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Is There a Pink Slip in Your Genes?

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Actually, at my age and my genetic predisposition, I can't see my nose. With the introduction, I obviously am supposed to be an insurance company person here, but I have to put my economist hat on as well, so I'll try to play both of those roles.

On the insurance company side, it's clear that insurance companies are not well loved by folks. They're not even supposed to do that. At one point after a company had approached QualChoice and told us not to tell the enrollees something that, in fact, had been a policy decision by the company, I was suggesting that perhaps we should change the name to the company to the "Scapegoat Insurance Company," since that really was what we were being paid for, and I think in this argument that may be part of the issue here.

I was also thinking of the analogy for how to structure my comments, and Kathleen [Engel] did an excellent job. I'll build on some of what she has said, and the analogy that I thought of was really profound, a metaphor for our times, *Harry Potter and the Sorcerer's Stone*.[2]

Now, since you have no reaction to that, probably most of you have not seen *Harry Potter*. You probably think it's a kid's story instead of a metaphor for life as we know it.

Harry Potter was a poor orphan who had this great power but didn't know it and had to contend against forces of evil to try to obtain the Sorcerer's Stone, which was a source of great power, and the reason he was able to obtain this stone is that he intended to protect it but not use it for his own gain.

So the question is who gets to play Harry Potter in this little drama. First of all, it is surely not the lawyers. We know that. It's not the insurance companies either.

So part of the question I want to ask is who is Harry Potter? The forces of evil are, most of us would like to believe, or many of us might believe, the insurance companies, but let me argue that's probably not the case. It's more of a system issue.

The stone, however, of great knowledge and power is genetic information in this analogy. That the potential for very good things or very bad things clearly rests in terms of this topic for the day. Let me tackle five different things in the time I've got. One is, what is it that makes health insurance work? Kathleen [Engel] has made a good job of introducing that and I'll just pick up on a couple of more points.

Secondly, what do insurance companies need to do deal with the issues, to deal with the pitfalls in particular?

Third, how can genetic information change all of this?

Fourth, how does this, in fact, threaten, I would argue, the very basis of health insurance? So we need to think about it. And fifth, what do we do about all of this?

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[2]HARRY POTTER AND THE SORCERER'S STONE, (Warner Bros. 2001).

Well, first of all, this seems self-evident when you think about it, but insurance companies have to, insurance events have to be random among individuals, but predictable on average. If you think about it, that's obviously what insurance has to do. So we have to have random events.

Predictability however has to be good enough to avoid excessive premiums for risk bearing, that the amount the insurance company charges beyond the underlying costs is a function obviously of how much risk there is, and to the extent that we make them bear more risk, it costs. So there's an issue of predictability.

Third, that enrollees need to match the general population or we have the problem she's mentioned of adverse selection or positive selection if it's the other direction.

The actions of the insured, fourth, need to not be biased by the fact they have coverage. That's a concept of moral hazard, which hasn't been mentioned this morning, but is a fourth issue you need to worry about.

And fifth, that parties have to have access to the same information to make a market work, the market-based concept here.

By the way, I have to throw in parenthetically, Kathleen [Engel] is married to an economist who is one of my colleagues at the Weatherhead School, so I am very impressed with your economic information. I think that being with Jim so much has clearly rubbed off, you should know. When you would actually use marginal costs and marginal return, I was very impressed. I wouldn't even do that in this day.

Now, the problem of adverse selection, moral hazard and asymmetric information, the third one is that both parties have to have access to the same information. If one has more information than the other, then you have the trouble. Clearly those conditions are never met. The question is, how well are they met in the insurance market, and, again, what impact does this have?

Well, if you take those three building blocks, which she's introduced, what do insurance companies do to avoid that?

First of all, as adverse selection is obviously the issue, one of the approaches to it is to try and make sure the group sizes are large enough that, in fact, you can have an average. So if you have enough people in a group, then you tend to have a good average and it tends to work out.

That's a problem when there are many choices, when an employer offers, as Case Western Reserve University does, four or five different plans, there's an issue because people that are healthy, as she mentioned, will pick the lower risk or the low cost plan, and people that are sick will pick the high coverage plan, tending to drive the two to extreme.

Moral hazard, what do insurance companies do about that? Well, co-pays and deductibles and risk sharing of various sorts are ways to deal with that. The asymmetric information is important for us, and the trouble in the past is in many cases that the individual knows more about their own health information than the insurance company.

So insurance companies have resorted to preexisting condition clauses in their contracts and limitations on the amount of time that they'll write a contract so that they have an "out" over a period of time, and number two, they have resorted to re-insurance, so that if something untoward happens, I can lay that risk off on another company or some other source that will pool it better.

Both of these take away from the true insurance concepts, so we have less insurance, less pure insurance when we have short contracts and only exclude certain conditions. So those are fundamental building block questions.

