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Event

2018 International Nurse Regulator Collaborative Symposium

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Presenter

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Well, good morning everybody. It's my third time at this excellent conference, and it's always a pleasure to be here. The standard of speakers is always very high, [[00:00:30]] and the standard of the participants is even higher. And I think it's a great event, and I think we should thank David, for his leadership always in pulling it together.

So I'm going to talk in two halves over the next period. The first part, I'm going to look at the extent to which we can [[00:01:00]] anticipate areas where regulatory intervention may be needed in the future. Then I'm going to look at some ways of assessing potential risk of harm, and some of the problems of assessing potential risks of harm. And then after the break, I'm going to talk with you about some specific examples that you might [[00:01:30]] be trying to deal with yourselves.

So this robot is actually probably about 50 years old, it's a clockwork toy. And it reminds us that we have been as humans fascinated by the possibilities of artificial intelligence, [[00:02:00]] and robotics for many, many, many years. And in fact, what is interesting is that way back in history, the idea of the robots of an artificial human has been current in almost every culture. Hephaestus in Greek mythology the wielder of [[00:02:30]] fire and metal, known as Vulcan in the Roman pantheon, actually constructed for himself artificial humans to work in his forge as his own servants. So this idea of the robot is one that I think has core human imagination for centuries, but we're still not really there. And that of [[00:03:00]] course, is one of the important things that we have to accept.

And I just want to remind you of some of the great failures of prediction. So I'm thinking for instance, that in 1876, Alexander Graham Bell, [[00:03:30]] invented the telephone, actually when he invented the telephone he didn't have no one to ring. But he did say at the time, "I can imagine a day when there is one of these devices in every town in America." I think he kind of underestimated the possibilities of the telephone. [[00:04:00]]

In 1873, the surgeon extraordinary to Queen Victoria, said, "I can say with certainty that no surgeon, will ever operate on the heart or the brain." I think he got that wrong. In 1903, the president of the Michigan Savings Bank, advised Henry Ford's [[00:04:30]] lawyer, not to invest in Henry Ford's company saying, "The horse is here to stay." And in 'the 1950s,' the chairman of IBM, predicted that there was a world market for computers of around six. You do need to remember that time the computer was the size of a small house. [[00:05:00]]

So predicting the future and predicting what's going to happen is really quite difficult, and people are wrong, rather more times than they're right. Fortunately, those who have predicted the end of the world quite a lot, have so far also been wrong.

But what seems to me to be one of the worst interesting things about the way [[00:05:30]] technologies do develop and take over our lives, is how we choose those technologies for ourselves. So do you remember fax machines? Now I remember fax machines, I thought they were fantastic. You could put a piece of paper in, and it would come out the other end on the side of the world, amazing. Who uses fax machines now? [[00:06:00]] Well, unfortunately, actually the National Health Service in the UK. But nobody else uses fax machines because they were rapidly overtaken by email.

But photocopiers, we still use photocopiers. We've had photocopiers for 50 years, but we still use photocopiers. So some technologies endure, and some [[00:06:30]] are kind of burst of flame and disappear in no time at all. Just of course, like the motor car, we're still using horses I noticed. The other thing that technology is doing to us which I think is very interesting, is that certain parts of society are leapfrogging one technology missing out a step. And this I noticed was particularly visible when I [[00:07:00]] was in India, some time ago.

When I first went to India, if you wanted to make a telephone call, really you had to go to a post office, and you had to queue, and you had to pay an individual, and you had to get the telephone that was in the town, and you had to make your phone call that way. And the line probably didn't work at all. Indians didn't bother with getting telephones in their homes ever, [[00:07:30]] because mobile technology arrived. And mobile technology took over immediately, and suddenly everybody could have a telephone in their own hand.

