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Who's on First?

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Summary: The panel provides an update on the status of the Factors in Risk Selection Techniques Study. A representative from one of the pilot companies discusses their experience with identifying, collecting, and preparing the data for contribution to the study to help future contributors avoid some of the pitfalls and problems encountered. Panelists explain how participation benefits a company, as well as the industry, and answer questions regarding this valuable and unique mortality study.

Mr. Allen M. Klein: First of all, I'd like to introduce everybody. I am Al Klein and I am vice president and senior financial officer with CNA Life Re. I'm responsible for the actuarial, financial, and claims functions. Doug Ingle is the vice president of reinsurance underwriting at American United Life (AUL). He is the chief underwriter there and is involved with mortality research analysis for AUL. Bill McDonald is with the Medical Information Bureau (MIB) and is the manager of the Knowledge Services Group there. Bill has been working on actuarial intercompany experience studies for 25 years for us. And finally, Mr. Tom Rhodes, is second vice president and actuary with the Guardian. Tom does experience studies. He supports in-force business and provides management reporting for the Guardian. And Tom wanted me to tell you that he is a Cajun specialist.

Anyway, I am the Chair of the SOA Task Force on Preferred Underwriting. Each member of the panel is also on the task force.

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Here is what we're going to cover today. First of all, I'm going to provide you with a little bit of background and explain what the FIRST study is all about. Then Doug and Tom will explain what the benefits of the study are. Bill will explain the technical aspects of the study. All of the data we plan to collect is going to go to MIB and be collected and maintained by them. After Bill, Tom will come back up and talk about his observations from a pilot company perspective. He's been working with us for some time; he will give you the good and the bad of what he's been working on. And then I'll come back up and summarize everything and explain, assuming everyone's going to be interested in doing it, how to get your company started with contributing data to the study.

So first of all, I'll explain a little bit about what the FIRST Study is. FIRST stands for Factors In Risk Selection Techniques. It is a unique and comprehensive mortality study, which will look at the criteria used in the underwriting decision. We will collect laboratory data, paramedical information, and motor vehicle record (MVR) information, and we'll keep track of all of this information on each insured from the time of application. Then, what we can do is study these criteria, either individually or in certain combinations, and see which has the greatest impact on mortality. Again, this is a very comprehensive study and I don't believe that anything of this magnitude has ever been undertaken before.

I mentioned Tom was from one of the pilot companies. We have three pilot companies that are working with us. They are Guardian, Manulife Financial, and Mass Mutual. Each of them has worked with us to help design the specs as well as trying to put their own data together. Tom will describe his experience.

Now I am going to give you a little bit of the history of risk classification and tell you how this study came about. It was in the 1940s that companies started to separate risks by gender. And then it wasn't until the 1970s that an additional risk classification was created; that is when we went to smoker/nonsmoker. In the 1980s, companies began to further distinguish between tobacco and nontobacco, and some companies offered a preferred risk discount for those that exercised. It wasn't until the late 1980s when "preferred," as we know it today, came about. So what caused it? Well, first of all, in the 1980s we had a scare from the AIDS epidemic. Companies started to test applicants a little bit more thoroughly. They would request a full blood profile. With this full blood profile came additional information from the laboratories, and companies were able to distinguish between different risks. There were those that had better readings on some of these elements and some that had worse readings. So that's what brought about preferred. Once the first few companies started using a preferred risk classification, other companies had to follow along. If they didn't, they were going to lose the best risks to other companies who offered the preferred classes. We started off with three and four rate class products and eventually it grew to where I think most of the major players have five or six rate classes today. And yes, there are some companies with eight or nine rate classes, but I think the industry has pretty much settled in with either five or six rate classes.

In 1994, we formed the SOA Task Force on Preferred Underwriting. I have been the Chair since its conception. When we first started, we had pretty much a two-prong mission. The first part of it was to survey the preferred underwriting practices. This was about five to six years after preferred underwriting started. We completed surveys in 1995 and 1997, publishing the results in 1996 and 1998. I'm assuming most of you have seen the studies before, but if not they are available on the SOA Web site. The last study in particular, 1998, is a pretty comprehensive study that shows what the practices were back at that time. We have since formed a new SOA permanent committee, the Mortality and Underwriting Survey Committee, and this committee is going to take over doing surveys like the preferred underwriting survey. We are going to be doing a survey on preferred underwriting again in 2001.

