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**THE REITH LECTURES 2014: THE FUTURE OF MEDICINE  
Reith Lecturer: Atul Gawande  
Lecture 3: The Problem of Hubris**

**SUE LAWLEY:** Hello and welcome to the Royal Society in Edinburgh for the third of this year's BBC Reith Lectures.

Our subject is the future of medicine and we're in the right place. There are few cities in the world that have made such a distinguished contribution to medical research and education as Scotland's capital. The list of famous surgeons and doctors who either studied or worked here is a long one – from John Hunter, who's credited with founding the science of surgery in the late 18<sup>th</sup> century, to Alexander Fleming, rector of the city's medical school who of course discovered penicillin in the 20<sup>th</sup>.

This year's lectures bring a distinguished surgeon and writer as a visitor to Edinburgh. In earlier lectures, he's discussed the issues of why doctors fail and the need for a far more systematic approach to healthcare. Today he tackles ageing and dying. To talk about what he calls the "problem of hubris", please welcome the BBC Reith Lecturer 2014, Atul Gawande.

(AUDIENCE APPLAUSE)

**ATUL GAWANDE:** Thank you for welcoming me to this special place.

I learned about a lot in medical school, but mortality wasn't one of them - which may seem odd to say. But you know we'd come to medical school to be heroes in some sense. We wanted to learn about what goes wrong with the body, but also how to fix it, how to really understand what we can do. We were not eager to recognise that a big part of what we would have to do in the future is learn to cope with the limits of our knowledge, our necessary fallibility.

We have a problem of hubris, overweening confidence, but we slowly come to realise that we can't fix what can't be fixed. And, as I discovered when I came into practice and found that, you know, a lot of patients were seeing me for problems that I was not going to make better – chronic illnesses that were not going away, frailty that was just getting worse, terminal illness that they were facing – we have no greater un-fixables than ageing and death themselves.

And the reality was I wasn't really prepared for what to do about them. And yet we have over the course of the last half century medicalised mortality, put mortality in the hands of people like me, saying we will know what to do about this phase in life. And you know the extent is pretty remarkable. From here in Scotland to Japan, we have 60 per cent of our population now will die

in hospitals – a remarkable change from the 1950s when the majority of people died in their homes. Eighty plus per cent die in institutions of some kind. But those of us who work in those institutions you know are being forced to ask the question: what is it we are supposed to do about these moments in our lives?

I got a call from a friend, the husband of Peg Batchelder, who was my 13 year old daughter's piano teacher, and he said simply, "Peg is in the hospital." And what he was calling about was one of those moments where the puzzle is what is it that we're supposed to do? So Peg I knew had had a cancer. She'd had a rare cancer - a sarcoma, which is a soft tissue cancer that was in her pelvis – and a few years before, it had been removed through a radical operation, removing one third of her pelvis, and then she underwent chemotherapy and radiation. She had many complications. She was in the hospital for many, many weeks. She called it her "year in hell", but she came through it. She had no evidence of disease when things were done. Her prognosis was good. And so she returned to teaching. She was a very popular, vivacious, very joyful teacher and she refilled her roster of students in no time, including my daughter joining in: Hunter.

She was limited only by having to walk with Canadian crutches. You might know those kinds. They're the kind that clips on over your wrists as you walk along. She had done well, had it all behind her. And I also knew that in the previous year – now this had been a few years on – in the previous year she developed a complication from her treatment for that original cancer. She had a condition that was a leukaemia-like malignancy that was caused by the chemotherapy and, as a result, she needed to go back onto now a different kind of chemotherapy again. She insisted that she keep on teaching and so my daughter would, you know, once in a while get notified that a lesson was going to be postponed a couple of days while Peg needed to go in to see the doctor, but for the most part, it was something that she was able to go through – through that full year. And then during the previous couple of weeks or more, we'd been notified that the lessons were being postponed and we would know when they might resume again.