And so one of the points I'm going to make is that technology doesn't only benefit the wealthy, and the well-off, certain technologies, have become enormously valuable and useful to people who have little money. [[00:08:00]] The other thing that's important I think about the way we take up innovation in the technological field, is that it is driven by the user and not by the provider. So if a technology has utility, we will adopt it, but it doesn't get adopted at all if it's not useful. So it's made by the millions and millions of people who use it. And [[00:08:30]] of course, we know that one of the big regulatory challenges for us, is that we get most of these technologies like Google and Facebook for free.

We get them for free because they are stealing our data because the most valuable part of what we are giving them is not money, but our data. And the whole way in which we are struggling to regulate the use [[00:09:00]] of personal data, is one of the huge challenges of the future. And I think that the digital world, creates huge challenges for governments because the digital world is anarchic and full of choice. And governments like authority and control. Which is why of course, and particularly in countries like China, the whole use of the Internet has [[00:09:30]] been very carefully managed and controlled by

government. It's digital media that has provided so much of the information we have from the war in Syria, from all kinds of situations in which the government doesn't want, or is unable to provide on [inaudible 00:09:52].

So the technologies that we are looking at in [[00:10:00]] the future, and which are providing challenges to us as regulators include, as I've mentioned digital communications, the use of social media. And I know there are many nursing regulators who have already had to take action both to provide guidelines to nurses on how to use social media. And also to challenge the use of patient information or the disclosure [[00:10:30]] of patient information, or writing abusive comments about patients on Facebook pages, and so on. So these new forms of communication are already creating for regulators areas where they need to think and react.

Artificial intelligence. Well, if you remember I think it was two years ago, we had Daniel Siskin [SP] here to tell us that you [[00:11:00]] would all be made redundant by artificial intelligence. In fact, there's a big billboard up out on Columbus Avenue, that I noted and it says... it's just outside the hotel, it says, "A robot can't take your job if you're already retired." So that's good news at least for Carolyn Reid and myself. But I'm not sure about [[00:11:30]] the rest of you. Some of you are much too young.

But you know, robot regulators, I'm not sure, I'm not sure. I think we will see increasing use of artificial intelligence in medicine, increasing use of artificial intelligence in a whole range of areas of work. But where moral decisions have to be made, [[00:12:00]] I have this feeling that humans might not only want to hang on to those decisions but might also be only means of taking them.

Then we've got drones, driverless vehicles, all coming probably... I mean they're with us already. I think drones are quite an alarming development, because at the moment, in most countries, drones are pretty freely [[00:12:30]] available, small drones at least. Small drones can carry cameras, they can invade everybody's privacy. They could carry weapons, they could carry diseases. There's a whole possibility for harmful as well as positive use of drones. And of course, that's true of all technologies they are by and large neutral. And they can be used for [[00:13:00]] good or ill.

Christine mentioned that on I'm a trustee of a large charity dedicated to justice, and the eradication of poverty. We have a real problem with our investments because we have an ethical investment policy which includes obviously not investing in anything to do with armaments or the military, not investing in [[00:13:30]] smoking or alcohol. The problem is, for instance, you invest in an electronics company, seems perfectly fine, you discover they're selling a little bit of digital technology that goes on the nose cone of a missile. That's no point no, no, no percent of their work, they don't make missiles, [[00:14:00]] but where's the moral question that you have to answer in relation to that?

So trying to break up the world in this digital area into safe places, is I think extremely difficult. I do think we're going to have tremendous developments in health technologies. We already have robot surgery in some contexts very safe, very effective. [[00:14:30]] The one thing you can be sure about with a robot, is it doesn't have a tremor in its hand. But of course, robot surgeons are by and large still manipulated and managed by human surgeons.

I've got a young friend who's a GP, a general practitioner doctor interestingly, just this coming week emigrating to Toronto. And he uses the [[00:15:00]] pharmacopoeia on his mobile phone. All that bit of

getting a book and looking at it, and having to be updated as a book, and sent out every six months with an update. It's now instant, it's digital, it's on your smartphone. These things are huge positive developments.