The other part of the mission was to determine the feasibility of creating a preferred mortality study. After a lot of debate and discussion, we decided that we really couldn't study preferred mortality as such, but that we should really be studying all insurance. We decided that we should study the criteria that go into the preferred underwriting decision rather than just preferred underwriting because of the differences in preferred classification between the various companies. We felt that there was not a standard that we could completely base it on.

We talked about studying one or more criteria. What will this study allow us to do? Take cholesterol for example. Now we will be able to see what impact cholesterol has on mortality. Does mortality increase with increasing cholesterol? Does it increase up to a certain point and stay flat after that? Or, is cholesterol really a factor? My personal feeling is that cholesterol combined with several other factors is a good indicator of mortality, but cholesterol by itself is just a so-so indicator. But we'll be able to see all that once we have the study. As I mentioned, it's a very comprehensive study and I do believe that in time, once we have enough data, this will replace all future SOA mortality studies. We'll be able to look at the full spectrum of preferred to substandard and anything in-between, having all the information on every insured.

So with that, I am going to turn this over to Doug Ingle, who's going to start the discussion on some of the benefits of the study.

Mr. Douglas A. Ingle: Basically you can think about this as an SOA contribution on steroids. If you think about what's going on right now with the SOA, for example the contributions for the impairment studies or the basic tables, this is the next level after that. You start with the basic studies that are going on right now, and embellish them by attaching the laboratory data. How does this occur? You can submit laboratory data to the MIB from Lab One. The three major labs—Lab One, Clinical Reference Lab, and Osborne Labs—have all agreed to submit laboratory data to you in an electronic format. The laboratories have captured and stored blood profile and urinalysis data on the individual insured lives that your particular company has as a risk. So this type of data is already gathered for you! You don't have to have someone key in the cholesterol and the HDL and all the other blood profile parameters. Just take this one page and say, "Would you

please electronically submit that data back to my company and then I'll forward it on to the MIB." And all of a sudden, you have contributed a full 12–channel blood profile and urinalysis to the SOA study for data analysis. Throw in a little build and blood pressure data, or a couple of other things like that, and you have a whole bunch of data points for the SOA to analyze.

So in essence what we're trying to do is to collect as much underwriting data as we possibly can. When you think about where we're going, technology is going to be the key. For example, I was in a session about e-commerce and the future of underwriting (Session 43PD "E-Commerce Series: Underwriting on the Internet." The future of the insurance industry will be strongly influenced by technology. Everybody's collecting data in an electronic format. It makes all the sense in the world that we as an industry should do more in an electronic manner. And basically the sky's the limit. All the different factors that you used to underwrite a case are potential features that you can do analysis on. The whole idea is to set up fields for all these different things and to do more analysis on more factors than ever before.

So who benefits from it? Everybody does. What we do as underwriters is risk classification. The insurance industry benefits from justification for its mortality assumptions. Preferred risk classes need a sound statistical basis. There's a lot of public interest in what we're doing.

It's not just sound actuarial principles supporting substandard classifications, but also the preferred risk classes as well. Is there really preferred? Is it statistically justified? There is a lot of public outcry regarding what we're doing and whether or not it's right and whether or not it's statistically validated. This will answer that type of question. And your own individual company can take advantage of this information as well. You can get feedback on your particular company's preferred criteria. Let's say you have a preferred risk class, which I believe most of you do. You want to know if your pricing assumptions are being met by the underwriting department. This allows you to take a look at your own database and find out if your assumptions match what the SOA database would suggest would happen.

And as Al mentioned, you can do univariate and multivariate analysis off of these items. You can analyze an individual parameter; for instance, what's the impact of GGTP or SGOT, or cholesterol or HDL? You can do an individual study on that particular piece alone or you can do things in conjunction. You can look at combinations, such as how family history and cholesterol impact mortality. You look for synergies and things like that. With these data points you can do analysis in that manner.

As some of you know, there is the Impairment Studies Capture System producing mortality for diseases commonly encountered in the underwriting process. The FIRST study will help you determine how preferred risk factors may have a bearing on substandard mortality. So, the FIRST study also provides support for impaired risk studies as well.