And that was when I got the call from Martin, her husband. He was calling from her hospital room and he put Peg on his speaker phone, so I could hear her tell her story. She had this very weak voice, long pauses between the sentences, and what she said was that the treatment wasn't working against that leukaemia-like malignancy. It caused her blood cell counts to fall. Some of those blood cells fight infection and, as a result, she had developed fevers. They knew she had an infection somewhere and so they did scans. And on those scans, they also found that her original cancer had come back – now in another part of her hip – and spread through her liver. In the ensuing weeks, the tumour, her original cancer got bigger and started causing her immobilising pain until she really couldn't get out of bed anymore and that was when she went into the hospital. There she was also becoming incontinent and now she wanted to know what should she do next, what could she try next?

I asked her, "Well what did the doctors say?" and she said, "Well not much it doesn't seem. They're giving me blood transfusions to fight the blood cell counts dropping." They were giving pain medications, they were giving steroids. But what next? They said there were no established chemotherapies that they were going to offer.

And I think this is the moment that we continue to debate in many countries around the world: what is it that we think should happen? It's an expensive moment, it's a trying moment. And the way it feels reduced, even sitting there on the other end of that phone call, seemed to come down to well should we encourage her to try something, anything, is there an experimental therapy that she could try? She told me and her husband told me that you know they had been discussing the idea of bone marrow transplant – very non-standard and there was disagreement among the doctors whether it is even something that ought to be tried – but it was something that could be tried. Or, she asked, should she just give up? Or you know the way that her doctors put it, they'd give her pain medication and keep her “comfortable”.

Now what I knew is that neither seemed quite right – doing everything at all costs or giving up - but after more than ten years in practice, I wasn't convinced I knew how to describe other options, other ways of really trying to think about this. I didn't feel effective, I didn't feel competent in these situations. I felt utterly competent if I was going to be able to say “Yes, well we can operate and I have certain things that I can do”, but in this situation I didn't have that competence. And that bothered me. It bothered me as a surgeon who saw many of these kinds of patients – I'm a cancer surgeon, saw people coming through who I could offer treatments that might try to extend time, but often I was making people worse – and it also bothered me as a son because my father a few years ago was diagnosed with a brain tumour in his brain stem and in his spinal cord that was not going to be curable, and he himself was a surgeon and we pondered what it was that we should do about that.

So I approached this the way I know how to approach these kinds of questions. I decided to approach it as a writer. And what I do when I write is I talk to lots of people and so I interviewed... I ultimately lost count after 200 people. I interviewed more than 200 families and family members and patients about their experiences with serious illness with ageing, with frailty. And I also met and interviewed and observed scores of palliative care doctors, frontline nursing home workers, geriatricians and others.

And afterwards what emerged were a group of people who seemed like they did know what to do in these situations. They had a way of thinking and a way of approaching what you might do when faced with an unfixable problem. And among the many lessons I learned from them, I think I discovered two of them that might be among the most fundamental. Number one, in medicine, in society it seems we have failed to recognise that people have priorities to serve, priorities they want us to serve besides just living longer. It seems obvious. We aren't just people who want to live to be pulsing organisms lying on a bed doing nothing, but what are the priorities that people have? And people have priorities that can range from, you know, wanting us to help make sure that their cognitive function is intact or wanting us to make sure that they're able to spend more time at home than in the hospital or wanting to make sure that they can just be with their dog.

Well the second important lesson that I felt like I learned was that the most reliable way to learn what people's priorities are – and there are highly technical studies on this – the most reliable way to learn is to ask. And we don't ask. In studies for example of cancer patients in a very advanced stage - in one study it was just a group of people who lived on average only 4 months after they started the study - less than a third of them had had a conversation with their physician

about their priorities and goals for their end of life and that group did far better, had less suffering, more likely to get the care that they wanted, less likely to die in the hospital or ICU, more likely to do at home or with family. Interestingly, 6 months after their death their family members were less likely to be depressed or to have post-traumatic stress disorder symptoms, but that was only a third who even had those conversations.

