"BREAKING THE CYCLE": ANTI-DOPING IN PROFESSIONAL CYCLING

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Anne is widely known for her more recent work at the International Cycling Union as director of the Anti-Doping Foundation. Anne was instrumental in the conception and growth of the Cycling Anti-Doping Foundation, the design and implementation of the Biological Passport and the design and implementation of the True Champion or Cheat Education Program. Anne's work in the fight against doping has contributed to a significant paradigm shift in the culture of cycling and the wider international sporting community.

Anne holds a Masters of Sports Management from the University of Lausanne/International Olympic Committee and is a founding member of the Lausanne Network for Women in International Sport.

Anne has just returned from the London Olympics.

Introduction

In 2008, when I was at the International Cycling Union ("UCI") in Switzerland, we knew that we had to do something dramatic if cycling was to maintain its place as a major sport. The UCI, to their credit, actually took a high degree of risk and implemented a fundamental change in anti-doping.

That change is known as the "Biological Passport" and it is not so new anymore. There remain a few issues with the Biological Passport that make it logistically very difficult and quite expensive. We were hoping that other sports, like athletics and swimming, may have also adopted the Biological Passport by now, but there are a few issues for them to work through before the Biological Passport becomes entrenched in the anti-doping movement.

Background: Cycling Crisis

To start I will set some context. In the early 2000s road cycling was a sport in crisis. We just kept hearing story after story, scandal after scandal. My view is that the sport of cycling itself was not, and is not, in crisis. There are a lot of new disciplines in cycling, such as mountain biking and BMX. These new cycling disciplines have actually brought some influence on the old original traditions of road cycling.

If there was a crisis, it was definitely in men's professional road cycling. There were significant, brazen admissions and findings of substances in cases of big names in cycling such as Marco Pantani, Floyd Landis and Bjarne Riis. There is no doubt that men's professional cycling was on its knees. Cycling had had symptoms of this problem for many years. In 1998 there was what was known as the "Festina affair".

In 1999-2004 there were many high profile cases, including the death of Marco Pantani and the winners of big tours like the Giro and the Vuelta, Tyler Hamilton and Roberto Heras, testing positive for EPO.

When I first joined the UCI in 2006, it was just after the dramatic bookends of the Tour de France in 2006. Two days before the Tour, "Operation Puerto" was discovered, which was a big human blood transfusion laboratory in Madrid. 56 cyclists were on a client list there. Nine of them did not actually start the Tour de France that year. Then two days after the 2006 Tour de France, Floyd Landis, the winner, was announced to have tested positive for testosterone. The events surrounding the 2006 Tour de France brought to a head issues with which cycling had unsuccessfully been trying to deal.

When I joined the UCI I happened to be in Switzerland at the time, getting close to finishing my year's Master's degree at the University of Lausanne. I had decided to get out of anti-doping, which was part of the reason why I was undertaking my Master's. I really wanted to get into broader international sport issues, but my friend noted to me the one issue in anti-doping that would be most worthwhile trying to address was international cycling. I agreed and stayed in Switzerland at the UCI for three years.

In 2007 to 2008 there was a spate of drug admissions in cycling. Previous Tour de France winners, like Bjarne Riis declared that in the late 90s and early 2000s road cyclists took performance enhancing drugs. Then in both the following Tour de Frances, the 2007 and 2008 blood issues remained a concern as there was a new version of EPO called CERA, which was quite endemic in the pelaton. Cycling just could not get out of the drug cycle.

Lance Armstrong

More recently we have had "The Lance Factor". For me, cycling needs to move on from that. It is a festering bubble in the sport. My hope was that the US Federal investigation that was launched in 2011 could bring an end to the continuing questions about Lance Armstrong. Jeff Novitzky, who led the Federal investigation into Lance Armstrong was the investigator who sent Marion Jones to gaol for six months. I thought if anyone could get to the truth of the matter it would be Jeff Novitzky.

What we did not know (or at least knew but did not appreciate) was the inordinate influence that Lance Armstrong has at every level of the environment in which he works. The investigation originally found that there was not enough evidence to proceed.

"The Lance Factor" is very much a part of the association of doping within cycling and cycling is never going to get out to the light at the end of the tunnel until the whole question about Lance Armstrong has been allowed to slip into the past.