And it seems to me that one of the real digital divide that is coming is not between those who use technologies and those who don't, [[00:15:30]] but the use of technologies to do new things or the use of technologies to do old things in new ways. And most of our technology is actually doing old things in new ways. Uber is just a different way of hailing a cab. There's nothing particularly astonishing about Uber, it's just a different way of hailing a cab. What it does do is it [[00:16:00]] makes it so much easier for so many people to get that cab, when they want it, and where they want it. So it's been enormously successful around the world, but it's the simple application of a modern technology to an old, old problem.

So it seems to me the unpredictability of which new technologies are going to take over our lives and which are not, [[00:16:30]] it runs through all this thinking. And I think if we are thinking about how to regulate for the future, we need to factor unpredictability into our thinking. We need to have ways of looking at what might not happen, as well as what might happen. If we'd invested all our time and energy in the fax machine, if that had been the basis of how we built our [[00:17:00]] organization, we'd be sorry people now. But at the time, it might have seemed really like the future.

The next area I want to look at is health and disease, what can we predict about health and disease? Now, I think this area might be in some ways more predictable, because health and disease moves quite slowly compared [[00:17:30]] with say technology. We know we have an aging population. I object very strongly to the phrase demographic time bomb. One because it's not... a time bomb is something that blows up suddenly in your face. We've known about an aging population for the last 100 years, it shouldn't be a surprise to anyone.

In fact, you are [[00:18:00]] the demographic time bomb, you are the people who are getting older, and it's not them the demographic time bomb, it's us. And particularly those of us like myself who were born in the 1950s. So we have aging populations, one of my friends back home who is a nurse educator, says that he says to all of first-year students, [[00:18:30]] "So I'm sure you've all come looking forward to doing old age nursing." And they all look at him horrified, because they thought they were going to do children, or they thought they were going to do something exciting in surgery. And he said, "If you're a general nurse, your work day in day out, day in day out, will be with older people [[00:19:00]] that is the future of nursing."

Now it's obviously not entirely the case, but that is the future of much of our health systems as many illnesses like cancer becoming increasingly treatable, even curable for a period. Cancer is becoming actually a long-term condition, and people are living with the consequences of treatment for cancer. They're living years, but [[00:19:30]] they have disabilities, or weaknesses, or fears to do with the cancer returning, that are part of having a long-term condition.

The third is what WHO rather alarmingly calls lifestyle disorders. I went to a conference in Gastein in Austria there's a big annual European WHO Conference every year [[00:20:00]] in Gastein. It's a ski resort and they need to make money in the summer, so they have a big European conference. And a

young woman from WHO gave us a talk on lifestyle disorders. She's only about halfway through, and I realized I had all of them. And it's a grim picture, to be honest.

Someone at break there was drinking a [[00:20:30]] smoothie made with kale that is definitely not a lifestyle disorder, it's what WHO wants you to do. I'm quite certain they want you not really to eat anything at all. And they want you to run or walk about 7 hours a day, and you'll be terrific. You'll be thin, and you'll live forever, and you'll be able to nurse all the dying [[00:21:00]] old people.

But lifestyle disorders are real if we talk about diabetes, if we talk about the consequences of obesity, if we talk about smoking, these are the real causes of lifestyle disorders. And these are to a great extent, but not entirely, a product of modern life. They are to do... some people [[00:21:30]] have called them the diseases of plenty. They are the diseases that come from actually having more than we need of most things.

So they are a real issue, and I think in the UK, in the United States, in Canada, we are seeing massive increase in obesity in children. And we [[00:22:00]] know that is a predictable problem which is ahead of us, and which is going to cause real issues. We might even be moving into the possibility of a generation ahead, whose life expectancy is shorter than ours. That's already happening in Russia, although that's for other reasons, and other lifestyle disorders mainly called vodka.

The fourth point [[00:22:30]] here is about epidemics and pandemics. We had some fascinating material yesterday afternoon about the Ebola outbreaks in West Africa, and the difficulty of containing those when you have global transport. I remember the SARS epidemic in Singapore and [[00:23:00]] Southeast Asia, some years ago. I happened to be flying into Singapore in the middle of that period, and we were changing flights. And a father was there with his young son who was about four I think, and I saw them solemnly before they got off the plane putting little masks on, this little white linen masks, and he solemnly put the white linen mask on the son, and then on himself. And I [[00:23:30]] thought well, you know, he's doing the right thing he's concerned for his son.