One of the interesting things I also learned was that when you ask people about their priorities, it has a certain special power because the way that we often in medicine try to get people to come to grips with their anxieties about what is happening to them and their body is by giving them lots of facts and information and data. But the way that people come to grips with their anxieties is not by hearing facts but instead by saying the truth for themselves, by putting it into their own words. And so when I asked folks as I interviewed them, I'd say "So what would be on the checklist you would give me to use in my next office visit when I come to a critical decision point with a patient about whether we should do an operation or not or other kinds of considerations?" And one of the items that people said I ought to have on my list is that in that conversation I should be talking less than 50 per cent of the time while we're in that room. And so I paid attention to what I was doing in those conversations and to my horror I found I was talking 90 per cent of the time. I had lots of facts and figures and pros and cons and risks and benefits, so now what do you want to do? And I'd see this bewildered person across from me.

They also said you know if you are going to talk less than 50 per cent of the time, the key thing is you have to be able to ask questions. And there are certain questions that I saw people ask that were really great at eliciting what people's real understanding and their priorities were. The first question was to ask, "What is your understanding of where you are with your condition or your illness at this time?" Another is, "What are your fears and worries for the future?" "What are your goals if time is short?" "What outcomes would be unacceptable to you?" And with that, they've told you their priorities and what they care about and then that tells you both where the bright lines are that you do not cross and what you might actually be aiming for.

Now not everyone can answer such questions and their answers can change over time, so you have to ask it, you know, as things go along. But I asked Peg those questions to see what she would say and she was able to answer them. I asked her what was her understanding of where she was with her illness at this time, and she said flat out "I'm going to die." Later on Martin, her husband, said to me you know that was the first time he'd heard her really say it just like that. She went on and she said, "You know there is nothing more they can do" and she said it in that angry voice. She was angry. So then I said, "What ... what goals do you have then if your time is becoming short?" And she said, "I don't know. I don't have any that I see possible." "What fears do you have for the future, what worries?" And then she named a litany. She said that she feared facing more pain. She was already immobilised in bed and just feared it getting even worse. She feared suffering the humiliation of losing more of her bodily control, she feared dying in the hospital. She said she'd been there in the hospital for days just getting worse and she didn't see how anything could turn around from that. Her fear is that it would all be that nothing more ... but that..

Someone in her circumstance, I think, offered death with dignity, an assisted death, might have taken that as their only option for control in the absence of other options, and I think in when

you're faced with someone who has unbearable suffering, unavoidably unbearable suffering, it is heartless to think that we might not offer that kind of option.

But that is not what I talked to her about because the other option I suggested was going home with hospice care. And I learned it from visiting and walking on rounds with the nurses who provide hospice and their other team members. I mean my mental image of hospice until I'd gone on those rounds was you know a black-hooded nurse with an IV morphine drip sending you into the beyond, or at best someone who says, you know, "I'm helping nature take its course." And that is not what that nurse said she felt her job was. She said that medicine normally will sacrifice your time and your quality of life now for the sake of possible time in the future. But as that possible time fades and the costs of the quality of life rise, you switch; at some point along the way you have to make the transition. And then she's there, she said, to use all of our medical capabilities to give you the best possible day today, regardless of what it means for your time in the future.

Now ironically people who go on hospice don't live shorter than others. In many instances, they live longer. It's almost Zen - that when you focus on what it is that you want to have that's worth living for and preserve it, people can get stronger for a time.

Now I turned to Peg then and I said, "What if we make this our goal? What if our aim is not giving up, but instead our aim is making the best day possible for you however you might define it under the circumstances? It seems like it had been a while since you had a good day?" And she said, "Yes, yes it has. It's been a very long time." So I said, "Would that be worth hoping for? Would that be worth fighting for - just one good day?" And 48 hours later Martin persuaded her that going home on hospice might be the best thing to do.

I had to break the news to Hunter, my daughter, that she would not be having piano lessons with Peg anymore and I told her the truth - that it was because Peg was dying. Hunter was struck incredibly low. She asked if she could see Peg and I said I didn't think that was going to be possible.

But then a couple of days later Peg called herself and she said if my wife and I were willing and if Hunter were up for it, she would like to resume teaching her. I couldn't believe it. She said she didn't know how long she could continue to teach, but she wanted to. And that was more than she or I ever imagined might be possible.