Cause of the Doping Problem in Cycling

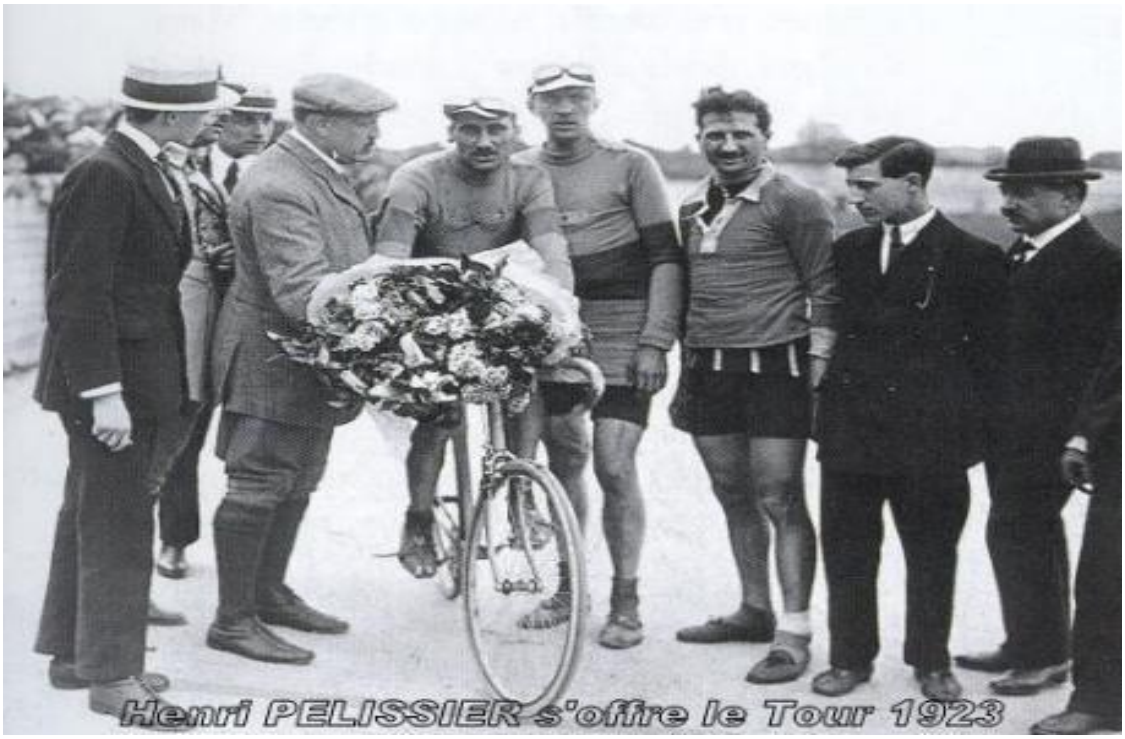
For me there are two real reasons why the doping problem became so bad in the sport of cycling. The sport itself has a deeply entrenched culture of cheating at every level. Back in 1903, in the first Tour de France, we know that the riders took trains! The sport developed in the late 1800s as a sort of an under-the-table betting sport, where people would bet on how far cyclists could ride before falling off in exhaustion. It developed in this murky water. It is a very working class sport, a bit like boxing, and, unfortunately, the presidents of the UCI had not really worked on addressing cheating and this allowed it to keep being perpetuated within the sport.

The other thing that perpetuated the doping problem is an Italian concept called the

Omertà, which is The Silence. Everybody knew what everyone was doing but they were not allowed to talk about it, even with their team mates to some extent. Consequently there was sort of a murky haze and all the riders and their professional team managers were expected to perpetuate this murkiness.

We know that in the high level professional cycling teams, for probably 30 or 40 years, there were certainly systematic doping programs in place, which were called "medical programs". If riders signed on to those teams, one of the conditions was they had to comply with the team's "medical program", but no-one talked to anyone about it. It did not cause a swell of negative reaction because everybody thought that they were special and that they were being treated in a special way and were getting special substances that their competitors and even their team mates were not getting.

The First Tour de France



The man on the left in the above picture is Henri Pélissier. He was the first owner of the Tour de France. In the 1930s when the race switched to national teams, Pélissier issued the rule book, which informed the riders and their managers that for that first year the drugs would not be provided by the race organiser and they had to source their own drugs if they were going to ride in the tour that year. The riders and managers provided updates of the complete cocktail of substances that they took which included quinine, strychnine and horse lineament. They needed these things to get through the race.

The Tour de France has shrunk considerably. It has become more human. For quite a few years it was simply a race that humans could not complete without outside assistance. It is now at a point where humans can do the distances and the times that are accepted in the Tour de France, without drugs. It is now a significantly shorter race than it was for many years.

The Solution

For cycling the Biological Passport was a solution of some sort. It was our first real attempt to change behaviour, but hopefully also go a bit deeper and start changing the embedded culture within the sport. The UCI was certainly the first international sporting federation, and in fact the first of any anti-doping agency, to really work on this. The World Anti-Doping Agency were cautious but were happy to support us to an extent. They were happy to let us develop the program, make all the mistakes and then develop their own guidelines based on the first two years of the UCI's implementation experiences.

My Role

I am not a doctor, I am not a lawyer and I am not scientist. That is relevant because, predominantly, the people who lead anti-doping programs fit into one of those three categories. When I arrived at UCI the program was being led by Dr Mario Zorzoli, a fantastic person. At that time the anti-doping program had a very strong medical focus. Other programs are led by the legal fraternity and they tend to have a legal focus. Programs have a different focus depending on how the program is led.

I believe that I brought to the UCI a sense of not being locked into a medical, legal or scientific perspective. My job was to co-ordinate the doctors, the lawyers and the scientists to come up with this brand new concept and not get locked into one particular way of viewing it.

My role was to co-ordinate and bring the perspectives all together, and we relied very heavily on those three groups of people.

UCI – Anti-doping Pioneer

People are negative about the UCI and it receives a lot of negative press. I understand the problems with the UCI and I understand the embedded cultural issues that they deal with. However I was quite proud to work at the UCI while I was there. Further, even looking back over its history, the UCI really was a pioneer in moving the anti-doping effort forward. Following are some examples.

The UCI was the first sporting body to introduce what is called the "no start rule". The "no start rule" means that riders with results from a blood test immediately before a race which were above or below a certain level were not allowed to start that race. It was not described as an anti-doping issue but a health issue. The UCI actually thought through this and realised that they should remove these riders from the race, but they stated it was for health issues, which avoided legal issues that would have arisen if it was raised as a potential drug issue. The UCI would simply say, "For the good of your health we believe your haemoglobin or your hematocrit is too high for you to safely compete in this race." Obviously those things are caused by the riders artificially increasing the oxygen carrying capacity of their blood, but the anti-doping movement was not at the point where it could impose sanctions for that because science could not test for a whole lot of things. So the UCI said, "We will not let these riders start but we will say it is because of a risk to their health."

In 2000 the UCI introduced bans for corticosteroids, which are very highly used in the sport of cycling.