And a big thing for me is to improve the communication between the underwriters and actuaries. We're both involved in mortality; we're both involved in pricing assumptions and mortality assumptions. This allows the underwriters to work closer with the actuaries. This promotes communication between the two groups. Are we getting the bang for our buck that we want with the tools that we're using or is there something else that we can do? So it's a great opportunity for the actuaries to work with the underwriters. Synergies are occurring inside our committee as well. We definitely work together on this committee and have common goals in mind. So, to further promote this interaction, I will now turn the podium over to an actuarial friend of mine, Mr. Tom Rhodes.

Mr. Thomas E. Rhodes: The FIRST study will make more data available to you and will affect several actuarial functions. First, the pricing function—with the FIRST study there will be a more extensive statistical basis on which to set mortality pricing assumptions. I assume many of you are in the same position as I am. You're under pressure to create new preferred classes, yet historically you don't have that data. Here is the study which will not only help you organize your own data and preferred classes, but will help you pool and get industry-wide data to help you in this. As one of the remaining mutual companies, Guardian views dividend mortality determination as part of the pricing process. We're very concerned with reflecting actual mortality experience back into the historical basis. So, for example, if nonsmokers have better mortality than priced for, Guardian uses the improved mortality in the older policies' dividend mortality basis. I hope that the new FIRST study will uncover risk factor combinations that can be reflected in pricing assumptions.

For the illustration actuary function, you have to determine the mortality basis for your disciplined current scale. Basically, one cannot set illustration mortality assumptions lower than your current pricing assumptions and experience assumptions. If you have validated experience assumptions for your preferred classes, you can feel free to go ahead and use that on your illustrations.

For the valuation actuary function, you can use current mortality experience of your company as a basis on which to set deficiency reserves and calculate "X" factors. Currently I'm using our Guardian mortality experience, reflecting that of course in pricing assumptions, and using that as the basis on which to set the "X" factors. The point being that if you have your mortality experience on hand, you can use that as valid justification to set lower deficiency reserves.

The FIRST study will help you on an ongoing basis in the pricing, illustration actuary, and valuation actuary functions.

Currently the industry supports the industry database. It's important for the industry to come out and have a common database where everyone has access to the end results. It's not just one individual company having the results, it's all of the companies in the SOA pooling their results.

Recently, the SOA has been turning out intercompany mortality studies promptly. Under Jay Biehl's leadership, the SOA's Individual Experience Study Committee has released single-year reports on all available data and produced both the 1985–90 Basic Table and the 1990–95 Basic Table. The seriatim format is the basis on which we're setting the new valuation basic tables. The 1990–95 Basic Table is the basis that will become the Valuation Basic Tables and then the 2000 CSO. Being a member of many committees, I get the question, "Are we going to have a preferred valuation basis?" Well, that's very easy to answer. We don't really have enough data on risk factors in the seriatim format to produce preferred basis. The answer to producing a preferred study is the FIRST format.

I don't consider what our marketing departments call preferred as valid. We want to go on a strict underwriting basis, having build, blood pressure, cholesterol, and liver function, as setting the preferred basis. So if we start saving and collecting data now, in the future we would have the opportunity to look more closely at whether or not we should have preferred mortality on a valuation basis.

Setting new industry mortality affects the reasonable mortality of Section 7702, standard nonforfeiture law, valuation law, and tax reserves on the 1980 CSO basis. If we want preferred mortality to be implemented, then we need this new preferred mortality study, the FIRST study, to provide a factual, actuarial basis for preferred mortality.

The FIRST study will provide additional support for the insurance industry's risk classifications. Throughout the years, there have been many court challenges on risk classification, everything from using sex as a method of risk calculation and people coming up and saying, "Well, I'm not really a substandard risk" or even what constitutes a preferred risk. Having an advanced statistical basis upon which to set our pricing assumptions and our classifications, will help the industry explain our risk classifications.

So how does your company benefit? By contributing to the FIRST study, you'll also be contributing to the ongoing SOA study. So if you currently aren't doing that, one of the benefits that you'll get is receiving analysis of your company's data. You'll give the data to Bill McDonald and he'll analyze it and work with you. Your company will receive, both initially and on an ongoing basis, the results of your own company in the same format as the results from the overall industry study. Also, results from the FIRST study will support the actuarial and underwriting functions as both Doug and I have talked about.