And then he got off the flight, and I heard him say to the flight attendant, "Can you tell me where the smoking room is?" And I did wonder whether he was going to make a hole in the mask, or whether he's going to tap the cigarette in round the sides, and whether he was going to take his four-year-old son into the smoking room with him. [[00:24:00]] And I thought we don't really understand risk do we? He certainly didn't seem to.

But the possibility of epidemics turning into pandemics is real, and it's real for reasons partly of global travel. So the speed with which we can travel the world and therefore take our own diseases with us, is quite astonishing. But I'm interested [[00:24:30]] also in the fact that China really is recreating the Silk Road. So China is actually building a road right across from Mongolia across the steps into the Middle East, up into Azerbaijan. Just as the old Silk Road was. And you know the old Silk Road, carried bubonic plague [[00:25:00]] from China to Europe in the 14th century.

And it is quite possible that we will see the transmission... and it's not just one way or the other. I'm not suggesting that all the diseases are in China and are going to come out. The possibility of pandemics moving by land is going to be increased by this new restoration of the old trading routes that [[00:25:30]] disappeared and then now reappearing. And you only have to think too of the way in which

in the 15th century, the Spanish and Portuguese invasion of the Inca kingdoms and so on in South America resulted almost in the genocide and decimation of the populations there. Because they had no resistance at all to European diseases.

So I [[00:26:00]] think we need to remember... and that's one of the strengths of this conference we need to remember that we're connected, and pretending that we're not connected isn't actually going to convince a microbe, they don't play by our rules.

I've added natural disasters here. Again, we heard about some of them, I think they are very [[00:26:30]] hard to predict precisely. But we can see patterns, we know there's a hurricane season we just don't know how severe those hurricanes are going to be, or what routes they're going to take. And it was fascinating for me to hear how states like Texas can you know, really develop that model and planning and thinking about... and learning from each one [[00:27:00]] to plan better for the future. You know, just a simple matter, the regulatory issue of having multiple regulators, and people not being able to move between jurisdictions when they're needed is... you know, we have to all say this is daft. We've got to find ways of cracking that problem it's absurd.

So we can't predict events, but we can predict the patterns [[00:27:30]] of events. And I think with global warming, which also we can predict, although I don't think myself we can be quite certain how it's all going to play out. People are trying to apply regulatory solutions to global warming that don't seem to be very popular with some countries.

What about people? People are going to change too, our expectations about work are [[00:28:00]] changing. The number of doctors in the UK, who are now working part-time, has gone up massively. It's gone up to some extent, but not entirely in parallel with the very large number of women who are entering medicine. And who have different priorities and different expectations about how they will work and in what circumstances. And [[00:28:30]] are choosing roles where they can work shifts, and where they can spend more time with family life than a man nurse to doctor traditionally might have done.

There are changes in our expectations about service, so one of the issues to do with digital commerce, in particular, is we can have everything instantly. You can Google whatever you want, you can go [[00:29:00]] to Amazon, you can click... you can even store your credit card. So you know, one click I think is what's offered to us. And we want instant solutions and it will be delivered to your door before you get home from work.

So that's also changing our expectations about how other services are delivered and what the public might demand from them. I think there's a real issue isn't there? About the fact that these digital [[00:29:30]] services are free, not in terms of our data, but free monetarily, which makes us have expectations that other things should be free as well. Hence the demise of printed newspapers, because people just can't be bothered to pay for them anymore, because they can get so much information free.