But what happened when the hospice nurse arrived on that first day that Peg got home, the nurse talked to Peg about what she cared about most in her life and then she said, "I'm going to work on making that happen." And the first couple of days what they focused on was just the basic goal of managing her daily difficulties and her suffering and that meant that they brought in a hospital bed that they kept downstairs on the first floor of their house, so she wouldn't have to navigate the stairs; they put a portable commode at her bedside, so that she might be able to get right onto the commode and avoid soiling herself quite as much; they made a plan for bathing and cleaning and dressing her whatever happened; and they especially worked on increasing and tinkering with her pain medications. They increased her doses considerably, much higher than she'd been getting. And with that her pain came under control. They added Methylphenedate,

which is Ritalin, to combat the stupor that she was experiencing from the pain medication. And with that combination, her anxieties plummeted as all of her challenges came under control. And then it let her lift her sights. Martin later said to me, “She came to a clear view of how she wanted to live the rest of her days. She was going to be at home and she was going to teach.”

Now that took planning and real medical expertise to make that happen. To make each lesson possible meant having to figure out the trickiness of giving her enough morphine at the right time so that it would peak to allow her to teach the lesson, but not be so much morphine that would make her groggy and slur her speech and freak out the kids. And they hit it; they found that sweet spot. Martin said that she was more alive running up to a lesson and for the days after than he’d seen her in a long time. She’d had no kids. Her students filled that place for her. And she still had some things that she wanted them to know before she left. She wanted to say her goodbyes, give some parting advice.

I think in medicine we’ve forgotten how vital such matters are to people as we approach life’s end. People want to share memories, they want to pass on wisdoms, connect with loved ones, make some last contributions to the world. And this role, many people argue, is among life’s most important. It’s how you give shape to the story of your life. It’s part of how you give your life meaning. And the way we in medicine can deny people these moments, relegating them to the care of strangers alone in an intensive care unit, the way we can forget this out of obtuseness and neglect, is I think cause for our shame.

Peg, however, got to fulfil her final role. She lived 6 full weeks and my daughter Hunter ended up with lessons for 4 of those weeks. There were then two final concerts. One was a children’s recital with the kids that she was teaching from elementary school, through high school age, and then there was a final concert with students that she’d taught in the past who gathered from all around the country – accomplished performers now – who played for her as well. In each concert, they gathered in her living room, they played Brahms and Dvorak and Chopin and Beethoven.

A week after the last concert, she went into delirium and a few days after that she died peacefully in her bed with her husband at her side.

My final remembrance of Peg, however, is from near the end of the children’s recital which had been a few weeks before. After the children had played, she’d stood with each child off to the side away from the crowd where she asked each of them to come up to her individually so she could give them a gift and a few personal words. And I saw her when Hunter went up for her turn. Peg gave her a book of music she’d selected for her that she wanted her to learn. And then she gave one final gift. She put her arm around Hunter. “You’re special”, she whispered to her. And that was something she never wanted any of those kids to forget.

We’ve had I think an about 50 year experiment with medicalising mortality, with casting it as just another problem for us to treat like any other, and I think that experiment is failing. But we have an alternative emerging. It’s one where we learn and elicit what matters most to people in their lives besides just surviving, and then we use our capabilities not to sacrifice it but to protect, to protect it – to protect those priorities that people have. And I think that is our opportunity. Thank you.

(AUDIENCE APPLAUSE)

**SUE LAWLEY:** Atul Gawande, thank you very much indeed. Now let me invite the members of the audience here in the Royal Society, Edinburgh, to put their questions to you. Who's going to give me the first one?

**PAT KANE:** My name is Pat Kane, I'm a writer and musician. I wonder, Atul, whether one of the enemies to this kind of rich sense of the dignity of death in the context of science, medical science, trying to keep you alive, one of the enemies to this is actually some of your own countrymen in the kind of tech community because one of the things it strikes me that the great tech giants are obsessed with is to defy you? So where are we with the battle between a dignified mortality and a kind of frantic search for if not immortality, then longevity?