To the extent that insurance companies do, they try to reduce the risk. Fire insurance companies go in and inspect for fire conditions. It's not surprising that you would do that. If you can reduce the risk of the event, then obviously the costs go down and people don't look for insured things to happen.

How do you do that in healthcare? Well, things like preventing tests, if you can do that, credentialing, monitoring quality, using data to enforce proper care paths.

The best example of that probably is United Healthcare maybe two years ago did a quick study of their database, very simple thing to do, and looked at all of the heart attacks that they had experienced across the country. It's a very large health plan, and looked at the use of beta blockers after that event, clear indication, and found, I think, do you remember, I think it was like 60 percent or 70 percent of the cases were actually using beta blockers when it should be 100 percent. The Doctors were flabbergasted. They had no idea that they were off the standards that much.

Physician care is not always what it should be, and to the extent that insurance data can be used to help out, that can be a very positive thing. A potential here, clearly a potential for use of genetic information to try to do something more positive, if there's a pre-existing condition that you can't exclude, then perhaps you can do something to eliminate the risk.

Parenthetically, one of my mentors here, the fellow that actually established Blue Cross of Ohio many, many years ago, John Mannix, died a number of years ago. He used to joke that there were two things that insurance companies definitely did not like to do. One was to bear risks, and the other was to pay claims. Now, he was over-stating it just a little bit, since that's the nature of the business.

But the predisposition to try to avoid things that, in fact, affect you negatively is undeniable, and I think that's part of the trouble.

Now, how could genetic information affect all of this? First, I think positive selection or adverse selection of populations could happen in either direction. Right now, I would argue we tend to probably have it geared more towards selection of possibilities from the patient. Patients know a lot more about themselves, employees know a lot more about themselves than the insurance company does, and that the response of insurance companies' negative response in terms of exclusion of preexisting conditions is definitely not a socially positive thing to have happen.

But on the other hand, the other underlying condition and concern here is that if insurance companies got a hold of this, they can exclude people more effectively. Therefore, we need to worry about that.

I think the question is, is that the problem with asymmetric information; that is, I know something that you don't know, could be made more extreme by the use of genetic information. That if I know a lot more than you do, then I really have a problem. Right now I don't know very much more than you do, but if I know a lot more than you do, then I got a problem. The marketplace won't work right.

And then I think this, in fact, leads to a fundamental problem in terms of — secondly, knowledge, I've lost my point, knowledge of pre-existing or predisposition can be very positive, as Kathleen [Engel] had mentioned, if, in fact, there's something you can do about it.

The benevolent long-term insurance company clearly would want to use predisposition of a future event as a marker to try to avoid the negative consequences of that.

The problem, of course, is that insurance companies don't write policies for long periods of time and they tend to have a short time horizon. So, therefore, the positive parts of that are very unlikely to happen and that's a problem.

That leads to the crux of the whole difficulty that I think we're facing here. The very basis of health insurance is threatened, not just by genetic information, but by the whole tendency of where medicine has moved. The very nature of health insurance is at risk when events aren't random, and what we are moving towards is a time period where many fewer events are random and many more are predictable, particularly with chronic care conditions.

To the extent that the population, and much of our health expenditures are tied to chronic care conditions that happen over a long period of time, events are no longer random, they're predictable, and once they're predictable, then the whole thing changes. Events and expenses of individuals read in groups now can become more predictable, and, therefore, less insurable in the pure sense that I talked about before.

The good part is that as more is known, as Kathy [Engel] mentioned, hedging necessity of risk bearing becomes less, and the cost of insurance should go down in the aggregate. The trouble is, it's going to be insuring the wrong people. The task then becomes less insuring the unknown than in financing known patterns of care.

This is a fundamental difference, because that's not what we've asked insurance to do in the past. This becomes an issue, particularly as she mentioned in cross-subsidizing the care to one now known population with high known costs with over-charging others with unknown, but probable low costs. So the crux of all health insurance is basically the risk by the situation that we're talking about.

So the question is now, thanks a lot, what do you do about it. Well, let me suggest something. First of all, acting like the information doesn't exist is foolish, especially when it can be used to improve life and the quality of life and avoid future costs and pain.

There's no question that we need to use the information, the question is how. The trouble is that the information will inevitably lead to further market failures in the insurance market. I don't think there's any question about that. It will make the market much more difficult, as it is now structured, as high cost ongoing care is squeezed by employers who want to minimize the cost.

The bottom line is that conventional insurance is unsuitable for this kind of cross-subsidy. It won't work, because it is usually handled by governmental means, not by competitive markets. Competitive markets simply won't be able to deal with this, in my opinion.