In 2001 the UCI was the first organisation to implement a test for erythropoietin ("EPO"). EPO is a drug that has wide medical use but it is used to create more red blood cells and therefore increase the oxygen carrying capacity of the body. It is used to great effect in endurance sports. For any event that is over about four minutes in length, the athletes benefit a lot from a properly prescribed amount of EPO.

15 days before the Sydney Olympics the test for EPO was approved and the Sydney Olympic Organising Committee were able to implement testing for EPO at the Sydney Olympic Games. The UCI was the first sporting organisation to pick that up and implement it in their own program, in 2001.

Then in 2004 the UCI focused on blood manipulation and blood methods and banned homologous blood transfusion and synthetic haemoglobin.

As reflected in the above examples, even though the UCI seemed to be a little bit tardy in its responses, behind the scenes they were doing far more than any other sporting organisation.

What is The Biological Passport?

The Biological Passport is an electronic record of a rider's complete test history. It is a sequence of blood tests which make up what we call the "haematological profile" or the "blood profile" and a sequence of urine tests which makes up the "steroid profile". It also consists of individual, stand-alone blood tests and urine tests. Really, it is just like a passport. No matter how or where you enter a country, you get a stamp. Similarly no matter what sort of test is conducted on a rider, the Biological Passport gets a stamp in it.

How is The Passport Different to what has Gone Before?

The Biological Passport has two main differences with previous approaches. The Passport provides indirect evidence of doping. In a laboratory the scientists cannot actually see what the athlete has taken. They look for any changes in blood parameters to indicate either the use of someone else's blood or the taking of EPO or a similar substance. In the past they looked for a specific molecule or chemical; with the Passport they look for changes in the blood.

The other difference is that the Passport is individual. Previous anti-doping efforts have always tested against the population norm. What this is doing is actually measuring each rider's test against previous tests that have been conducted on that rider to look for a pattern and therefore look for variations that are unnatural.

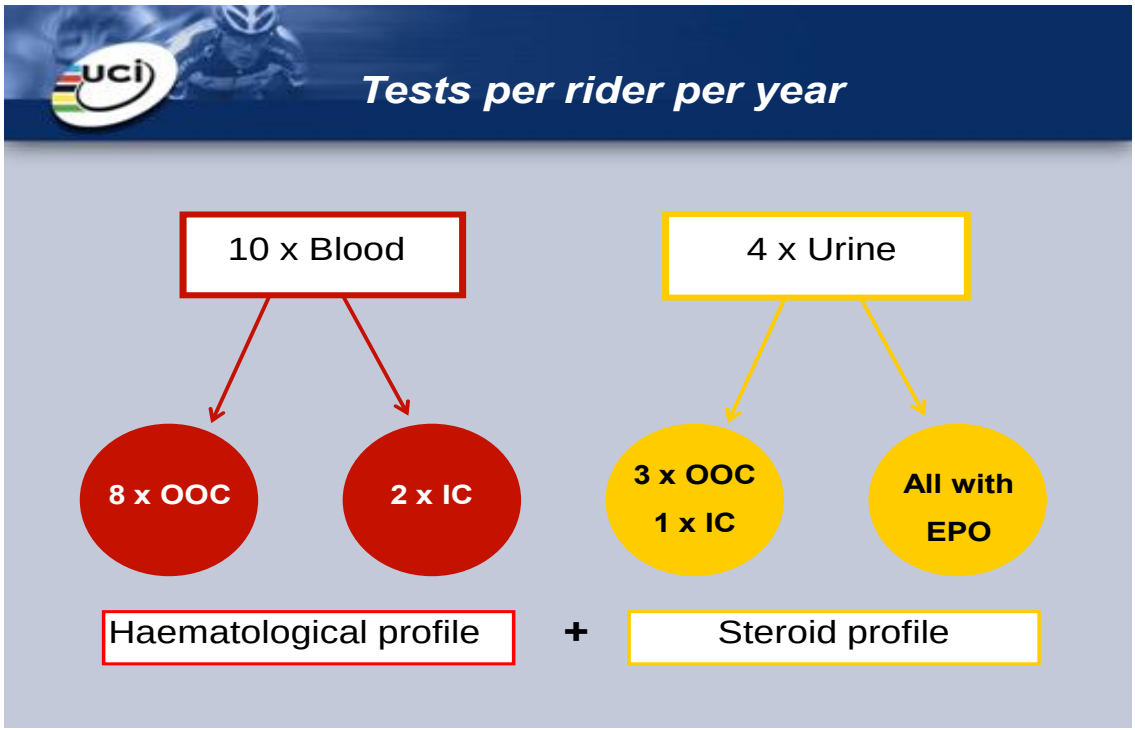
Who Uses the Biological Passport?

At the moment it is still only cycling that uses the Biological Passport. It is certainly used for all riders who are contracted to a UCI pro team, which means the top 18 teams in the cycling world. They are the teams that are required to compete in the Tour de France, the Giro d'Italia, the Vuelta España, and the other 20 top races. The Biological Passport is also used on all riders who are contracted to a Tier 2 team, which we call "the special continental teams". The Biological Passport is also used on a group of other riders that we selected based on risk factors.