**ATUL GAWANDE:** Yeah it's a lovely question. We have come through a century where we've added 30 years to people's lives, generally good years. There are, in many ways, no better time to be old - so at age 65, we will on average, in developed countries, the male will live to 83 years, women to 86 years - but it is also the case that we have this extended period towards the end where we will need help, we may be dependent, we may need ... and we will face illnesses. But what it is to be 65 today is remarkably almost unrecognisable to a century before. So if I could get ...

**SUE LAWLEY:** (*over*) A lot of people in this room nodding at that statement.

**ATUL GAWANDE:** Yeah, yeah. So you know if I could get the pill that would give me 20 more years, I would take it. But I also think that we don't come to grips with the reality that there is frailty, there is dying, and that we have tremendous suffering by failing to recognise that we have turned those into medical experiences narrowly focused on health and what does health mean when you are faced with something like Peg Batchelder was?

**SUE LAWLEY:** But we don't all have friends who are surgeons who can intervene and to sort of fix it for us. That's the great problem here, isn't it... that you're asking for really personal help with each individual case?

**ATUL GAWANDE:** The interesting thing and I'll point to a study that helps bring home how ... how close to within access this is. And there have been many studies like this, but the most rigorous one was done at the Massachusetts General Hospital and they took patients with Stage IV lung cancer. So this is incurable lung cancer; the patients lived on average just 11 months. Half of the patients got usual oncology care and the other half got usual oncology care plus saw a palliative care physician who would discuss with them what their priorities and goals might be for the end of life. Now the group who had that discussion ended up choosing to stop chemotherapy sooner. They were much less likely to go onto the fourth round of chemotherapy, in fact had one third less chemotherapy costs. They had one third fewer days in the hospital. They were much less likely to die in the hospital or in the intensive care unit. They started hospice earlier. They had less suffering at the end of life. And the kicker was they lived 25 per

cent longer. If this were a drug, it would be a multi-billion dollar drug and we wouldn't be asking oh could we afford it, how is this going to be possible? But you know in truth it isn't even a matter of affording. These are basic skills around having conversations that enabled a win-win situation.

**SUE LAWLEY:** Sure. I'm going to move on.

**TONY TREWAVAS:** Hello. I am Professor Tony Trewavas. I'm a biologist. It seems to me from what you're saying that it's the acceptance that you're going to die is crucial. What do you do with people who are in denial?

**ATUL GAWANDE:** This is really important. You know people who are in denial – and I have some of these patients – they ... they will not, as you say ... This is not a curable cancer and your time may be short and you can give them the statistics - you know 50 per cent will die within the year - and they won't hear it. And you'll know it because it's easy to know it. You know they aren't processing it along the way. The key thing that I think that emerges are a couple of things. Number one is simply asking people this question over and over again as time goes on: "What's your understanding of where you are with your condition?" And if they can put it in their own words, they are the ones who are the only ones who can overcome that denial. Secondly, this is the group that do need the palliative care physician. I don't think everybody needs a palliative care physician. This conversation is within the realm of what any physician can be good at, but also I think families can have and ask these basic questions of one another. But with someone who's in severe denial, this is where people who have a lot of skill must come in.

**EMMA El Makdessi:** I'm Emma El Makdessi. I'm a first year medical student at the University of Edinburgh. And you've used Peg in order to illustrate your point about hubris of doctors about the end of life, but how would the story and how you deal with asking patients where they are with their disease and dealing with this kind of situation that you've brought up for future doctors, how would that differ if you were thinking about terminal illness in children?

**ATUL GAWANDE:** I don't think it's different for children except that you're dealing with the parents as well as the child. I had a cousin named Callie, who was the cousin of my wife, who had a lymphoma and then the lymphoma came back. She'd been in the hospital for a couple of months and her father called me to say "They're discussing bone marrow transplant. They say it doesn't work very often", but it was something they could try and "what should we do?" The other alternative was take her home. And at the time I wasn't equipped and I gave them some facts and figures – you know bone marrow transplant has this much survival and there's this and that. And I think ... But one thing I did that I'm glad I did was I said, "It's okay if you say you want to take her home", but they really were left alone with this decision – lots of facts given to them - and I wish I'd asked them, "What's your understanding of where you are with this condition?" and I wish I'd asked Callie - at 12, she could have said." And I know that if I'd said, "You know what outcome is unacceptable to you?" it's that she would continue to be in that hospital bed the way she was – or worse. And they finally on their own, took her home and let her die. And she had a peaceful week at home with her family, but I don't think we helped at all.

