[MUSIC PLAYING] DAVID ELLWOOD: So what young MD can have so very much to say about the essence of the immortal? I know only one. The tool go on. So please join me in welcoming Atul Gawande Cristine Russell for a wonderful forum this evening.

[APPLAUSE]

ATUL GAWANDE: Can I just go now? I have to live up to that.

CRISTINE RUSSELL: Yeah. It could be nonstop. Thank you, David, for that introduction. And I'm sure people heard things that they don't even know about Dr. Atul Gawande.

Tonight, we're going to try to take particularly after a challenging day, and you're all here, and where is the snow. So we're feeling optimistic.

But much of the time here at the Kennedy School, the issues are really tough. There's a lot of anxiety about what's going on in the world and in the world of health care as well.

And so I wanted to start with a lightning round. This is really very comfortable here. I was thinking I should have brought all his books and piled them up.

And then behind us on the set of our new segment, it's called the doctor is in. And so Dr. Gawande is going to put on his hat as the nation's doctor, and he's going to answer not with more than hand-wringing about the problems. But you can give us some of these quick solutions, not all the solutions, a solution to some of the things that we're all really worried about.

ATUL GAWANDE: OK.

CRISTINE RUSSELL: So you ready?

ATUL GAWANDE: OK.

CRISTINE RUSSELL: OK. And soundbite answers. Don't elaborate too much. Sorry.

ATUL GAWANDE: OK.

CRISTINE RUSSELL: Because we have time to talk. OK. Gun violence as a public health problem.

ATUL GAWANDE: Giant metal magnets that take away everybody's guns, how's that? Gun violence, the problem is I suspect as you go through the list, you're going to have a whole bunch of answers, where we've had the answer a long time. So you look at what a lot of other places are done.

Three things. You actually have people get a license for getting a gun. So all of these, by the way, can be done with the Second Amendment just as it is.

Just like a driver's license that you have a basic testing and safety approach for being able to obtain a gun. And number 2 is no assault rifles. And then number 3 or buybacks for buying back the massive number of guns that are out there on the streets. And it's been demonstrated to work in Australia, in particular. But other places that you offer a payment, they offered $500 for every gun and people turn them in by the millions.

CRISTINE RUSSELL: OK. Opioid epidemic.

ATUL GAWANDE: Oh. Yes. So this was really interesting because we're the only country that's had this epidemic. Right now, we have more people dying from opioids than died at the peak of the HIV/AIDS epidemic in 1995.

Just like the United States, in Europe, they began taking seriously the question of pain and asking people to report what their pain scores and things like that are. But two things that we need to address.

Number 1 is my profession the surgeons and the other doctors who provide opioids. Thanks to a very successful amount of marketing the United States by some of the supplying drug companies. But also because of our sticking our heads in the sand.

We were prescribing opioids I was prescribing opioids without recognizing exactly how addictive it was. I can't tell you how many people. I've been in practice since 2003 have said I don't want to take the narcotics because I might get addicted. If I knew someone who got addicted.

And I would say you don't have to worry. There's no chance of addiction. And the answer was that if you took an opioid for one week, 8% of people would be on that opioid one year later.

I had no idea. And I was handing it out with prescriptions that we're giving people 50 pills, and they would use three and then, it would get in the market.

So number 1 on the supply side is simply the research and the systems. So we're giving people the right amount of medication. And I would add to it so there's a wonky thing.

We need electronic prescribing. New York state's done it. Other places have not done it.

Electronic prescribing allows you to follow the track of narcotics. And also makes it easy to give people a small supply, and then you can easily renew through your doctor, through your mobile phone. You can send it send a prescription and that gets a return.

And then the second part is we need medically assisted therapy. So whether it's methadone or buprenorphine, and having people take these long acting opioids in replacement of these opioids cuts the opioid death rate by more than 90%. It works. And we have been reluctant and unwilling to make that a standard part of what we do.

Imagine we had the AIDS epidemic running wild. It's 1995. And we had the treatment for 90% reduction in the death. And we said the problem is people are just weak. So we're not going to actually have a national campaign around that.

It's straightforward. We need medication assisted therapy.

CRISTINE RUSSELL: OK. Another easy one. Unaffordable health care coverage, especially for the most vulnerable citizens. Now, just like one solution here.

ATUL GAWANDE: One solution? OK. Universal health coverage.

CRISTINE RUSSELL: OK.

ATUL GAWANDE: Just implementing Obamacare alone. So with two economists Kate Baker who served in a Republican administration, and Ben Sommers who is a Democrat by leaning. We published an analysis of the last 10 years of data of various kinds of health care expansions that have been tried at the state level in the United States.

Obamacare and Medicaid expansions. And you look across all of them. And within a year, people's medical debt drops. Bankruptcies are virtually eliminated within a year. Within two years, people have their health improved, they do not have a mortality reduction because what happens is you finally get treatment for your chronic illnesses, your high blood, pressure your diabetes, or your cancer, or your HIV.

And then at five years, you have a 6% reduction in mortality. It's 1% increase per year. So there are a million ways to do universal health coverage.

We just do it. I'm actually pretty ecumenical about whatever version we go for. We just need to be committed to implementing.

CRISTINE RUSSELL: Over testing unnecessary diagnostic tests and unnecessary treatments.

ATUL GAWANDE: So a huge part of our health care cost problem is unnecessary care. We'll probably end up talking about my Research Center Ariadne labs, which is probably the thing that's, at least, well-known. But we've been running large scale experiments in tackling problems and birth surgery and end of life care.