In 2010, there were 852 riders in the Passport program, which in all rational thinking

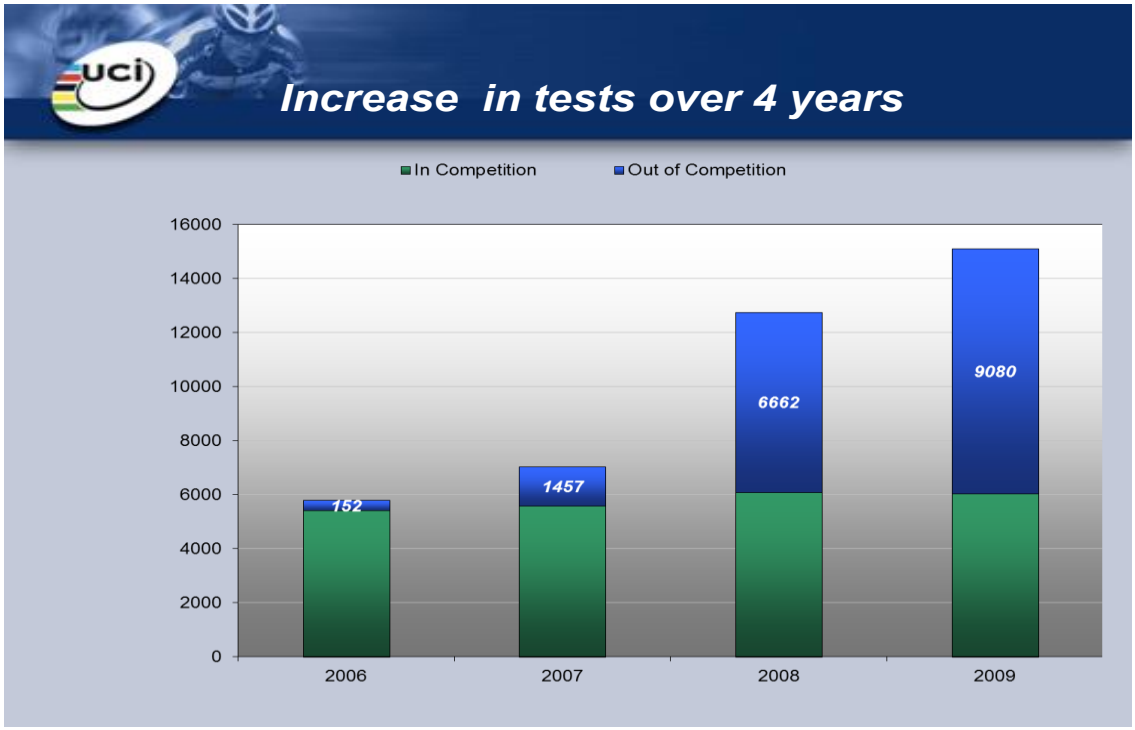
would be far too big a group to start a pilot project, but for us it was all or nothing.

Testing



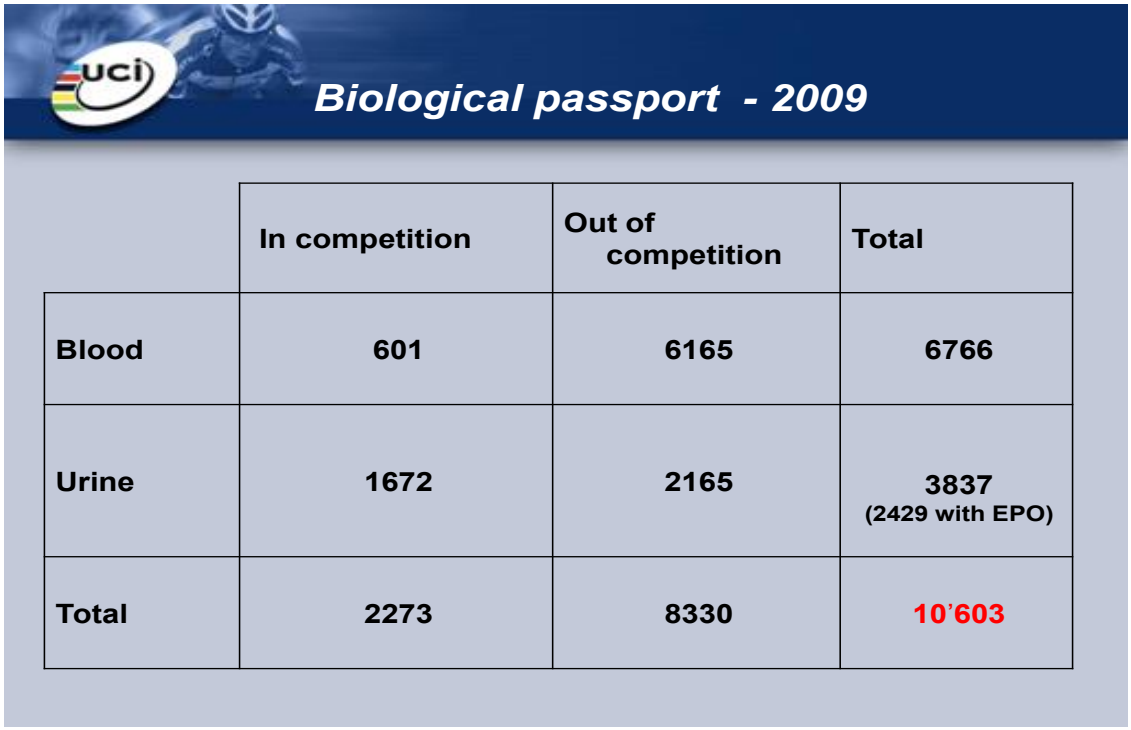
Each of those riders each year would have ten blood tests; eight of which are "OOCs", (out of competition, so they are a surprise, conducted by unannounced knocks on the door of where the athlete is either living or staying with the rider having no concept of when they are going to happen) and two "ICs" (which are "in competition", usually after a stage of an event). They also have urine tests, usually three out of competition and one in competition and they all also have a test for EPO, which was something that was not previously normally happening because to add EPO screening onto a urine test adds about $800 to the cost of the test. That is a lot testing on 852 riders.