And finally, on the timeliness of data. This has been an issue with the SOA—how quickly are the experience studies actually coming out? That was one of the reasons, two or three years ago, I started getting involved in the individual experience study committees. My responsibilities were expanded to include that as a primary role and I really have to give kudos to the efforts of Jay Biehl in getting the experience studies out on a rapid basis. We got out the 1985-90 Basic Table and the 1990-95 Basic Table. Your contributions to SOA studies, whether on the seriatim or FIRST basis, will be processed quickly.

If you contribute to this FIRST study, you'll be getting the results back on the standard SOA basis. In terms of getting preferred mortality data, it will take some time even with the pooling of the data amongst all of the companies to get a statistically significant number of deaths in each cell to produce valid results. We would anticipate that within five years we can start getting out valid preferred mortality results using combinations of things such as build, blood pressure, cholesterol, and liver function tests. In the meantime, we'll be able to provide early nonmortality results such as the distribution of the business. At this point I would like to turn the session over to Mr. Costello.

Mr. William J. McDonald: MIB, for those of you who don't know, is a membership organization consisting of about 600 life insurance companies. It is totally owned by the life insurance industry. Our main claim to fame is that we maintain a database of medical information supplied by the member life insurance companies on people who apply for life insurance either through the application process, attending physician's statements, or other sources. This information is about their physical and, to a degree, psychological condition. This is passed onto us and kept for a period of seven years based on the Fair Credit Reporting Act. What this is basically is an antifraud method of catching people who may be applying for insurance and after being rated on one basis deciding to wait three months and then going to another insurance company and not answering the questions truthfully in the application. It's an alert flag that underwriters use in the process of evaluating the risk.

As part of being involved in the insurance industry for about 25 years, I have worked in the Knowledge Services Group of MIB. We're an outgrowth, or metamorphosis, and an expansion of the company's old Center for Medico-Actuarial Statistics. What it was originally conceived to be was a center to do mortality and morbidity studies on an intercompany basis. For the last build and blood pressure studies that were published, we were the compiler and processor.

As an outgrowth of this, we became involved with processing the SOA's intercompany studies back in the mid-1970s. The initial one we did was the Individual Disability Income Study. At that point in time a lot of the intercompany studies were done by various large insurance companies where the data would be sent to, say, a Metropolitan who would do the Individual Life Study for a period of two to three years. Then it would be passed on to a John Hancock or a Prudential. As internal processing demands on information technology (IT) departments grew, companies decided to bow out of the studies processing. All of you certainly have had great success in getting your IT departments to do whatever you want at any point in time; at least that's what I've been told by Tom and other people in discussion last night. The Society looked for a secure source for companies to send their sensitive data to for the intercompany studies. MIB has a track record dealing with sensitive data. And since most of the contributors, if not all of the contributors, depending on the study are MIB members, it was a natural outgrowth for the Center for Medico-Actuarial Statistics, and for us at MIB, to get involved in processing SOA intercompany studies.

For a number of years MIB has been keeping a very low profile because of the sensitive nature of the data and the perception of the data that has been sent to us as far as our own business is concerned. All of you are probably knowledgeable of the fact that the number of inquiries to MIB has declined. A couple of years ago our board of directors decided that since the individual life business, which is the bread and butter of our product lines, is declining something had to be done in the near future. We are a not-for-profit company and raising our rates to a certain point would have a negative effect on our process. So the long and short of it is that we decided to restructure and set up an aggressive approach to marketing MIB products and also to look into other services. We've hired several account reps to go out and touch base with the membership to find out what new product lines and services would be feasible to them and what they would be interested in. And so, with that process we started spending a significant amount of money in upgrading our technology. Our approach is that we're gearing up to do all kinds of new and better things and improve our process and to look forward to doing new things faster, better, and cheaper.

As part of this, I have been involved with the task force and in developing the specifications for this FIRST study. If you picked up the copies of the specifications outside, you can see that they are very extensive sets of instructions which cover everything and anything you really want to know about individual and preferred life in generating a contribution. There are two basic formats. In the "at issue" format, we hope to capture all the information that is gathered as part of the underwriting process, be it lab reports, etc. A lot of the underwriting information that is captured is stored in paper format because of the nature of the underwriting process. It is usually stored away and eventually cataloged someplace in a warehouse, if not shredded at some point in time. At the point in time when the policy is issued, the administrative systems take over. And so basically the "at issue" format is a new concept in collecting data to try to capture as much information when it's been supplied in the application, from the lab work, MVRs, MIBs, etc.