What we see in unnecessary care is a lot of it is especially around issues, where related to end of life care. It's not the only area of an example. But just to take that one, which is 25% of Medicare spending is in the last year of life the majority of it just in the last few months of life.

When you actually make sure people have a discussion early in the course of their care, when they've got a diagnosis with a serious life limiting illness before crisis comes, about what their goals are for their quality of life, and not just their quality of life and make a plan around it. People over and over again have seen, including at a randomized trial at the Mass General Hospital with stage 4 lung cancer patients that they end up choosing paths, where they stop chemotherapy, or aggressive surgery sooner than people otherwise do.

They spend more time at home, choose to spend less time in the hospital, they're less likely to die in a hospital or an ICU, their costs are about 30% lower, they received markedly less chemotherapy, and they lived 25% longer. So our failure to have basic discussions about what people's goals are for their treatment, for their quality of life as well as their quality of life is a huge source of not only unnecessary care, actively harmful care. Care that is costing them time and quality of life.

CRISTINE RUSSELL: And some of the patients are double problems. So this big sector of cost is a group that has more than one condition and also needs a lot of social service help as well.

ATUL GAWANDE: That's right. So once you figure out what people's goals are, then what they're often in need of are addressing, how do I managed to stay independent at home?

CRISTINE RUSSELL: Right.

ATUL GAWANDE: It can be one of the biggest things they're trying to face. And your treatments are actually making it harder for them to accomplish those things. The number of people who are bankrupted by their cancer treatments is extremely high. That there's a whole epidemic of financial toxicity from care that can sometimes not even be the right care that they should be getting.

CRISTINE RUSSELL: And finally, politicization of health care reform, in this country, in particular, I mean, Obamacare was not really reform of the health care system. It was in health access bill. But it was still seen as a radical proposal by some of the opponents, including the current administration.

ATUL GAWANDE: You can't cure the politics of health care because it is fundamentally about values. And we're still having a serious many decades long debate about whether people deserve right to health care.

I wrote a piece in October where I went back home. I grew up in southeastern Ohio, governor Strickland's here. And not far from the county where he's from.

And my county was the poorest county in Ohio. Most of my friends when I go back home were not college graduates. And many of them voted for Trump. We're blue in the middle of a Red Sea.

And so I went back home trying to avoid talking about politics. And so I try to think like, what can we talk about? So because they would ask me about health care stuff.

And so my question was, do you think you and your family deserve a right to health care? Three of the people I was seeing and talking to had been bankrupted or near bankrupt by their health care costs. And virtually, all said no. That they do not believe that they should have right to health care.

And when I pushed on it to say OK, so what's going on here? What they felt and understood was when you say there's a right to health care, it's who am I going to have to pay for now?

So the average person like one was who is same school as I did is now a school librarian at my middle school. She earned $17 an hour after 22 years on the job. Half her paycheck goes to taxes, and paying for her health care coverage, which has a $3,000 deductible. She has $500 in the bank. She's been driven to near bankruptcy with health coverage that she can't afford to pay for.

And she's paying taxes for neighbors who get Medicaid, don't work, and have better coverage than she could ever dream of. No copay, no deductible, no premium. And so that just creates incredible resentment that I have to pay taxes for people to get a health care coverage plan. I can't possibly be even allowed to have. And if I quit my job I could then get it.

So I think the bridge to me around that was, I'd say what about Medicare? And everybody was supportive of Medicare. There was only one of them who did not say I supported Medicare.

And I said but isn't that a right to health care. Isn't that government work covered health care? And said yeah, we know it's the government is running Medicare.

But everybody pays in. It's the same tax on everybody and everybody benefits equally. And that I think is the bridge that has to be crossed.

It's painful for progressives because you have to say, what are you going to have to pay? So Medicaid is free. No copay, no deductible, no premium.

And if we don't have a way in which we have clarity about what do you owe back in order to be able to benefit. So in an ironic way, I'm actually in favor of programs like healthy Indiana when they are not the work requirements.

But the notion that there's a sliding scale in which you might have to pay $2 a month you might have to pay $10 a month based on your income as it goes up. And guess what? At the higher

level, you may have to be paying a lot more like I can Medicare, where high income people will be putting a lot more in. And then they'll then they'll receive back.

CRISTINE RUSSELL: In fact, if we stick with Ohio for a moment, there are new data out from the Centers for Disease Control about ER visits and overdoses. And the biggest rise is in the Midwest and Ohio. That was a particular problem.

So could you talk a little bit about this? The fact that in some communities, the death rate is going up rather than down, which has been the way that we've always thought about the health care system. And they're suffering from what is actually a young doctor in my class called diseases of despair.

Drug dependency, alcohol, suicide, and so on. So talk a little bit about the Midwest, and Ohio, or those problems.

ATUL GAWANDE: Yeah. And the economist Angus Deaton had been a pair who had started analyzing the data going back now a decade or so. And began saying like he was seeing that among male high school. Only educated people that there was a decline in mortality.

I mean, sorry. Decline in life expectancy, which is an incredible historical an anomaly. There are very few societies, where that has happened outside in peacetime, in the situation where there was not war.

Russia after the collapse of the Soviet Union was one of the few other instances of it and the surrounding countries that then peeled off. What you know has emerged now is you not only take males who are high school educated. But now you take females who are high school educated, and you have declining life expectancy.