There's a challenge about the supply of people, and the demand for their services. [[00:30:00]] And I think we may see as has been predicted the role of artificial intelligence in a whole range of areas, reducing the opportunities for employment. Increasingly you know, a robot in a big warehouse owned by Amazon, cannot only pick all the items off the shelves but pack them in the boxes, label the boxes,

[[00:30:30]] put the boxes in the van. At the moment, you have a man to drive the van, but when we've got driverless vans, then you won't even need a man to drive the van. You only need a man to pick up the pieces of the men who've been knocked down by the van without the driver in it. So there will be roles for some of us, but not perhaps in delivering Amazon boxes.

The great thing I think is that people have minds of their own, [[00:31:00]] I'm really keen on that. I love the fact that people break the rules sorry, we're all regulators we shouldn't love the fact that people break the rules. But thank goodness people break the rules, if they didn't break the rules sometimes, we'd have no innovation at all. If they didn't break the rules sometimes we'd have no work to do stopping them from breaking the rules that would be sad. And if they didn't break the rules sometimes we wouldn't know that [[00:31:30]] they were moral beings.

So I think the fact that people have minds of their own makes it possible that the future will not be quite the way we predict. And that gets me to the final point about people, is that people have consciousness and they're capable of ethical thinking. And I've yet to see... although I'm sure there are scientists working on it. But I'm yet to see anything you know, of artificial intelligence [[00:32:00]] that suggests that a computer or a robot has consciousness.

You know, quite some time ago, the Deep Blue computer beat Gary Kasparov, the world chess champion. It was a huge moment for the first time, they've been trying for years to beat a human being at chess and they did. The thing was Deep Blue, had no sense of satisfaction at the [[00:32:30]] end. Deep Blue did not know that it had beaten the world chess champion. The World Chess Champion knew he'd been beaten, he had consciousness, he had a sense of failure, he was a human being. And I think we need to treasure that aspect of being human and remember that it's a very, very profound difference. [[00:33:00]]

So finally, in this section, I just want to talk about our society's changing. Economic inequalities seem to me to be growing dramatically, both between countries and within countries. I mean the figures that people give you about poverty does suggest [[00:33:30]] that the very poor are perhaps not as numerous as they were. You know, those people who they used to say had to live on a dollar a day. Those people perhaps in many countries are not as numerous. But the gap between the just about managing people, and the wealthy is vast, absolutely vast.

You know, this [[00:34:00]] comes to me very strongly in the charitable work that I do, how do you... you know, we always say comic relief that "A just world and free from poverty are not two objectives, they're one objective. Because you can't have a just world that isn't free from poverty. And if you could free people from poverty, you would go a long way towards creating a just world. And yet we are creating a [[00:34:30]] world in which the gap between those who have, and those who haven't is continuing to widen, and it's widening in our societies.

Homelessness in the UK is rising after many years of falling. People are using food banks in increasing numbers. We are a rich western country, and we have [[00:35:00]] people using food banks you know, it's shameful actually. But you know, that is the feature of modern economies, particularly since the banking crisis.

And along with inequalities, comes health inequalities. And health inequalities are also increasing although again, it's not [[00:35:30]] a simple pattern. So in India for instance, life expectancy has risen very significantly if you survive to the age of five. So child mortality is still high, baby mortality very high. But once babies survive for into childhood, then their life expectancy is getting very similar to life expectancy [[00:36:00]] in the west. But if you include infant mortality in the figures that life expectancy comes down significantly.

So the pattern about health inequalities is changing, but I think that health technologies are going to increase some of those inequalities. So only the very wealthy will be able to afford the very expensive drugs [[00:36:30]] that are coming for instance personalized medicine genomic-based drugs for cancer and so on, will not be available to the population as a whole. They will only be available to those who have the most money to pay for them, or who have the most expensive insurance. Or who perhaps come from countries that have, dare I say socialized medicine. [[00:37:00]]

Mass migration, it's a consequence of some of the other things I've talked about, but it's particularly a consequence of war, and of the displacement of huge populations. You know, the moment there are 8 million child refugees living in refugee camps, 8 [[00:37:30]] million children. Some of those children have never lived anywhere except a refugee camp. Some of those children will grow up to be adults without living anywhere except a temporary camp on the edge of a desert somewhere, dependent on the meager generosity of the rest of us.