The "post issue" specifications are more of an administrative type of record format which captures all the information that would be significant to an ongoing study. They include a year-end snapshot of what the status of a policy is and all the information that is involved in it. Tom has alluded to the fact that this could be the basis for information for the ongoing individual life study, which has its own format. However, this contains all the elements that are in that format, plus both of these formats contain a number of new data elements that never have been asked for before.

The other thing that's out there, and Doug has alluded to it, is the release form asking the labs to send you, as a contributor, the electronic reports that they have been saving for a period of time. It has been saved for you so that you can use that as a basis for your submission of your lab data. It would be nice to have everything available at the beginning, but what's going to happen is you're going to go back and talk to your IT people. Or if you have your own data-processing people within your department, you're going to find out that maybe a significant amount of this information hasn't been captured as of this point in time. All you

can do is look forward to trying to capture information on an ongoing basis. It's going to be an evolving and cumulative process. As time goes on you may be able to capture more and more information and supply it in a record.

As part of this we're looking at the current contributors—those of you who may be contributing to SOA's Individual Life Study. And we're also looking for new contributors that may find this process to be a beneficial product to the industry. As Tom has alluded to, the regulators are looking for information, and other departments within your company can also utilize the results of this process.

The specifications of the current individual life study also have a large number of components, such as waiver of premium, accidental death benefits, and so on. Not much has been done at this point in time with this data, but hopefully at some point, somehow, it will be used. There will be mapping so that the new specifications can be mapped back to the old specifications, which will help as far as the conversion; it won't be a situation where you can't find the sources to fill in the fields described in the specifications. One of the things we as a committee are trying to do is to get as much data as possible. As part of the specifications, we've also indicated what are required fields. These mandatory fields are indicated with an "M" in the category field. A "1" is information we would really like to have if we could. It will be most beneficial for the analysis and we would like it to be studied. And then "2" is, "Gee, we'd really like to have that, but if you can't get it to us, that's OK."

The other thing we started talking about is the submission process. It doesn't mean that you can't submit data now which gives us the information on that policy. The data will all be contained on a relational database model. At any point in time additional data could be sent in and we could connect via the basic link, which would be the policy number. This will be the key to relating all of the other variables and all of the other tables.

Well, I guess that covers things as far as making contributions. Try to contribute if you can. As I said before, we have a long history of dealing with many formats of information sent to the MIB, and there will be a feedback loop. One of the things that Tom has alluded to was individual results. The FIRST study has plans to use a data-scrubbing validation and, to a degree, some relational field-to-field-type analysis, which looks at the reasonableness of certain field compared with other fields. We would come up with certain benchmarks that will be sent back to a contributor to compare to what was perceived to be sent to us from them. And then the next phase would be just a basic analysis of mortality results with our other fields, that we would compare. For example, if we come up with a 90% mortality ratio for standard issues and you have a 78% ratio, then there's something wrong with the process. If we come up with 78% and you have 78.25%, then we know we're close. That's sort of a validation on the process and the data, that it will have this constant feedback loop.

One of the things that we will offer as far as dealing with you initially and on an ongoing basis is we will go out and work with the people, talk to, and be a part of

the process of you developing this contribution. We're here to help you develop this process and contribution.

One of the other things that we have in our plans is to get more people involved in this by setting up some kind of user group. It initially will be a group of people from contributing companies getting together just looking at what's the best way, or how they're going about gathering the data. And the next thing would be for a user group to say what kind of analytics that they may want to see, in addition to what the committee that will be doing the study may want to look at. That will be the basis for information and feedback. That is in the future.

As I said, it will be a relational database model with online analytical processing that will be generated through as a set of tables. It would be generated through directives through a committee that will look at the various aspects and the robustness of the data that we have. As for data contributions, we have dealt over the years with a myriad of things. Some people remember the summary format of contributions, which was countless studies on punch cards. Thank goodness we don't get those anymore. But we accept data via tape, CD-ROM, or diskettes. The Internet is a future basis for contributing. One of the technology proposals for MIB members will be a secure extranet site which is being developed. This could be a basis to contribute the data for those companies that are MIB members. And, again, we reiterate, that it's a much more extensive contribution than the current individual life, but the end result of this process will be a much more robust and multivariate analysis study.