And overall, it's to the point that life expectancy of men generally. It's the drop in the high school educated only is so severe that it's crossing all the boundaries.

We focus on the drug deaths. And for good reason, because it is such an incredible anomaly. But the biggest rises in heart disease, which goes along with the stress and circumstances of a life in which you see yourself to have few prospects. That's the best.

I mean, at this point, we don't have real data to unpack and explain what the causative factors are. But what I can say ties back to that piece I was writing. We forget that 70% of the country does not have we're at the highest level of college education in history, and only 30% have a four year bachelor's degree by the age of 30 right now.

70% of people do not. 60% have a high school only diploma. And the story of our economic development and growth has been-- we don't have a plan that says, what is your future in a knowledge economy when you have only a high school education?

And you cannot say to 60% of the country. Well, the future is not you. Whatever you're doing, that's not the future. And there's no place for you in that future.

And I talk to my friends. So I went to high school with. Her now turning into our 50s.

And one friend of mine who'd been out of work for two years. Had put out a couple hundred resumes looking for jobs in Athens with a high school degree.

And he said, I don't think anybody would care if I died other than my family. No one would miss me. No one would think it mattered one bit.

And the fact that we can have people who say that, who feel that in their bones, who feel their community that they do not matter at all in the community, have no place in it. And it's particularly true for whatever reason among male high school only educated.

We get distracted by the Trump insanity for good reason. But the fact that Democrats have no answer for my friend, the fact that we have nothing to offer, we see in the places where there's extreme inequality and very little economic mobility that those are the places where those deaths are occurring.

And that's where you do turn to drugs. And that's where you see the suicide. And that's where you see the alcohol and massive rates of heart disease. And also, by the way, inconsistent access to health care, lack of ability to be integrated into the system in significant ways.

CRISTINE RUSSELL: I'm afraid I led you into a problem. Let's go back to solutions. Can you talk, first of all, solutions from other countries? We are very different from other developed countries and there are lessons there.

And you are doing a lot of innovation research with your Ariadni in the labs and other work. So talk about some of the encouraging experiments or things that we might learn from the rest of the world.

ATUL GAWANDE: Yeah. I'll tie into that actually. Ariadni by the way, was the Greek goddess who showed Theseus the way out of the labyrinth with a simple thread.

And if health care is an incredible labyrinth, the maze our hope is to show straightforward ways out. And we've been able to do that, including some of the stuff I was talking about with end of life care.

But we recently published a case study that I think is emblematic. So it's a case study of Costa Rica. 30 years ago, Costa Rica had a life expectancy right in the center of where Latin America typically was.

So they had a life expectancy into the early 60s around 65 years of age, where much of the developed world has been really around 80 years of age.

They embarked on a set of policies that have been incredibly successful. So that today, their life expectancy is over 80 years. They have the third longest life expectancy in all of the Americas, North and South America, Canada. And with their banking Bermuda are one and two. The United States is number seven. So Costa Rica with a quarter of our income per capita is now at 80 years.

And so what did they do? The case study was, what were the policies that they pulled off? So number 1 was universal health coverage. But it was universal health coverage focusing not on do you have the catastrophic care for when you need to go into the emergency room.

It was recognizing that life when you get to live like we do an average of 80 year while we can with modern science up to 80 years. It's not about being rescued in the catastrophic event. The catastrophic event you go if you have a car crash, you have a heart attack, you go to the emergency room.

You get treated. You just get bankrupted for it. So the coverage for those events prevent your financial insolvency.

But the critical part is that then you're rescued and now you have a chronic illness. And that's what life consists of now is it over time you accumulate chronic illnesses. You might get high blood pressure.

In fact, you likely will. 1/3 of adults already have high blood pressure. But we only have 40% achieved appropriate treatment. Have been recognized and achieved appropriate treatment for their high blood pressure.

It might be HIV. It might be cancer. It's being able to have care over in a sustained way, a regular source of care afford your needed medications and treatments over time, which is where primary care becomes a cornerstone.

And they built their universal health coverage on having access to primary care. A regular source of care in your neighborhood.

Second at a policy level, most countries divide their CDC from their Medicare equivalent, from their health care, delivery health care insurance function. They combine the two in the 1970s, so that you are looking prospectively.

In our neighborhoods, what are the issues? Smoking, infection, high blood pressure, as we call them the NCDs, non-communicable diseases became the major determinants of health and people's lives.

They were already assigning nurses, the abuse workers, community health workers who were partnered with the doctors to begin addressing and treating some basic sets of problems has diabetes, hypertension, HIV, and other conditions began to be on the scene.

And so that combination of you made a policy level change, you had the universal health coverage based on access to primary care, you began following the data of what was happening in the communities, and acting accordingly. They were able to achieve these kinds of goals.

And so now, people are starting to follow that model. We're implementing in various ways and testing it in Estonia now. Very interesting place.

1 and 1/2 million people single payer all on the same electronic medical record. And we're able to now test deploying that model in another setting that has like Costa Rica. Their male survival is only to the mid 60s at the present time.

But we're starting to see. All right. Less than 20% of the population has high blood pressure control. We can do something about that.

We can recognize alcoholism early enough, which is a major issue there to begin acting before people have gone all the way to the point of losing their jobs, losing their home, losing their family ties. So these are doable things.

CRISTINE RUSSELL: And when are you doing that experiment in the US, is there a target area that you could see checking this and comparing it to Costa Rica Estonia?