And I don't know what that's going to do to their worldview. [[00:38:00]] I don't know what that's going to do to their internal values, and their sense of justice. I don't know what it's going to do to our values and our sense of justice. When I see governments mine included, turning their hearts against child refugees and turning their nations against immigration. Many of those children are not getting any education either, and [[00:38:30]] yet we know that education is what liberates people from poverty and despair.

So I think there's a real issue about mass migration, and if global warming comes in any serious way we are going to see the movement of millions of people from Africa into Europe, and to the east and that's going to cause [[00:39:00]] massive problems in those countries. Because that tide of people will be irresistible. And we've got the current issue, haven't we? With the migration from South American countries at the moment coming up through Mexico.

We have an uneven distribution of the health workforce, we have a global shortage of health workforce. So of course in the west, we still seeing workers from [[00:39:30]] developing countries. Some years ago, it was said there were more Ghanaian doctors working in England than were working in Ghana. Sub-Saharan Africa has 24% of the world's global disease in Sub-Saharan Africa and they've got 2% of the world's health workers.

The Ebola [[00:40:00]] crisis, of course, it was heroic of many doctors and nurses from the West, to fly out to help. But I felt uncomfortable about turning those doctors and nurses into heroes, when actually what we should have been doing was building the Indigenous health services in those countries. We should have been helping them to have good [[00:40:30]] health services, we should have been celebrating their own doctors and nurses, who were putting their own lives at that risk. But certainly in the newspapers in my country, it was all about the wonderful West saving, as usual, the impoverished

and disease-ridden black people in Africa. I put that deliberately bluntly because I think that was the underlying message.

But as I've already mentioned [[00:41:00]] communication technologies are also providing huge opportunities for development and change. I visited the Massachusetts Institute of Technology some years ago, they've got a health lab which is a fabulously quirky place. It's all dark and full of sofas and extremely geeky young men doing extremely geeky things with wires. [[00:41:30]] And I was introduced to an avatar doctor who we were supposed to have a conversation with. She wasn't getting very far. She was learning to answer questions like I have a pain in my leg, with answers like you have a pain in your leg, which didn't seem to be taking her or the patient very far forward. But she's the kind of artificial [[00:42:00]] intelligence we can look forward to in the future.

But also in that place was this young chap who'd done the most fantastic thing. So in many rural health services, you have what are called Barefoot Doctors. So people who are just partly trained local people partly trained to diagnose, and treat basic problems. And they're out there in the forest, or in the fields, or in the jungle, and they are connected [[00:42:30]] to base, with a mobile phone which everybody has. But what they found was that the mobile phone signal in these places oscillates. So sometimes it's powerful and sometimes the signal goes off entirely, a bit like London I think.

And they couldn't send photographs, and it was hugely valuable to be able when they came across say a wound, or some symptoms they [[00:43:00]] didn't know about, to be able to take a photograph, and send back to the doctor or nurse in the base place who had more knowledge. And this young student had developed a simple way in which he could compress the digital image, and the phone would wait until the pulse of the signal was strong enough, and it would send the [[00:43:30]] digital image of the exactly the right second to get through.

And it was a simple solution, it was relatively low tech, and it was using digital to really actually reduce health inequalities, and to make it work. So there are all kinds of things that are hopeful in this. And I think the last general point to make is... and you might be able to tell which side I'm on here is. Are we going to [[00:44:00]] choose isolationism? There's a lot of anti-globalism which comes from I think a dislike of the way in which global capital has behaved, and has made life worse for many people. But it seems to me, that globalism is the only way we are going to solve problems in the future, because we're just not going to be able to do them alone.

So I finish this section with [[00:44:30]] some more robots. These are real robots, these are from the University of Hong Kong. They are with us now... well they're not with us they're in the University of Hong Kong. I think what I want to say about these, these are domestic robots apparently. I don't know why they wear iPads on their chests but they do. Presumably, you can tap into them and tell them what to do. They look to me [[00:45:00]] as though they might be quite good Hoovering, I'm not sure what else. I think the interesting thing about these, is if you look at their heads, and their faces, these are designed to look a bit like babies, it's quite deliberate.