**NOEL SHARKEY:** Noel Sharkey, President of the Edinburgh Student Surgical Society. My question is twofold. Are healthcare professionals best qualified to protect the priorities of those who are dying? And might there be scope for a new type of professional, a new speciality out with medicine, to act as the patient advocate and manage this type of situation?

**ATUL GAWANDE:** We haven't done a good job protecting the patient, have we? And the people who are often in the best position to protect the patient or the patient themselves and the family members, some of the most powerful people are people really outside of the doctors and nurses - the social workers, the chaplains. 85 per cent of the population have a living will. Probably even more importantly, virtually all of the people who are in a nursing home or who come into the hospital for any risky matter re-discuss what their priorities and goals are, so that you know if it's changing, you're always evolving it. Now whether it's a formalised patient advocate or a particular role, in that community it's simply people who are interested in learning how to play that role and help people along the way.

**SUE LAWLEY:** Doesn't the desire for life suddenly at the end, when someone is aware that they are dying, suddenly overcome all kinds of thoughts they might have had before? Suddenly people want to live.

**ATUL GAWANDE:** Suddenly people absolutely want to live, but want to live for what? So my father towards the end, you know his goals changed over time. He had a tumour and his first goal was I want to stay a surgeon as long as possible. And then when his hand became paralysed by the tumour and he was forced to give up surgery, then it was that he wanted to at least, no matter what, remain ... he's a social creature. We had this discussion. One of my colleague's fathers said, "You know as long as I can watch football on television and eat chocolate ice-cream, that is good enough for me." And so I said to my dad this is what he'd said, and my dad said, "No way that is good enough for me." He wanted a social life. And in fact even towards the end and he was on hospice, he had a dinner party almost every week. He loved to stay in contact with his family by Skype, to email and connect with people. He would have grabbed for any opportunity to keep that going. That was good enough for him. But when the pain and the problems reached the point that he couldn't even do those things anymore, then he said "Give me the pain medication. Give me as much pain medication as required to stop the pain and then whatever happens happens."

**SUE LAWLEY:** But you're advocating autonomy over your treatment. What about autonomy over your life itself because you intimated during the course of the lecture that actually you had some sympathy for assisted dying?

**ATUL GAWANDE:** Yeah. The puzzle to me is or the complicated view I have on this is that I fully believe that we are heartless if we do not recognise when people have unbearable suffering and do not seek to alleviate it.

**SUE LAWLEY:** (*over*) Or simply don't want to go on, like your father, because life wasn't good enough.

**ATUL GAWANDE:** Well so it was complicated. As long as we were alleviating his suffering, he was okay with that. Now it meant giving him so much pain medication that he basically was knocked out and at certain points it would stop him breathing. A difficult part of the story I tell is the conflict within our family over what this means, and at one point my mother called an ambulance because of her fear that you know he wasn't breathing. They reversed the pain medication and he woke up in pain and he said, "Give me back my pain medication." Now he's in his hospital, he's a surgeon in his own hospital talking to his own colleagues and they won't give him the pain medication because they're afraid he won't wake up again. But he's telling them what the priority is. So he checked himself out of the hospital. He took me aside and when we were alone, he said, "You are giving me every bit of that pain medication no matter what Mom says."

**SUE LAWLEY:** *(over)* Even if it stopped him breathing?

**ATUL GAWANDE:** Even if it stopped him breathing. And I kept on giving the pain medication. I don't think that it killed him. There are many things that killed him – his tumour, he had now pneumonia, he had a variety of things going on. It relieved his suffering and the situation ended there.