ATUL GAWANDE: Yeah. So there's an amazing faculty member on our team called Ossoff Bittoun who's a young physician from the Brigham who has done primary care, smoking cessation globally and public health as all of his career.

And he has two jobs. One is doing this global work, where he's leading a team doing that. But he's also the advisor to Medicare and Medicaid running there now more than 1,000 primary care practices across the country that have switched to this model.

We don't just wait for you to come in telling us I have x problem or y prime. But actually, empanel as we say enroll the neighborhood populations. Say I'm your clinician now.

And we'd like to pull you in and make sure we know what's happening. Let's address high blood pressure. Let's see if we have opioid issues to take on and begin working on a prospectively. So it's now more than 1,000 practices across the country that are beginning to deploy and test that model that Ossoff is leading that work.

CRISTINE RUSSELL: As an author, and many of you have read the New Yorker, or his four books, or portions, or what they're called. Talk about communication in terms of-- I mean, one of the really hard things is communicating health messages to the public.

What individuals can do but also to doctors and practitioners about what is really evidence based, which is what you've focused on as opposed to things that are really not proven and are overused or unsafe?

ATUL GAWANDE: The irony is I don't think I'm a great example of trying to explain and communicate these things, because it wasn't what I set out to do.

CRISTINE RUSSELL: I just made you the nation's doctor.

ATUL GAWANDE: What I've always been interested in writing about are problems that I didn't understand in the first place. And then I use the writing as my excuse to go to where to often the ones that are most compelling to me are the ones that really bother me.

And that might be, what are we supposed to do about unnecessary care? Or what are we supposed to do about care at the end of life? Or why do people itch?

And that one I end up coming across a case. That was a woman who had an itch that was so terrible. She scratched all the way through her skull and gave herself brain damage. So how does that happen?

CRISTINE RUSSELL: OK. Don't try that at home. Yeah. That's not health tip.

ATUL GAWANDE: So I think some of the communication from on high, we have the expertise. Here's what you've got to know. We've been doing that.

You're never going to convince people to not be anti vaccine just taking that approach. Part of it is what I try to do is come into understanding the people themselves who are struggling with the issue and trying to come to answers. And then try to walk along that journey with them, whether it's the woman who had the itch or someone who's facing.

A patient of mine who has high health costs that I hadn't even recognized is the reason why they're not taking the medicine. We're supposed to be working harder, or decided not to have surgery for their cancer since I do primarily cancer surgery.

And what I've been immensely gratified by as the people have wanted to come along on that ride. Even though my pieces are 10,000 words long or 100,000 word book, that they've been able to connect, begin to drive some news and offer some of the way forward.

So when it comes to communications, I think it's helpful to explain the detail of here's what matters about statins. But much more important is, for example, why are people not able to take their statins? Or what's going on when high blood pressure is our biggest killer in the country?

And we don't seem to reward or encourage or take seriously the idea of doing anything about that. Then when you dive into it, find out where their story is.

You begin to understand, what's the feeling behind it? Where are we blocked? How might we work our way around it?

And at least for me, I start feeling like OK. I begin to see the way around to solutions, which are not just the technical solutions. But how do we get to the point we're actually all pulling in the same direction?

CRISTINE RUSSELL: Well, in a lot of it has been campaigns as we're seeing. Tobacco has receded somewhat. It's still a problem in the country. But it was more the activated side and restrictions than purely voluntary.

ATUL GAWANDE: Right. But we came to a point--

CRISTINE RUSSELL: The airports are getting rid of even the smoking rooms. So it's an interesting change.

ATUL GAWANDE: I think tobacco's a great case study as an example, right? So we wanted the quick fix at the beginning. And we said for a good two decades, the plan was smoking cessation.

We got to get everybody to quit. And we discovered it is highly addictive and people can't quit.

And it was learning along the way. And then we began shifting our focus to tobacco control. And we started in small areas first.

And it was trying one thing and another and they didn't work by themselves. So one thing was enforced that you don't sell cigarettes to people to kids under the age of 18. And then try banning smoking in public places, and then try taxing the hell out of cigarettes.

And any one of these didn't work. But you put the three together. And again and again people in cities began demonstrating 25% reductions in smoking and higher.

Once people saw that it began to happen, and how much health improved, and these impossible things bars in New York. No cigarettes. And it began to happen. It became a model.

And then Massachusetts with Howard Koh said we're going to do it statewide. And then it became a whole statewide thing, and it became something that has swept across the country.

And then you saw France and Italy following the checklist. They do these three things at a public advocacy campaign. And my God, cafes in Paris and Italy, you don't have to cigarettes anymore.

And you stunningly can create that change. But the story is every time it takes longer than people think, all of these campaigns are 20 to 40 years that you're working and chipping away and learning how to define the problem accurately, how to mobilize people to pull in the same direction. And then give them the map of the three or four things that you can do to actually move the ball down the road.

But we've demonstrated again and again. It works. We've done it. This is why I think health care so inspiring. We can create cooperation. It has led to doubling the human lifespan in the last century.

1900 to the average person only lived into your mid-40s. Now, if you have a regular source of care, receive and can afford your medications and treatments, on average, you will be able to live into your mid 80s. On average, obviously, there's a spread around it.

But the fact that we have been able to demonstrate that. And now, we're demonstrating that across the world. We've lifted the world.

And that to me is evidence. That it's possible. There is not the simple quick fix. It's partly battling around values and priorities and partly about here are the known solutions and our signs of progress along the way.