We are trying to humanize these robots, we're trying to pretend that they're light people. They don't need to look like that at [[00:45:30]] all to do whatever it is robot task they're going to do. They don't need to look like humans, but they're designed to look like humans, and their faces are designed to look unthreatening. Quite unlike that toy robot that I showed you at the beginning which was designed to

look fierce, and rather like a warrior, these are designed to look cuddly. I'm not quite sure why the one on the right has a sort of cleavage, there must be some purpose [[00:46:00]] behind it.

So I think what I'm saying is don't overstate the possibility of artificial intelligence. Don't overstate the possibility of rapid technological change, either solving our problems or making them worse. But there are a whole range of major changes coming I think we can not predict how they will play out, but [[00:46:30]] predict that they are happening. And actually, because we have minds of our own, we are in charge of the future if we choose to be.

The next section, which is really just a preparation for the conversation we're going to have, after the break, is to look at how we can or cannot [[00:47:00]] predict the probability of harm. And this has been a great theme through the conference, in so many of the excellent talks that we've heard so far. And you know, this is something which as you know has exercised us at the Professional Standards Authority quite a lot. We've been... as many other people have influenced by the work of [[00:47:30]] Malcolm Sparrow. But I'm also going to mention now someone I admire a lot Professor David Spiegelhalter, who is the wonderfully named Professor of the public understanding of risk at the University of Cambridge.

And David Spiegelhalter, he's a terrific communicator and he's done a great deal to explain to people about [[00:48:00]] probability. So I just want to go through his four rules which I think are really worth remembering. The first is that stuff happens. You know, things go wrong, it's not the end of the world necessarily, that would be something going wrong of course. But stuff happens.

The second point is [[00:48:30]] compare like with like. He says, "We are very good at not comparing like with like." I mean his simple example is supposing you want to see if putting up a camera slows down traffic and reduces accidents. There's no point he says in putting up the camera in all the places where accidents usually happen. [[00:49:00]] You should put up the camera in places where accidents don't usually happen as well if you want to have a proper comparison. But we are inclined always to go for the simple way of looking at probabilities.

He says, "What am I not being told?" He says so someone's on the radio she says she's taken this miracle cure, she's drunk kale [[00:49:30]] every morning and she's already cured of her cancer. They don't interview the 10 other people who've drunk kale every morning and have cancer, they only give you part of the story. And we see that a lot in the media don't we? The personalizing of a health story with a great... you know, every health charity... I used to do it I confess. Every health charity you've got your press release saying you [[00:50:00]] know, we need to do something about this.

And the first thing the journalist says to you is "Have you got a patient I can talk to?" And if you're any good, of course, you say yes, and not only do I have a patient you can talk to, I've got one from your town. And that person will tell the story you want to tell, and they won't interview any of their patients who want to tell them something different. So what am I not being told about this risk?

And his [[00:50:30]] final point which I think great is twice not very much is not very much. And that's another thing that we hear a great deal of so and so has increased enormously, but they don't tell you what it's increased from. And that just takes me to my next slide which is an important representation of health services around the world. So what we have here is a doctor, we can tell he's a [[00:51:00]] doctor

because one, he has a white coat, and two he has a stethoscope. A stethoscope is the symbol of a doctor. And no doctor will be worth their salt would be seen in public without a stethoscope. I have a friend who's a psychiatrist who carries a stethoscope because he's afraid that if he doesn't people won't think he's a doctor.

We can tell who's the patient because the patient is wearing pajamas. And it's very [[00:51:30]] disempowering to be wearing pajamas when other people are properly dressed. When I was national director for patients at the Department of Health, I used to suggest... we had one day a year where all the health professionals wore their pajamas, and all the patients were allowed to wear grown-up clothes. I thought it would change the balance of power in one day instantly. And we know who's the carer in this picture, because they're pink and cuddly as we know carers always are.