At the UCI we certainly had to increase the number of out of competition tests. The following graph reflects this.



The blue lines are the out of competition tests that were conducted during that year. When I arrived at the UCI in 2006, the international world had embraced the concept that out of competition testing had been more effective than in competition testing, because everyone knew that they were likely to be tested during competition, so they would do whatever they needed to do to make sure that nothing was evident then. By 2006 riders were required to provide their whereabouts information so that riders could be tested at almost any time of the day on an unannounced basis.

When I arrived at the UCI in 2006 there were 152 out of competition tests that year. To make this program work we really had to increase the number of out of competition tests. In 2009 we had raised the out of competition tests to just over 9,000 per annum.



You can see from the above table the type of test performed. It shows blood and urine tested in and out of competition. The greatest number of tests were blood out of competition tests with just over 6,000 performed. That is a lot of arms and legs to go out and collect samples from and we really struggled. We struggled to find competent testing people that could go out and take tests, particularly blood. We required a minimum level of competence to take blood. Blood is taken from the vein in the riders' arms. We required that those taking blood were phlebotomists at a minimum. It is hard trying to find enough people that would go out and track down riders in little Spanish villages to take blood. It is harder work than it may sound.

For us the greatest expense was actually transporting the samples, because once the blood was collected it had to get to a laboratory to commence the analysis within 36 hours. It costs 60 euros to get the blood sample analysed in one of the eight laboratories that could do it, but it cost us on average 600 euros to get the sample there by truck driver or plane. It was a really expensive program to run.

Whereabouts

The concept of "whereabouts" is a concept that is now more fully embraced at the elite sporting level. It took some time to get it embedded. It was my role in cycling to get the athletes, the riders and their managers, to understand the importance of this.

"Whereabouts" requires the riders to report on a three monthly basis as to where they are going to be and then they actually have to make changes if their plans change, so that we know how and where to test them out of competition. It is a burden for them, it is a big burden at a practical level, but also philosophically. There are very few other professions where you have to account for where you are going to be pretty much all the time.

Tests could be conducted between 6am and 11pm and the riders had to identify where

they could be found from 6am to 11pm for every single day.

We were quite successful in getting our 800 riders to understand the need to do this. Athletes can be sanctioned for not providing their whereabouts. They would get what is called a filing failure, which means they did not submit their whereabouts on time, or a mistest, which means that they were not where they said they were going to be. If you have three of those in an 18 month period you actually get a two year suspension from the sport.

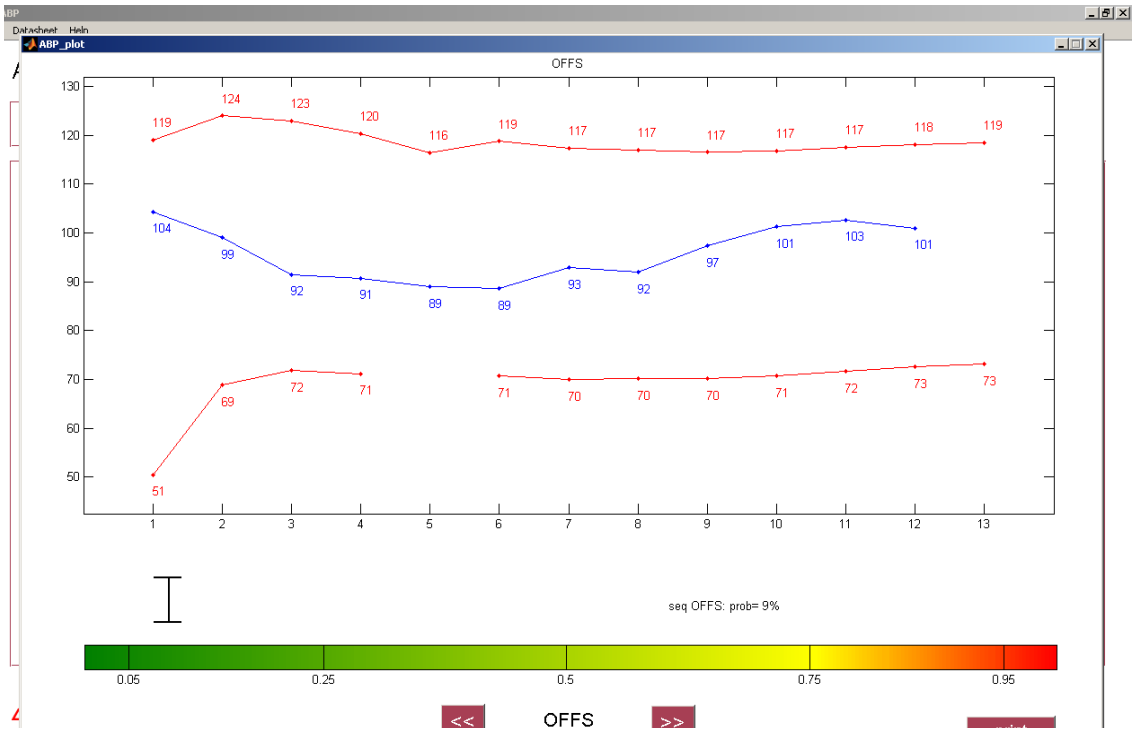
The World Anti-Doping Agency was quite good in developing a system to provide and update a rider's whereabouts. It was an on line system called ADAMS, which did make the job easier for the riders.

There were very interesting rights issues in relation to the whereabouts concept however that is beyond the scope of this talk.