CRISTINE RUSSELL: Well, as a footnote, when I started writing about the war on tobacco in the late 70s as a young reporter, and Washington in the halls outside the congressional hearings, the Cancer Institute officials were lighting up cigarettes. It's really an example of the addictive nature of when, I mean, I really was shocked at that, and actually did a story about them that they weren't happy about.

But OK. We're going to move to questions maybe.

ATUL GAWANDE: Yeah.

CRISTINE RUSSELL: I hope people will ask about the checklist about on mortality and all the other hats he is wearing. So I think everyone here, if you have are not aware of the rules for asking questions. First of all, we'd like them to be short, brief questions. Not statements. A question is something that ends with a question mark.

And also, if we could start with students at the four microphones. This is really an opportunity. So I know other people want a chance.

But if we could start with some of the Harvard students from various schools, that would be great. If we could start up there with the health care pick from the Kennedy School.

AUDIENCE: Thank you so much. My name is Liz Webber. I'm a master's candidate here at the Kennedy School.

And in your last remark you made reference to health disparities. And I'm wondering if you can expand on that and talk about some of the more promising interventions that you've seen to reduce disparities in this country.

ATUL GAWANDE: Well, one of the things is clearly coverage is a place to start. And it's very difficult to address equity if you have large numbers of people who are left out of access to coverage. But what we also see is that having access to coverage still isn't enough. And that the critical next steps have been around being able to have access to primary care, in particular, as being the part of Medicine and I say that as a surgeon that has the evidence is flipping in an interesting way.

In the 50s and 60s, it was really the rescue of people. You've got your pneumonia. We can give you the penicillin.

We can operate and address your problem to where now, we're more and more acting in front of disease. Not only by knowing if you have high blood pressure or other things, but we're in this age of data, where we're able to understand much more.

We're adding genomics. And as David said earlier David Ellwood, your zip code is turning out to be as powerful as your genetic code. And so also being able to act in ways that have community interventions access to healthy foods, access the design of cities and air pollution.

And so I'm an editor of a series that called the Disease Control priorities volumes, which has been done in collaboration with the World Bank. And every 10 years, they assess all of the interventions that we provide in health care across public health. It's this amazing now nine volume compendium.

And then rank order them for what makes the biggest difference. And we have been successful addressing. Here are the basic infectious disease, public health, epidemics spread interventions. There's some important things that still need to be done there.

But the two big categories that we haven't addressed incredibly well are intersectoral policy as we call it. But those are things like air pollution, climate change, and other considerations, which have disproportionate effects on geographic populations that are the most vulnerable, and have major forms of social disadvantage.

Those policies also include economic development policies and so on. Tobacco control, alcohol, and et cetera. And then the other category is around chronic illness management. And that the major life extension we've offered since the 1970s has really happened after the age of 65.

And reducing the likelihood that people die before the age of 70 is about being able to have regular access to sources of care, some basic nutritional aspects, and pollution aspects. But then consistent care through the lifespan.

CRISTINE RUSSELL: And can I just make sure that everyone does introduce themselves before their question? Are you a student. OK. Great.

AUDIENCE: From Harvard.

CRISTINE RUSSELL: That's OK. I'm not really in charge of all of this.

AUDIENCE: So my name is Volodia. I'm from Boston University. I'm really interested in your perspective on aid in dying.

But you never really stated if you support, aid in dying in Massachusetts. And I'd like to know your stance on medical aid in dying bill in Massachusetts that has been going on for years. Do you think it will come to a decision? And do you support that bill?

ATUL GAWANDE: So I'm going to give you a complicated answer here. And then I will tell you my-- I'll give you the simple.

And I am not a fan. But let me explain why.

So when we talk about what happens at the end of life, and why it goes wrong, and the suffering that people experience at the end of life. The evidence is that the suffering starts long before people even get to the end of life. And it's rooted in the fact that we--

And it's in the way that I even managed people until I started writing about it and trying to dig into it. That our focus on control of disease and narrowly purely on treatment without thinking about something larger than survival is a failure to recognize that people have priorities in their life besides just living longer.

Those priorities change as you experience serious illness experience disability. And so you have to ask people what those priorities are. But we don't ask.

We ask less than 25% of the time. We've been doing now an annual survey in Massachusetts measuring for people who have a serious illness with hospitalizations along the way in the past year. Less than a quarter of them, have had a discussion with their clinician about what their goals are for their end of life and for their care, for their quality of life.

And those people have markedly worse outcomes than the minority who do have those conversations. The ones who have those conversations have markedly less suffering more likely to have equal or better survival.

But also, simply have their needs being met. So in India, for example, where we do a fair amount of work. There is a bill for aid in dying. But there is also not availability of narcotics.

If you don't provide the access to care for your suffering, it's not surprising that people want to choose that being the way out. I would want that.

But the answer isn't, therefore, give them assisted death. The answer is give them relief from pain.

Now, certainly, it's less than 1% who want access to aid and dying. Most of them if you give the prescription actually never use it as they come to the end of life.

So I'm not quite doctrinaire about it. But the second part I'd say is the cautionary tale for me has been the experience in Europe in the Netherlands, in particular, where it's now up to 4% of the population who choose the aid and dying.

And the most common patient in that population is an elderly woman who and asked what the reasons were is they don't want to be a burden on others and on society. And it alarms me when that becomes the major driver of why people would be seeking aid and dying.