**SUE LAWLEY:** So it's heartless not to assist people to die when they want to die because they don't like going on living?

**ATUL GAWANDE:** Yeah. Let me put it this way. It's heartless not to treat the suffering; and if your treatment of the suffering ends up shortening their life, that is what happens.

**SUE LAWLEY:** Anybody want to pick up on this particular issue?

**GRAEME CATTO:** I'm Graeme Catto. I'm a physician and I chair Dignity in Dying. Peg was fortunate at least to the extent that her symptoms were controlled by the very excellent treatment she got, but had her symptoms not been controlled then I think you did hint that perhaps she would consider an assisted death. I suggest to you that one of the reasons she might not have considered that was that it's against the law and I just wonder why doctors have been so slow to push for that and societies so slow to accept it where it's often a settled wish for people who are competent but are suffering beyond their wishes.

**ATUL GAWANDE:** Yeah I'm glad you extended the discussion one step further. When suffering is so great that we don't even have the means to stop it and prevent it and it's unavoidable suffering, I do think we have means that are effective and can be carefully targeted to only those who are falling in that situation to allow them to have a prescription that would hasten their death. We have several states in the United States where it is legal now and what's striking about it is a couple of things: only one per cent of the population end up choosing that path; and, interestingly, once they have their prescription, only half of them end up using it. I think often just knowing that that option is there is relief enough in case the suffering becomes that terrible. Now I am in favour of that. I am disturbed, however, by some of the lines of reasoning behind it. I don't think the aim is a good death. I think the aim that we have is as good

a life as possible all the way to the very end, and when the semblance of a good life is no longer possible then this is part of appropriate therapy for that situation.

**GRAEME CATTO:** I very much agree with that. I think though that the decision needs to be the patient's and not the doctor's.

**ATUL GAWANDE:** Which is why getting the prescription in your own hands is important. But that said, in the Netherlands it's bothered me that now the number of people who are taking the assisted suicide path, assisted death path, has risen to about 3 to 4 per cent, and the number one reason is no longer unbearable suffering, it's become that people don't want to be a burden on the family and the society anymore. And that concerns me a great deal because we can put people in a position where they feel that they are just a burden, that they have no use in the world. And that's a sign again of a societal failure – to value people who are not suffering but in fact simply living, and by their living serve some worth in the world.

**SUE LAWLEY:** Is there anyone who disagrees with what's being said here on this issue? The whole room agrees.

**ATUL GAWANDE:** Cowed??

**SUE LAWLEY:** (*laughs*) I think I believe them actually. What about you? I'll take a last question there – woman with the blonde hair.

**JENNIFER McILHENNY:** Hi I'm Jennifer McIlhenny. I'm a surgical registrar in Glasgow. I wanted to ask you about the term "avoidable" deaths. We hear all the time hundreds of thousands of "avoidable" deaths, deaths that could be prevented with a surgical checklist. Of course all of these are just deaths that could be delayed and often usefully delayed by a long time and that's why we're doctors and surgeons. But how do you think we could get that terminology right – deaths that are usefully delayed by a long time or deaths that are just delayed by a little while in what's an avoidable death?

**ATUL GAWANDE:** It's a very difficult question, but what we know is that with the different approaches that we've produced – including the surgical checklist but plenty of other things – we've lowered the death rates by more than 50 per cent over the last few years and that describes a world of people who basically had avoidable deaths. But then as you come to these other questions, there are probably inappropriate people coming to surgery. The most common week of having surgery in your life is the last week of your life and the most your most likely day of having surgery during that week: the very last day. You'd like to move it up or how about not have that at all because all we've given you are the complications and the pain and the suffering without adding any benefit.

**SUE LAWLEY:** We've run out of time. Next week, for the final lecture of the series, we'll be in Delhi where Atul will be telling the story of his Indian grandfather who lived to be 110 and questioning how he could be as well cared for in the modern or the developing world today. That's *A Question of Well-Being* next week from Delhi. Until then, our thanks to our audience here in the Royal Society, Edinburgh, and of course to our Reith Lecturer 2014, Atul Gawande.