One of the other things that Tom talked about is individual results. As a company contributes to the study, it will be able to do analytics on its own data. And, as I said, the future process will be determined by the traditional SOA committee process, but the contributors will be intimately involved in the decisions as to what kind of analysis may be done. That's again, a push for a users group where contributors could be surveyed for input. Right now a request is going out for contributions on an annual basis for individual life. There has been limited success, however. Jay Biehl's committee has made great strides in an aggressive effort to try to get current in the next couple of years. So there's a great effort going on there. But, as part of this process, there will be a consistent update interval and the feedback process will continue. As far as any company analysis goes, that will be determined on an annual basis based on the number of contributions. As far as technology goes, the evolution of technology is such that today's best technology is already obsolete. We are looking forward to going forward to the new technology at some point in time. The process should be set up so that as long as the data comes in, the results will be sent. An analysis can be done on a very short-term basis and not like the current process.

And with that, I will pass the microphone to my friend Mr. Abbott who will talk about all of the strides he has made as far as a pilot company goes.

Mr. Rhodes: I guess I'd just like to make a few comments from the perspective of a pilot company. First of all, when I entered this process I looked at the SOA's

contribution and said, "Well, what would this need?" And one of the first things that popped into my mind, amongst the many committee meetings where we went looking at the additional data, was where's build and blood pressure? Build and blood pressure is not in the current SOA study. I felt that really should be in there. I was also looking at the fact that we had the AIDS epidemic, and that spurred the preferred mortality. We got blood testing information. It wasn't just whether or not they had HIV; there was much more information and from that came the great explosion of preferred mortality.

Part of the FIRST study is using the standardized lab test results from the AIDS blood test. This is available from the major labs for free by request. At the Guardian, we are getting the blood test results. For a year and a half we have had a 386 online with a large hard drive where the medical laboratories every night send the blood test results. My secretary logs and makes sure that everything was transmitted. If there's a problem, she goes back and calls the lab and they retransmit it. It really isn't that complicated of a process in getting the data, so I'm sort of caught between two places. One, my technical actuarial role where I have this wonderful layout of everything anyone could ever study. The second step is the practical part of saving the data you have and requesting free medical test data in a common format from most major testing companies. There are things which you learn going through the process and all that data to be a contributing company. So just fill in what you can; it really isn't as overwhelming as it might first appear.

When we got together after putting together this data format, we had totally different shops amongst the pilot companies. We do our data processing in a different fashion. At Guardian we have different things going on, but we found that we could create a very simple outline that actually covered the aspects of all the different areas, and that's what I'm going to be talking about now. The reasons for participating. We've been going over that. There is underwriting information, the need for a valid statistical basis for pricing, dividends, deficiency reserves, wanting to know what's going on, and other things like that.

In terms of the data sources, all of the companies had multiple systems. I have one administrative system for whole life, another administrative system for variable life, and soon a third administrative system for variable life. So we have different aspects of data. Also, as I mentioned, we have lab data from another source. And you may run into a different availability—electronic versus paper. Although at issue at the Guardian we have all the underwriting information there, it doesn't get saved. So we had to make a decision on what elements we actually wanted to type from paper onto a system. So at Guardian we typed in some additional paramedical information—build, blood pressure, and some other easy information.

The first thing you should do is retain the data. You can't do a study unless you have the data to study. Go back to your IT area and say "Don't get rid of the old tapes." Go to the medical labs who have already warehoused, from our understanding, three back years of data, if not more. So just make sure the data is there; that's the first, most important step. You can't run an experience study without the data.

Then, the next step after you have that data is pulling all the data together. As I mentioned, I have different administrative systems that I have to work with. One has a label called issue date, the uninitiated might think that means the date the policy was issued. No. It's the date the premium last changed. That's the issue date! And, of course, another system has another definition, so what I did in my responsibilities is put together what I called the "life actuarial data warehouse." From each system I have a common format so that issue date means what one would tend to think it would mean. That was my approach. Other companies probably haven't gone through this. I personally have found that if I have all the information about a policy for mortality, the amounts, the agent who sold it, and demographic information in an Oracle relational database, not only can I do mortality studies, but it's very easy to start tracking agent retention, productivity, who's selling what, in what amounts, in what regions, and in what agencies. So there are side benefits to all of this work.