It's not I think a coincidence. The Netherlands is one of the last to have hospice and palliative care develop as a major benefit and a universal benefit for their population.

CRISTINE RUSSELL: Over here. Are you a student?

AUDIENCE: Yes. Dan Hanrahan a student at the Kennedy School. America has such a large proportion of the world's best medical care health care University schools open to a small lot of people. Compared to other developed countries that have better health outcomes and education outcomes, they seem to take an approach to provide very good health care or education to a large number of their people.

What do you think is driving that difference? And is there anything you can do to try and change that while also keeping some of the world class things that America produces?

ATUL GAWANDE: Well, yeah. There's a couple of things. One is that in our research center, we end up doing about 50% of our work in the US and 50% abroad. And if you thought that we had the best--

There are two things. One is that you quickly become aware that we don't have the best health care in the world when we're not providing it to large portions of our population. We have very good specialty care cancer care and so on. But not very good primary care compared to places like Costa Rica, or England, or other places have managed to make primary care actually a universal and well reasonably well run benefit.

And yet at the same time, there are major holes in those societies too in how those systems are run. And virtually, everywhere we go, health care delivery and performance is poor.

So even in single payer countries around the world, there is no country I found where there actually even at 50% of recognizing your high blood pressure patients and making sure that they're under adequate control. So then why? So what makes their systems so much more successful and better along the way?

And I think it's still this battle over values and how much do you feel the role of the community is to assure that over the course of your life you have these basic needs being met. One set of data that I think is really compelling and interesting is if you add up spending on health and on social welfare, the net amount of money that we spend in the United States and the net amount of money in the typical European country is actually about the same.

But we spend 2/3 of it on the health care delivery. And they spend 2/3 of it on the social sector delivery, education, and other components. And assuring those the basic level of universal benefits.

And I think it's partly our individualism, our extreme, our large size, and our extreme diversity, where we are less apt to be committed to the idea that we're all in it together. And I'm going to look after my community member in the same way and want to assure they get that education and assure that they get that health care coverage.

I think it's possible to achieve those things. We did come up with Social Security later than other places did. But we did do it know did finally cover the elderly over 65. I think we can address these issues and win the battle along the way. But you have to bring a large very diverse and quite riven country along that pathway.

CRISTINE RUSSELL: So I'm the timekeeper. And we need really quick questions if we can.

ATUL GAWANDE: I'll try to give quick answers.

CRISTINE RUSSELL: OK. Try to give quick answers.

ATUL GAWANDE: I always tell stories.

CRISTINE RUSSELL: Yeah. That's good. Yes.

AUDIENCE: Hi. My name is Ben Bulger. I'm a Harvard alum and current graduate student. So there was a time when people died of old age. But now, in, reality people die of specific things. Not just generally old age.

It's people that are in their 80s. Like Buzz Aldrin and Dan Rather who are extremely productive. My question is, should we be focusing not only on quality of life, but quantity of life? And should we view aging itself as a disease?

If we look at the science of aging like the shortening of telomeres and so forth, there's evidence to suggest that we could focus on aging as a problem itself. Is that something that should be a priority and a concern or not?

ATUL GAWANDE: Well, I don't see these things as fundamentally opposed. If you asked people in 1900, whether you'd want an America, where the average person lived past 80 years, they'd say oh, God. No.

Because kill me by the time I'm 65, do you see what people look like when they're 65 and how miserable life is? And behold we're at 80 and we live not only longer, but we live better on average with about 80 years of disability along the way.

And being able to reduce that disability, one of our most important areas of doing work really is around dementia because we've not been able to do. A major cap on our ability to have productive independent lives into our 90s.

I do think, however, that we will be a generation that gets to experience continuing to push that boundary outward. And there is no reason that we shouldn't be pushing those boundaries.

And so I'm all for the contributions of Kendall Square and other parts of our economy, and driving innovation that will solve more and more of those problems. I just don't think that we have major investments in those billions of dollars going in along those lines.

And when we are generating solutions that can also improve health and improve your outcomes by ensuring that you have some basic planning and questions that in the health care delivery along the way, what are your priorities? Who's going to make decisions when you can't? Have you told them what your priorities are?

What you're willing to tolerate? What you're not willing to tolerate when it comes to having more time?

Those basic questions about what our goals are for our well-being, and then ensuring that we're doing innovation to achieve those goals well-being, and we're also delivering on that as a goal with the capabilities we have. I don't see those as opposed. I just think we have much more to do on the implementation side than we have been doing.

CRISTINE RUSSELL: So here. Thank you.

AUDIENCE: Hi. My name's Kate I'm from the School of Engineering here at Harvard and a graduate student.

My question leveraging the two examples you gave specifically regarding Costa Rica combining Medicare in the CDC, as well as Estonia, and the electronic health record. Is there the ability or the potential or the possibility to take on patient generated data and combine that with

medical health professional data and leverage that with specifically geographical information for a massive data set that the CDC could use for predicting the reasons why we are sick and how to improve those? And what that might look like?

CRISTINE RUSSELL: And the CDC, Centers for Disease Control.

ATUL GAWANDE: Yes. OK. So I think some of the most exciting work that's underway. And that's I'll point to two examples. One at the micro, one at the macro.

So before Obama left office, he started all of me research, all of US Research Program, which is enrolled about a million people is enrolling about a million people across the country to collect and follow exactly that data to have patient outcome information, their community data, and their genomics, their electronic records, and so on. It's happening in Pittsburgh, and Baltimore, Boston. So that data set is going to be incredibly important and powerful in being able to untangle and address these issues.