So I use this slide just to [[00:52:00]] remind us that there's still a huge power imbalance in the way we think about health care and the way we deliver health care. And that was that came up yesterday I think in the remarks about why are we keeping information about health professionals who might not be safe from the public. That's part of our control of the power imbalance.

Lies, errors, [[00:52:30]] and statistics, I just think we have to be terribly careful. Big surveys where people are self-selecting they're not going to give us reliable data. Because we know that people who are self-selecting for a survey, are only a section of the people from whom we want to hear. Percentages I have banned percentages at the Professional Standards Authority [[00:53:00]] for any number under 100, because they're meaningless.

I had some recently where I said you know, 37.6% of my staff did something. And I'm going well how can I have 6% of a person, and two, I've only got 36 staff. So 37 why can't you say you know, 12 out of 36 staff or whatever the number was. [[00:53:30]] So the percentages are very misleading. They're even more misleading if we allow people to put digital points after them. So especially my finance team do this all the time, they can't bear anything that doesn't have at least two digital points after it 36.34. This is false precision, it actually misleads us.

And the use of small numbers [[00:54:00]] I really hate... there are so many research papers come out... sorry researchers. But they're mostly done by people doing MAs and Ph.D.'s, and they say "I interviewed 14 nurses and they told me this, and from this, I draw this great conclusion about nurses. And it's just not reliable, or true, or helpful. People draw quantitative conclusions from qualitative [[00:54:30]] research, they sometimes don't seem to know the difference. People don't know the difference between a correlation and a cause especially journalists. Journalists love to say you know, over 50% of the people or 40% of the people who have cancer are left handed. They don't say 40% of the people are left-handed or whatever the figure is to give you a proper comparison. [[00:55:00]]

And we endlessly hear people... and you know, Marie was really clear this morning wasn't she? That you cannot draw all these conclusions about correlations until you've actually tested the hypothesis, to see whether there is actually any connection between those two separate pieces of information.

And finally, I think we're all guilty of both conscious and unconscious bias. My strong [[00:55:30]] belief at the moment is we have an unconscious or sometimes conscious bias against information given to us by patients. Complaints from patients are given less credence and less credibility than complaints

from other health professionals. And we don't test the evidence that is coming to us from patients in the same way, that we take seriously the evidence that comes from health professionals. And I think that skews regulation [[00:56:00]] quite significantly.

I'm run out of time, so I'm just going to go on very quickly. Some of you may have seen this three dimensional model of risk that we're developing. We're used to two-dimensional risk which looks a likelihood and severity. What we've done here is we've taken likelihood and severity, but we've applied it to three domains. The activity that is taking place, the [[00:56:30]] agency or autonomy of the patient, not the doctor or the nurse, but the patient, and the context in which it's happening.

So put very simply, the activity could be surgery, or it could be manipulation of the spine by an osteopath. It could be on a patient who's unconscious and has no agency, or [[00:57:00]] a patient who's entirely conscious and has chosen to go and see the osteopath as a free active competent person. And it could be in a safe well organized surgical setting with lots of other health professionals around, or it could be one osteopath working by themselves in their own practice. So we've taken those three domain, activity, agency, and context, [[00:57:30]] we've looked at the likelihood and severity of the risks, and we're developing a model in which we can create this three-dimensional view of risk. And it is a work in progress, but we're looking at how we can profile the intrinsic risk of harm

Once you've done that, there are of course extrinsic factors to consider as well. And by doing that, you should be able [[00:58:00]] to develop a proper model of which occupations are so risky that they should be regulated, which need some other form of assurance. Whether it's by employers or through credentialing, or accreditation. So I'm going to stop at that point, sorry I've gone on a bit too long.

After the short break we're having, I want you just to think yourselves about some [[00:58:30]] area of your own regulatory work where you are looking at a future risk, or a potential future risk. And I would like to welcome some of you to be brave enough to put those forward to everybody, so we can have a discussion about how you might approach assessing the probability of harm for those future risks. So thank you very much.