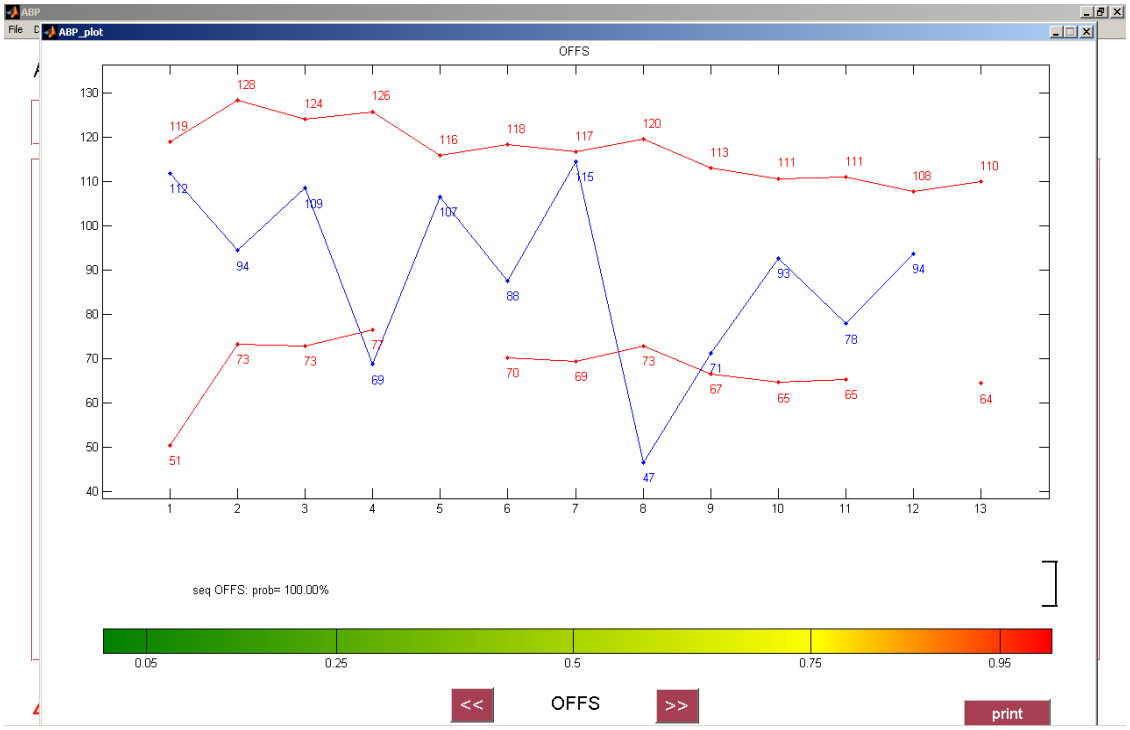
Examples

The following are examples of actual blood profiles that we collected during 2009. The red lines are what would be expected in a normal male healthy population. The blue line is the actual blood profile taken.

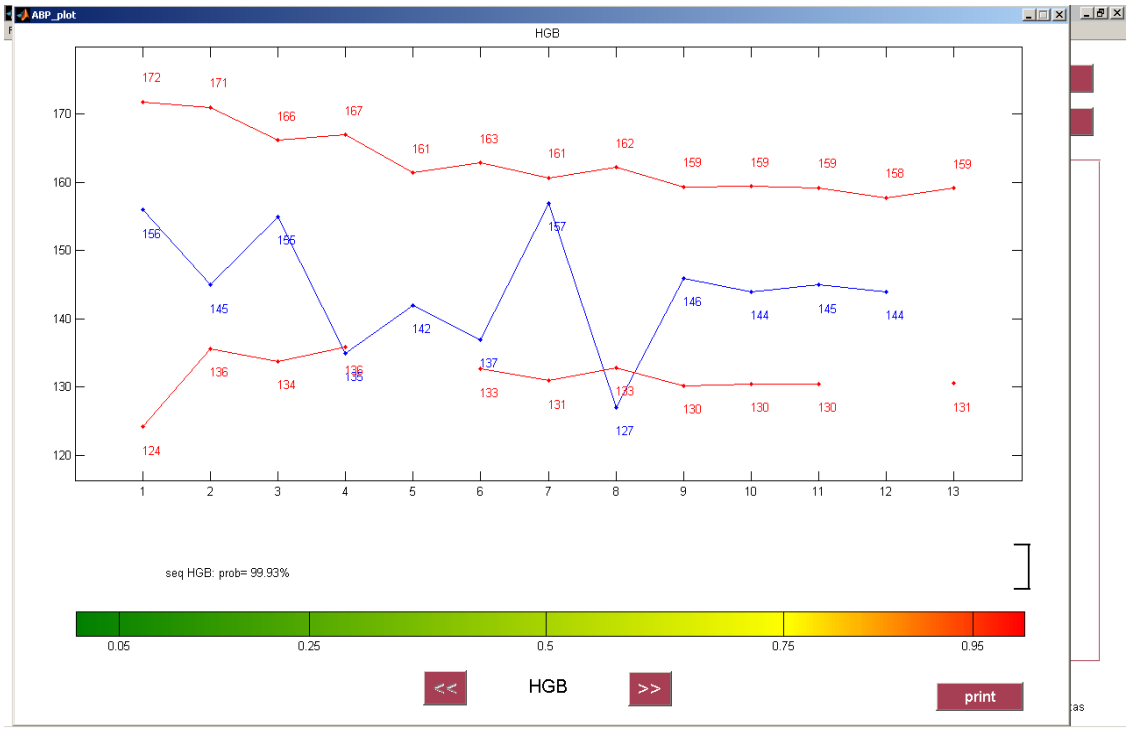
RIDER 1



RIDER 2



RIDER 3



Rider 1 has had 13 tests to provide what we call an "offs" score, which is a combination of haemoglogin and percentage of reticulocytes. It is one of the measures we take. As the rider has more tests, the red lines change and this establishes the individual limit for the rider. Rider 1 has a very stable profile. That is a superficial way of looking at it, but it is a quick check. Obviously there is lots and lots of data

that goes behind this that our medical experts would look at very carefully. The graphs are a quick, superficial visual image that we get from a blood profile. Rider 1 with that stable profile is not of concern and further studies of his results would not be undertaken.