The second is in our Research Center, we have a project underway in a collaboration with some school of Public Health researchers. We've called digital phenotyping. And that's where we're tracking people by following your phones.

So we get permission to have a loaded app on your phone that turns on the sensors, and lets us track after you've had surgery, or after you've had treatment for depression, or things like that. How long before you're back to your usual level of cognitive function reflected in the words you're using, in your text or the volume the metadata, of the volume of contact, and how wide your networks are, how much mobility are you showing, and how much movement are you actually experiencing?

And be able to really begin to track and show how well is our system working. And then combine that with nontraditional data like being able to look at social media use, or combined with other data sets. And then we're making it very practical. We're trying to create the dashboards that allow those to be used by your clinician around your goals of care.

CRISTINE RUSSELL: Thank you. Up here, please.

AUDIENCE: Hi. My name is [INAUDIBLE]. And I'm a GE fellow at the Massachusetts League of Community Health Centers. I had a question regarding the shortage of primary care physicians. How do you think that we can address the shortage and get more primary care physicians to take on these roles?

ATUL GAWANDE: So another way that Estonia has been really cool. So after the Soviet Union fell, Soviet Union was really built on a hospital and specialist-based health care system. And Estonia decided to try to go another way actually because of a school of Public Health professor in and out of tune who was advocating for a universal primary health care system approach.

And it was a straightforward set of policies. They paid primary care better. If you look at the lowest paid medical profession, it's pediatricians. And the highest paid or interventional cardiologists, interventional radiologists, plastic surgeons, et cetera.

You see what we value. And by the way, the most recent budget that got passed by the Senate blocked Medicare from adjusting the primary care payments to be higher and specialty payments to keep a budget neutral.

You would flip the-- not flip, but just correct a little bit imbalance. They corrected it, and they provided support for staffing in primary centers by if you had at least 1,500 patients you, got a full time nurse assigned to you, so you could do population management.

The result was 50% their specialists about a decade later had switched to primary care. 50% had switched to primary care.

The solutions are there, it's really are having and debating and pushing on the values and the clarity. It's perfectly possible. It's not impossible. But we have to push for it and agree on it.

CRISTINE RUSSELL: OK. We're supposed to be winding down. But let me grab a few questions over here.

AUDIENCE: Hi. I'm Prinny, senior at Harvard College. You mentioned not being too particular on what form of universal health care. But I would like to push a little bit more and ask, what version of universal health care do you think would be best for generating the health care improvements we want to see the system so?

ATUL GAWANDE: So I really don't think it's a technical answer. And I'll explain why. So when we've had countries that have committed to doing universal health coverage--

In Switzerland, they have done it through private insurers that people shop around and choose for us. So it's like our exchanges.

In the UK, they do it. The government runs and employs every doctor and runs the clinics. And it's like the VA system.

Canada is it's not like Medicare. It's more like Medicaid because every province has its own health care system, and there's federal matching funding that goes to the provincial level. You have other countries like France that look like Medicare or Germany, looks Medicare Advantage plans because they have these nonprofit plans that are IN different parts of the country.

People arrive at their plans, not because they've farmed out what they recognize the perfect solution it's that they've committed to some basic values of covering everybody paying in. So I think the basic system needs to be a tax-based system.

Our fundamental failures. And it's a mistake tied back to World War II was tying where you get your health care to where you work.

We don't tie where you go to school, where you go to work. In a world where work is now increasingly a gig economy, we need to break that tie because we've built it around that system and then we've cobbled together all these solutions around it.

So a system in which it's a tax-based system. And then even saying let's do Medicare for all. We have a third of seniors are in Medicare Advantage plans, which are privately insured, and 2/3 are fee for service.

I just say let's just do it. I'm not going to fall on my sword over whether we have advantage plans or whether it's a straight fee for service insurance.

CRISTINE RUSSELL: OK. We're going to take two more here and then up there.

AUDIENCE: Hi. It's been a pleasure. My name is Lorna, and I work in the Neurobiology Department at Harvard Medical School. So my question is in regards to sexual assault as a public health problem. How do you feel that our government and our community are addressing this?

ATUL GAWANDE: Well, that's a tough one. I think we are discovering we have barely begun.

And so on one level, there are certain I think about this when it comes to end of life care as well. But the legislative solutions are mostly going to be a Mario Cuomo, sorry, Andrew Cuomo in New York mandated that doctors have to have this conversation with their patients in the state of New York.

And it didn't accomplish anything just trying to mandate it from the top. So in a policy level, where we're addressing sexual assault, it's partly about just making sure that people's voices can be heard. And we are we're in a phase where I feel like we're coming to needing to have our truth and Reconciliation Commission.

The world that spans from Al Franken to Robstown and Rob Porter and the allegations of domestic assault is a world that we only have-- is where I can draw myself into trouble, right? Because we're still navigating this discussion.

So as a public health problem I'll just say two things. Number 1. We're pulling the rug back and beginning to have the right conversation. And hold people accountable along the way.

What we need to be able to get to is a number 2, that men can acknowledge, where there has been bad behavior even criminal behavior, and then figure out how we be able to put some of that behind us.

The criminal reform work that we also want to see is one where we're trying to figure out how do we both hold people accountable and forgive and manage to have people bring their best selves back into society.