The governmental means are one, taxes. We tax certain parts of populations and subsidize others. Don't expect insurance companies to do that, or we also then, and I think this is less preferable, engage in regulation of the behavior of firms. You must insure everybody, you must somehow cross-subsidize, and that will be less likely to work as mechanism in this particular market.

The alternative to either one of those, taxation to pay for these ongoing predictable conditions or financing them rather than insuring them, is to strengthen the re-insurance market, to take known risks away from conventional insurance leaving them to cover only the random events that I mentioned before.

Then my company could go to the government re-insurance for excess cost of those enrollees with certain conditions in exchange for a modest premium. The government or the larger entity could then pool and actually still make an insurance market work leaving the conventional market to work for truly random events, addressing the underlying problem of predictability of that population, which I think is a very serious one. Then we can finance care for known populations of people at a higher level than the insurance market, but still be pooling for and have the potential to do good things in terms of delivery and use of information without the affluent problem of adverse selection at the insurance market.

Alternatively, I'm just thinking about this morning, alternatively, we could dump the whole thing. So I don't know if there are any UHCAN people here. There are always around Cleveland. This may be the Achilles' heal of the whole system, you can go to a single payer system dealing only with financing and ignoring the fact that we have to have insurance, skipping the whole insurance part of it and simply paying for anything. Perhaps, in fact, genetics will accomplish what politics and economics could not, and now we have insurance companies that neither have to bear risks or pay claims.

Well, Harry Potter, where did we wind up? It seems to me that the question is, how do we do something that, in fact, is going to do the right thing and make a go of it. I don't see lawyers, as I said before, as Harry Potter, the one who is trying to do the right thing and can use this information properly.

Doctors can do it. Doctors, in fact, have a right, and I think they're closer to be the right party to use this information, because obviously they make the right kind of decisions. But I also would probably argue that the patients are the ones who ultimately have to be responsible for this information in terms of making the decisions.

The evil force is not the insurance company. The insurance company is simply a mechanism to spread risk, to do some financial things that we need to have in society. The evil force is the system and the fact that systems don't change very fast.

The question is, how can we create a framework, which is why I think the law exists and why government needs to worry about these sorts of issues, that lets us make the right sets of decisions, but lets these parties make the right sets of decisions so that, in fact, the stone of power can be done positively.

AUDIENCE: I'm not sure that I have a clear picture about what the state of medicine is right now, and you mentioned that there were 40,000 genes and we don't even know what they are.

Are we at the state right now scientifically where if you did a study, an employer of 10,000 employees, that you could accurately predict what was going to happen [inaudible] five years to that population? I mean, are we there right now?

DR. ZAHKA: Thank goodness that Dr. Wiesner is actually shaking her head no. She's the geneticist, I'm just a cardiologist. She's the keeper of all of this knowledge.

AUDIENCE: Dr. Zahka, are your patients concerned about genetic discrimination? Is that something that your patients regularly bring up to you?

DR. ZAHKA: Not yet. I think that will evolve. I was actually thinking about how to ask Professor Silvers about the issue about who should, in fact, be Harry Potter? Like most physicians, I think I spend an enormous amount of time educating my patients and their family, and I think I'm enormously successful. I'm not sure

that most of them are going to be able to understand the world of genetics right now. Ten years from now? Twenty years from now? Thirty years from now? Maybe.

But I mean, there are people like me who barely understand it because I have a great colleague like Dr. Wiesner, but I think to take that leap right now to the families and the patients is going to be really tough.

But I think Georgia [Wiesner, M.D.] should address that as well, because she's much closer to it than I am in terms of people who are really focused on it, because people who are focused on it are generally, are at her door.

COMMISSIONER MILLER: The way that I think about it is that we're at this very odd and whacky historical moment, and going back to your question about the state of medicine, we have the ability to learn a lot of genetic information, but for the most part, there's really no therapeutic use for knowing that information. There's no reason to know if you have particular markers one way or the other for the most part. There's some good health preventative stuff, but there's not really the wholesale genetic therapies out there yet, and, therefore, in a sense this information becomes particularly dangerous now to be poking around and so on.

There's a tremendous amount of future expectations and hope, that this genetic information will ultimately turn into health-related therapies in which, years from now when my daughter is my age, these discussions will seem very trite and obscure because the way medicine may be practiced, the way that genetic information is going to be integral with respect to both responding to disease and preventing disease may be vastly different.

So we're trying to build this protective bridge and bubble, recognizing some real issues, but also not really seeing around the corner to where medicine is going and how this is going to ultimately play out, and that makes it really very complicated and difficult, but nonetheless, very important to do.

Because I believe that if we don't get the proper protections in place, while the medical advances won't be stopped, it certainly will be slowed down dramatically because people, out of fear of discrimination or fear of privacy concerns, are not going to be willing to engage in the kinds of testing to open themselves up to research protocol to participate in the science moving forward. So it really is a complex interrelated bubble.