Compare Rider 1's very stable profile to Rider 2's which is obviously a very unstable profile.

Two results concern us. If the blue line moves either below or above the red line, that is an individual test which is of some concern. We are also alarmed if the actual sequence of tests looks like Rider 2's, which would be very abnormal in a normal healthy male. We work on a specificity of 99 per cent, which means that we look more closely if there is a one in 100 chance of a profile like this occurring in an ordinary healthy male. Rider 2's profile probability would actually be far higher. There would likely be less than a 0.01% chance that that sort of profile on the offs score would occur in a normal healthy male.

Rider 3's offs score profile is an interesting one, because it suggests a rider who has changed his behaviour. You can see the first eight tests were very up and down and then tests 9, 10, 11, 12 and 13 very much more stable. So even though there may have been enough evidence in the first eight tests to actually bring a charge against this rider, the fact that he has changed his behaviour and is now obviously doing something or not doing things that made his blood irregular meant we did not press further. I just want a rider to stop doping. I do not really care how or why they did it. If this program was enough of a deterrence for that rider to change his behavior part way through a season, I consider that a good result.

Results Management

Anti-doping traditionally has the collection phase, the analysis phase, then the results management phase. It is at the results management phase where the legal people get involved.

Stage One of Results Management

The way we ran the results management was that each week all profiles that had met two criteria were sent to a panel. The two criteria were that:

1. The profile had to exceed the 99 per cent specificity level, which meant that there was a one in 100 chance that a profile like this would occur in a normal healthy male; and

2. A new result must have been added during the week.

Therefore if the profile had been updated with a new test and that caused the profile to exceed the 99 per cent level, then it would be sent off to three experts (from our panel of nine experts). There were usually about 10 to 15 profiles a week that met those two criteria.

The experts then would provide their independent evaluation. The experts were not particularly interested in the actual graph. They were interested in all the data that lay behind it because they could see other things like potential medical conditions and patterns that might suggest that the deviations were due to something other than

doping.

The panel would give us four possible outcomes for that profile. They would say:

1. Yes, it is possibly doping and we need more information;

2. It is a possible medical condition and we need to think what, if anything, we tell the athlete (we picked up on potential health issues);

3. We do not know but we suggest you do some quite targeted testing at particular times on this rider;

4. There are factors there that mean it is not a profile of concern.

Stage Two of Results Management

In the next stage of results management we provided the extra information the panel required. We gave them details about the rider's whereabouts submission, in case they had any strange journeys anywhere. We provided the rider's race schedule so that the experts could see what they may have been doing to prepare for particular races. We also asked the laboratory to provide a full documentation package, (documentation packages amounted to about 35 pages for one test. So if you're looking at 13 tests, these document packages from the laboratories were large.) We also provided any further medical information that we had on that particular rider, as some riders did have recognised, known medical conditions that were on file.

Stage Three of Results Management

In stage 3 of the results management phase the full panel of experts would review the case taking into account the additional evidence. If the full panel believed that there was evidence of doping, we would prepare a case file for what is called a potential anti-doping rule violation. The violation was not for the presence of a substance, it was for the use of a prohibited method.

Anti-doping traditionally had looked for the presence of a particular substance; so, again, this is new. We were saying this is a method, not a particular substance, and the method is the artificial increase of the oxygen carrying capacity in the blood. We did not know what particular method the rider has used, but there was enough evidence in his blood profile to indicate that he had done something that was illegal.

We then advise the rider and he (because it was all males in our program) has the opportunity to provide alternative medical information that may account for his very irregular blood profile. Any explanation then went back to our experts. If that did not explain the irregularities, then we would send the results to the rider's national cycling federation and they would initiate a sanctioning process against the rider.

Sanctions

The potential anti-doping rule violation was for a prohibited method. The prohibited method was the enhancement of oxygen transport through the body. For that particular violation we always advocate a four years ban from the sport on the basis that it was not just one test, it was based on a series of tests, which indicates that it was an extended, aggravated case of doping over a period of time. However to obtain such a long sanction on a broad new approach we needed a very high level of evidence.

Therefore the case files on the nine riders we prosecuted while I was at the UCI were really really large documents.

Appeals to Court of Arbitration for Sport

Interestingly, of the nine cases that we opened that went to the Court of Arbitration for Sport, six were appealed by the rider or the national federation, and none of the appeals were upheld by the Court of Arbitration for Sport. Being upheld by the Court of Arbitration for Sport was the biggest risk to the Biological Passport program and the rest of the world was standing watching. Everyone was waiting to see if our decision would be challenged. If the first case had been challenged and the Court of Arbitration for Sport had decided that there was not enough evidence or there were flaws, then I think the further development of the Biological Passport would have been substantially compromised. We invested a lot of resources and a lot money in preparing the cases as well as we could, because we knew the rest of the world was depending on this as well.

Results

Profile testing in road cycling resulted in much better detection. Road riders are endurance athletes. Testing for steroids and stimulants really was not working. We needed to be able to test for what they were doing, which was manipulating their blood. That is the only thing that will really help an endurance rider, particularly when it is so endurance based as 22 days cycling up and down the French Alps. Manipulating their blood is the way they can get the best advantage.

While I was at the UCI we had nine doping cases based on the blood profiles, all of which were successfully held.