So I don't think we are the worst things we've ever done in our lives. But I also don't think we're defined entirely by the best things we've ever done in our lives, and being able to acknowledge, and be up front, and begin to talk about me included be able to say, what are the worst things that I've ever done as a male in my life, and what are the ways that we've been able that-- and not just get credit for the best things I've ever done in my life.

Those are the crucial things. I've only seen one place that's done it. One person who's begun that conversation I thought had done it extremely well. And that was Peter Beinart taking ownership of being the editor of The New Republic at a time when sexual assault was going on under his nose with Leon Wieseltier and other folks.

And he said, I realized that I was the affirmative action baby here. How did a 28-year-old male manage or 25-year-old male manage to become the editor of a major publication? It was only through Harvard connections being given a special passport along the way.

And he was incredibly lucky. His whole career was built on his getting a leg up that the women in his own office that he didn't even successful. He didn't even defend did not get and he owned it.

One of the few I saw beginning that process of recognizing that it's that this is the problem.

AUDIENCE: Thank you.

CRISTINE RUSSELL: Last question.

ATUL GAWANDE: OK.

AUDIENCE: Hi. My name is Raj. I am a senior here at the college as well. Thank you so much for speaking with us. I was wondering if you could comment on disparities in access and outcomes in rural versus urban locations. And what solutions you might have for incentivizing physicians to practice in rural settings, or strengthening health systems in these areas where there may not be the highest standards of care?

ATUL GAWANDE: Yeah. And it's a worldwide problem. One of our colleagues just this week has a editorial in Jama. Neel Shah who's our head of our project around childbirth in the United States.

So childbirth units are closing across much of rural America. 70% of our counties now are without access to an obstetrician. And it's only getting worse.

There is a couple of things. One is that we're not going to reverse the migration pattern of the country. The world is urbanizing because of the advantages of density in the world.

So what we have to be able to do is build systems that enable people wherever they are to be able to get that high level quality of care. And it's about building the systems that enable that to happen. And that's by not necessarily making it.

So we move a cardiac surgeon and an obstetrician to every county. But instead, be able to make sure that we've created the systems and the transport, and the ways of being able to make that work.

So one quick example. In Iraq, during the Iraq war we had better survival from brain injury and multiple trauma than we have in Boston with all of our density of care. They had one neurosurgeon.

But they'd created a system that allowed for immediate recognition, some basic care in the field, with medic level care, a general level surgeon, and medical capability within an hour away, and then transport that could get people to one place in the country for the highest level care. And then even when those weren't available, you could have people who would be treated within 36 hours at four different levels ending up at Walter Reed for the final part of their treatment and have extraordinary results.

Those kinds of opportunities and building systems for rural care I think are going to be much more successful than trying to make it. So we're already at 20% of our countries in health care adding even more to try to drive people out there isn't going to get to where we need to go with the outcomes we could. But the outcomes that we can achieve. I do think basic systems can get us there.

CRISTINE RUSSELL: So two quick questions and then we will leave. What book are you working on? Since it's been four years since--

ATUL GAWANDE: I can't quite say yet. As you can tell, I've been doing a lot on system. So I can say it'll be about systems. But that sounds so vague. And systems, it's ineffable.

CRISTINE RUSSELL: Pretty sure that will be the title.

ATUL GAWANDE: That won't be the title. But it would actually be something like that.

CRISTINE RUSSELL: OK. And then finally, given the audience advice to young people who are thinking of going into public service, health policy, government, private sector. If you were starting out in your career or in a broad audience of public service, what would you say?

ATUL GAWANDE: So I followed a very circuitous path as you could hear in David's story. And the son of two Indian immigrant doctors, you can imagine what they expected me to be.

And I spent a lot of time trying to escape becoming a doctor. And it didn't work along the way. And that included getting a master's in philosophy, and finding I wasn't very good at philosophy, and trying to start a rock band, and finding I wasn't very good at that, and working in an Epstein-Barr virus lab for a year. And I didn't like those little viruses.

And that the best advice I've heard along the way was before the age of 40 say yes to everything. And after the age of 40 say no to everything.

And the reason why is it before 40, you should be trying lots of things. And then paying a lot of attention to what actually energizes you and what doesn't. And what energizes you, it forces you to make choices.

Don't do the things that energize. Don't do the things that do not energize you and do the things that de energize you. And it sounds really simple. But in fact, it's incredibly hard.

My parents thought I was going to be a doctor. And then I'm saying, but I'm going to go work in Washington for this David Ellwood guy.

But why? Why can't you go to medical school? And you're following what actually makes you-- I mean, the amazing thing about being in a country like America is you can follow your dreams, and you have a high likelihood. If you do what you are best at, you get to thrive.

Now, after 40 you should have discovered what you're good at and what you're not good at along the way. And it's time to say no to everything else and then and then buckle down where you actually have your talents and where you can dig in deep and keep going.

And I feel like that's what I. I didn't know I was any good at writing or interested in writing until I was a third year surgical resident. A friend asked me to write a blog for his new startup internet magazine, which turned out to be slate magazine along the way.

And I just learned a ton. And I liked it. And I'm in the middle of residency, and I found I was making time at 11 o'clock at night to work on it. And I said, well, then I should keep on doing it.

CRISTINE RUSSELL: Well I have a sense you're still saying yes even though you say you're saying no. And I want your next article to be about time management, stress reduction. We'll all be looking to read that.

But I want to thank our speaker Atul Gawande, and also the audience for coming out tonight. Really great audience too.

[APPLAUSE]

[MUSIC PLAYING]