants COVID back again, correct? You do.

2:49:33) : So the next part of my lecture is going to be on what we as a group have been trying to do to try and reduce this problem. So we need to be disruptive. Usual business as usual in terms of trying to fix this system will probably not work. We know that we have risk cause that was driven, derived from America, for example, that probably underestimate our risk. We know that we do ECGs in patients that we suspect of heart disease probably too late. We know that trying to get them examined by doctors, sometimes they don't come to doctors.

We know that ideally everybody gets an ultrasound to the heart to see the valves and to see the heart muscle. That's not easy to do because of excess. So all these things are challenges. But if we can combine them all into one system, then we have the ideal solution, which is this little handheld device or a tricorder, like a Star Trek. You go to a sick person, you don't need a stethoscope anymore, you just put a tricorder. That would be ideal. Can it be done? That's what we're trying to do. So I'm stupid enough to try and venture into these things. My wife told me this morning, some of the things that we do, it's not because it was easy.



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Transkrip:

- 2:50:51 : We do it because initially we thought it was easy. And then when we actually start doing it, it's actually very, very hard. In 2015, I had a PhD student who started dissecting into our registry. We contribute to the National Cardiovascular Database Registry that's maintained by Mr. Sanichi here. So far, it has enrolled 140,000 patients with heart attack across the country from 26 different hospitals. So we access that data because we want to try and predict and see.
- 2:51:20 : We want to figure out what are the characteristics of people that die early, die of shock, and so on and so forth. So we have developed our AI database predictor solution. We call it many, many things. My heart risk, my heart ACS, my heart air, my heart BP, my heart echo, my cardiac rehab, and so on. You can find it on our website, which is live, to predict cardiovascular risk and sudden death. Our data source is big data, but my wife would only laugh at this. I deal with 120,000, 130,000 people. Her analysis is 30 million people. 30 million versus 140,000 is like she put, but that's what it is.
- 2:52:07 : I'll show you a video of some of our output. So the ideal scenario is that we can predict your heart disease before it happens. The ideal scenario is that we can pick out patients who are at very high risk, especially if they're in kampung, out of state, rural, so that they can be transferred to a tertiary level or to a super hospital faster. That's the ideal state. We have risk calculator, but we don't take it seriously because we don't believe in it, and our resources are very, very limited. So what we have tried to develop is we have tried to develop a system that can refine your prediction so that it's more accurate.
- 2:52:50 : We have shown that our solution is more accurate than what we currently use. We're able to improve prediction by 30 to 40 percent. This is an example of prediction of heart attack, my ACS. We're using machine learning and AI-based algorithm. We're able to reclassify patients into either high risk or low risk so that they can be looked after better between 20 to 50 percent. So that's quite a big, quite a big amount.



Program

Program Kepimpinan Perpustakaan Siri 7

Auditorium 1, HASA UiTM

27 September 2023 (Rabu), Jam 9.00 pagi

Nama Professor Dr. Sazzli Shahlan Kasim
Tajuk Heart of The Matter: Dealing With Cardiac Deaths
Jangka masa : 3 jam 10 minit

Transkrip:

- 2:53:19 : We received a grant from MOSTI a couple of years ago to look at the impact of air pollution and cardiac death. Again, we have a large database from all people with heart attacks. We marry that database with data from air pollution for the past 10 years, and we try to figure out if you come in with a heart attack, for example, what's your risk tomorrow of dying when the air pollution hits 200? Or we try to figure out if you have a heart attack tomorrow and the air pollution is 100, but you live in Kuala Lumpur where you have a lot of other air pollution and stress environment, et cetera, et cetera, what is your risk of getting a heart attack at that point? This is an evolving field that we are going to try and explore a bit more.
- 2:54:02 : I will work with air pollution because air pollution kills, yeah, and it's very difficult to avoid. As I said to you, you have 12 risk factors to look after. The one that is blue you can deal with because that's behavioral, alcohol, smoking, low physical activity, what you eat. The one that is in red is because you are not looking after yourself and there's probably some genetic reason to develop disease. The one that is in green, susah. You cannot change the environment.
- 2:54:35 : It's very hard for you to change whether the sun is very, very hot or very, very cold. It's very, very challenging. So air pollution is there. It's high up there. So what we've done is that when we marry the two data together, we found that using machine learning and root mean square error, we were able to predict individuals that have a higher risk of death when the air is dirty or when they're in the wrong location for some reason. These are some results. You can read this in our paper. I will not bore you because a lot of these things are very, very technical. So that's in patients with heart attacks who are going to die sooner.

What about in normal people like yourself without any disease at all? Part of our problem is that a lot of our risk scores, a lot of our risk scores are developed from Western countries, from America, from UK, from US. They are not from Malaysia at all. How can you take this Mark Sully, 6 foot 7, mata biru, kulit putih, makan sausage and hotdog and say that his risk is sama macam you? Tak boleh.