We also had seven EPO (erythropoietin) or CERA (continuous erythropoietin receptor activator) cases arising from targeted out of competition testing. These arose where we got a profile that looked suspicious or abnormal but was not strong enough to initiate a case based on the profile alone. We would then target that rider "Bang, Bang, Bang". We would give them no room to move. We actually got seven EPO tests that were based on really highly specific targeted testing that had abnormal profiles that were not quite strong enough to go through and initiate a case based on the profile alone. We also had six doping cases arising from random out of competition testing, which in part was due to the increased number of tests being performed.

Deterrence

The other main outcome of the Biological Passport monitoring, the one that I was more excited about, was increased deterrence. Riders were pretty scared by the Biological Passport and, for the first time, the risks potentially outweighed the benefits. They knew that they had to provide their whereabouts. They knew we were out there collecting lots of blood. This actually caused them to change their behaviour. Certainly on a couple of key blood parameter levels, looking across the board, there was a substantial decrease in suspicious readings between the early 2000s and 2009.

Equally important, a much greater trust in the sport began to develop. My role initially was to gain the support of the broader stakeholders. I was very clear when I

started that this was not a problem of the UCI alone. I said that if the UCI wanted to sit in a bunker on its own and take the arrows as they came, we would never get anywhere. We had to engage the professional cycling community.

One of my first jobs was to go out and talk to the cycling pro teams, to convince them we needed to work on this together, and we got them on board. They gave me a great budget to work with, a budget that I think other sports could only dream about. Because the pro teams put pressure on themselves, they all made a significant financial contribution each year, and also made a commitment to help their riders comply, notify their whereabouts and be where they should be.

Consequently we started seeing some good performances, particularly from the teams that labeled themselves as "clean teams" and had come into the market place quite late as "clean teams". Riders that we were pretty confident were completely clean started winning races and this was a huge breakthrough for the sport.

The other thing that occurred was that teams would not hire a new rider until that rider had agreed for us to release their blood profile to the team. Again, there are issues with confidentiality of medical information which means that in many other circumstances this would not happen; however the sport accepted our position and riders were keen to ensure that we provided their blood data to their potential new team.

Clean Teams

The following picture is of the jerseys of the teams that I think have always been clean and have never ever had a systematic doping program. There is a bit of a theme. They are relatively new teams and many have an Anglo-Saxon connection. When I first joined the UCI in 2006 it was very strongly dominated by French, Italian and Spanish teams and a cleaner approach was brought with the influx of English teams, particularly Bob Stapleton, the millionaire who set up the team "High Road".

Bob Stapleton visited the UCI in December 2006 and said, "What can we do? How much money do we need to start working on cleaning up the sport?" And High Road was the first team that embraced the concept of advocating the fact that they were cycling in a very different way.

The French teams back in the early 2000s said, "Okay, we're sick of this. We're going to go clean." But they took a martyr approach as well, declaring "We will go clean but don't expect anything from us, we'll just come 40th or 50th", whereas the new teams said, "We're going to go clean but we're going to give our riders everything they need to be successful." The new clean teams implemented little mini Australian Institute of Sports-like programs within their team environment. They said, "We're not going to dope but we're going to give our riders great nutrition, great symbiology, great biomechanics, and have psychologists on hand". They set up an environment around the riders which gave them the confidence that they could succeed without doping. Previously this was a foreign concept in cycling, because always if you wanted to win races you had to do what everyone else was doing (doping). The influx of those clean teams has really changed the culture and the texture of cycling.

The Future

The focus at the UCI is the Biological Passport. It was a big risk. It was a huge success. It is not sustainable. There are probably another two years of being able to sustain the same level of spending on a program like this, but it gives much better protection, increased deterrence and most importantly it has started to build up a clean credibility in the sport.

I believe the winners of the last two Tour de Frances have been completely clean. Cadel Evans has a spotless record and there is nothing to indicate Bradley Wiggins has done anything either. That is a huge move forward for the sport.

I also believe that 85 per cent of the riders at that really top level are largely clean. It's still a jungle down in the Tier 2 and Tier 3 levels and it will be for a while until we have the resources to start shifting the focus to that level, but at the top level it is now just too risky to dope. We have certainly achieved behavioural change. How deep that is and whether it is actually cultural, we will not know for a few years.

Interestingly, an article in the International Journal of Sports Medicine says that the lessening of performance in cycling was a good thing, it was an indication that things had changed. The writer of the article said:

> "The persistent and statistically significant decrease in performance levels of elite cyclists over the past five years suggests these programs and policies may have had a widespread impact on the behaviour of professional cyclists."

It is a bit ironic that in a sport one actually looks for decreases in performance to indicate a good outcome, but the power output and the times that it is taking riders to go up the big mountain passes are now sometimes up to 15 to 20 per cent slower than they were five years ago and it is a more realistic estimation of what a natural human body can maintain up some of those big passes.

Contribution by all Stakeholders

In summary, for us, the Biological Passport was a commitment by all stakeholders in cycling. I have already mentioned professional team managers. The race organisers added 15% onto the prize money which they contributed to the anti-doping pot. The riders themselves contributed 4 per cent of their prize money and each of the professional teams contributed 120,000 euros into the budget.

I was very fortunate, I did have a lot of support and a lot of money to do this. When you think about the International Athletics Federation, they need it probably as much, if not more than cycling, however Athletics do not have that professional structure which cycling has which can help assist in the cost. Also, athletics has a diverse geography, with athletics bodies all around the world. Our cyclists principally train and compete in Europe. There are eight labs that were qualified to do this testing. Seven are in Europe. The other one is in Salt Lake City. So the geography and the resources the UCI had meant that really cycling was the sport that had to take this forward.