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Jangka masa : 3 jam 10 minit

Transkrip:

- 2:55:36 : Chances are you will misestimate your risk and that is why we did what we did. We do what we did. 2017, Anis Safura is part of this guideline. They recognize that in Malaysia, we don't have, we have not developed our own calculator. So and this risk calculator, every country uses different one and they are always producing better and better and they are always trying to get you to do better. Negara menjajah kan? Europeans will say use ours. Americans will say use ours instead. Australians will come up to you and say ours is better. So we said nah lah, let's develop our own and see whether it is truly better. So that's what we did. We validated against all these risk scores. So we found that some risk scores actually performed very, very well in Malaysia.
- 2:56:15 : And then we applied what we have been doing before this. We applied a bit of AI and tried to figure out what are the variable predictors that could actually predict risk in healthy people. And our solution is slightly better than Framingham, unfortunately, only slightly better by 4 to 5 percent. Not that great because Framingham itself is actually very, very good for Malaysia, where our NRI is about 15 percent. Still pushing the boundary of knowledge, now you know. And from this, we have developed an online system that people could actually log on to and we have interactive databases and interfaces and so on, so that lay person can know their risk, doctors can know their patient's risk, and also help people understand better.
- 2:57:02 : We will evolve this project so that it will be more useful, more commercializable obviously, but more useful to the laypeople and to patients alike. Inshallah, it's life. Our next step, and this is where Syawal, you have done some work into this, is to try and estimate blood pressure using all the data that we have. Because remember, if you have high blood pressure, it's probably one of the risk factors that is very, very difficult to control. You think your blood pressure is controlled, but when you check during the course of the day, it might not be very, very well controlled, despite taking medicine. And that's part of the reason why a lot of people are still suffering from sudden stroke, sudden heart attack, collapse in debt, and so on and so forth.



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Transkrip:

- 2:57:43 : They think they have high blood pressure, they take medicine, they think they're under control, but they're not, and that's part of the problem. So MyHeartBP is our work that will try and identify continuous blood pressure reading from the watch or wearable, so that you will know your numbers at all times. Another work that we are doing is using ultrasound, which is called MyEcho, and this is great, and this is probably the best thing that I have to offer you when you come to see me, from a diagnostic point of view.
- 2:58:12 : In the past, when you see a doctor, they will greet you, talk to you, ask you about your history, put a stethoscope, listen to you, give you medicine. If you see a cardiologist, we don't use the stethoscope that much, we use the MyEcho. We take ultrasound, put it on the chest, and we visualise the heart directly, so that we can see the structure, we can see the valve, we can see whether or not the heart is functioning normally or not, and that's very, very important, because then we can give you the right advice.
- 2:58:39 : A lot of the time, in rural especially, where you have rheumatic heart disease and so on, they're not diagnosed early enough, they're not referred early enough, the intervention is not done early enough, and that leads to a lot of the late presentations that we see. Some of the things that we have been doing, we've been publishing, it's been recognised, there's no point trying to predict something without providing a solution. Hospitals are scarce, so the one thing I learned from my Master's in LSE, is you need to democratise healthcare, you need to disrupt healthcare.
- 2:59:12 : So we need to deliver point of care, bukan pada dokter, bukan pada nurses, bukan pada klinik, kepada pesanan. Individuals should be more empowered to have the knowledge, the right diagnostic tool, so that they can look after themselves better. One of my pain points is with patients after a heart attack.

They come in with a heart attack, I see them in clinic, I shake their hand, give them medicine, I give them advice, they go home, six months later, they come back with a heart attack. Why? They did not stop smoking. I'm too busy to tell them to smoke, I have a smoking referral programme. They have a lot of people that they have to look after, they give advice. It's not effective. We try to be effective, but we're not



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Transkrip:

: So this is our solution. But what MyCardiacRehab is, is an app solution that our patients will hopefully in the future download, and use it as a guide, as a coach, as a health coach, as a life coach, as an exercise coach, so that they can recover in a safer environment, have people at the background to prompt them, to guide them, to help them along the way, giving them advice on medicine, on lifestyle, on diet, on sleep, etc. That's pretty much it.

3:00:34 : That's MyCardiacRehab, and this is the work in progress that we are trying to do, because if we get this right, then the next phase is actually to deliver the solution for other type of diseases as well. And these are some of our researches that we have been working with. Okay, I didn't realise I'm going to be talking this long. I'm so, so sorry. One of my hobbies is actually travelling, and I've travelled to many different countries, 46. I hope to increase it to more, but I don't think my kids will let me, unfortunately.

And from my grandparents' house, my auntie is here, she still lives there, Rumah Kampung ke Taman Ibu Kota, we moved to St John's, we moved to Taiping. At some point I was in Africa with Kunta Kinte, and all these African tribes, which is very good. And along the way, we've been to many, many places, leadership courses in Berlin, and in Sephora, you were there. And the icing on the cake was actually to have the honour of officiating this hospital two years ago. So I've spoken for a long time. I'm not here on my own. You guys obviously play a huge, huge role. And therefore, I would like to dedicate this next video to all of you, and I really hope it plays. Academic, academia, research, clinical and admin, we exchange those hats, macam tadi lah. Sometimes I'm chairing a meeting, and then I'm in the OT. And then I'm talking to some visitors, menteri, etc. And then in the evening, I'll be looking at some PhD proposals and stuff like that.

And we do this without even thinking twice about it. It's amazing. And all these professors in front of you here, they've been doing it a lot longer than I have. And I'm in awe. So in conclusion, heart disease is all on you. We have to look after ourselves better. Those 12 risk factors that I've shown you, there are things that you can do. We research into it a lot, we publish a lot, but it's not easy to change. The way forward is to do something more disruptive, and more radical, more dramatic.



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Transkrip:

3:03:34 : And I really hope we can really deliver the solution to improve the burden in the future. You always need cardiologists, you always need cardiothoracic surgeons, doctors, emergency physicians, rehab, and so on and so forth. But with a bit of AI, I hope the right people can get the right care, the right people will seek the right specialists, and avoid premature death, obviously.

So with that, I thank you for listening, for spending time, for spending your morning to listen to me chat yakadaya for the past hour or so. This has been truly an honour to be with UiTM, with all of you here in front of me. This journey has been quite amazing.

What happens next, there's probably no slides and pictures, because even the projector system refused to show me what's going to happen, despite spending time learning AI and prediction and whatnot, you know. I just cannot see the future. So with that, I thank you all again.

Assalamualaikum warahmatullahi wabarakatuh.