Then after I did that, I had the great fortune of being able to hire Jaron Arboleda, who's a career ASA. He's working with a system's analyst for about two months and he's transferring the data from the warehouse, from the medical lab, and the other data that we had typed in on build and blood pressure. And that will take, I estimate, two person-months to do. The creation of the programs to extract the data and test the process so that it is an automated job will take an additional four person-months to do.

One thing you have to be aware of—you can get help from as well as have conflicts with new business and IT. Their new business idea is to get the money in the door, the policy out, and the commission paid. And you have to respect that. What I did was go and get data from behind the system. In working with IT they're more interested in what report you want to have from this data. How do we process it? It's a bit difficult to tell them, "Well, I don't know. Haven't a clue. I have blood test information, cholesterol information, liver function information; I really don't know what the significant data is until I collect and study it."

Throughout this, I've had a lot of help from MIB, and you can count on them to be helpful to you. When I first got into this process I had to do my original Society study. They worked quite closely with us and were very helpful in it, and there was a good back-and-forth. So the benefits that I'm getting from this study are using and talking with other actuaries and using Al Klein's leadership in creating what we should look at in a preferred study. I get that simply by having my new associate get the data and reformat it into this submission. When that gets done we'll be established for future years, but I've also trained that individual on the data warehouse, on the relationship of the data, and that will help me immensely in the future in producing more management reports. So overall I don't think it's a big effort or overwhelming as it is just summarizing what you're going to look at.

We want information on existing business. However, you do not have the at-issue information on old business. So, if you don't have the at-issue format, say for business that you sold 15 years ago, we're not expecting you to go back and get at-issue information. We're just asking you to fill in an appendix and in that way

you can contribute, and get not only the new preferred data but also receive the typical reports that you get from the ongoing Society data. That's all that I have. Al, your turn.

Mr. Klein: One thing that was kind of interesting when we were putting this presentation together is we sat down as a group and all the pilot companies discussed what it was that got them into this and what some of the problems were that they had with it. And we formed this outline because every one of them had something to say about each of these issues. We only had time for one pilot company to express their opinion, but each one had these issues, except with a little different twist to it. So they all had multiple systems that they were using, but this caused different problems for each of them. They all had issues with reformatting the data.

One of the important things to remember with this study is that everyone is willing to help you with the issues that you may have in terms of trying to format your data into what we're looking for. We have several different approaches to solving problems similar to what you will encounter, so one of them should be able to help you.

What I'd like to do now is give you a quick summary of some of the benefits again. As most of you are aware, we have had a very slow turnaround with SOA data. I know that Jay Biehl has done a great job of moving that forward. But, one of the things that I've been pushing from the beginning is that I really want a quick turnaround on data. Now we may not have enough data for several years, but once it's statistically significant, I'd like to get the results out, if we can, on a very quick and periodic basis.

As I said before, this is probably going to be the best source of mortality and underwriting data that is going to be available once we have the database established. We are going to be able to determine which criteria or sets of criteria have the greatest impact on mortality and which should help us fine-tune our pricing assumptions and our preferred risk classification and other risk classifications as well.

A number of people have already talked about this, but I think that it's really important to understand so I will go over it one more time. In terms of contributing data, if you look at the specs, and you should have a copy of them, they really are overwhelming. There's no question about that. It's more data than has ever been collected before. But, as a minimum contribution all you have to do is contact the lab with the form that was also handed out and get your lab data again. Then peel off the name and Social Security number because we don't want anybody to be identified. Add in some other characteristic such as policy number so that you can identify the record later to report on it, and then send it to MIB. There might be a couple more things that you will need to add, but that's all you need to do! Now I know some companies are already keeping track of this data, and that's great. For those that aren't, I just described the minimum contribution. We would hope that over time you'd be able to add more to it, but again we're just

looking to get started. The reason for going into this detail is to demonstrate another of my original goals, which is to make it as easy as possible for you contribute.

We will be looking for continuous ways to improve the study. We're going to solicit your input through the user groups and get your ideas as to how to make this more valuable as well. And again, as I've mentioned before, we will help in any way we can.

What about some of the time frames? I'd like to get started with 1999 issues. However, when we were discussing this with our pilot groups, they told me that once they have this data in the right format, they can go back as many years as we want; that it is just a matter of reading other tapes. So if we can go back to years before 1999, that'll be great and that'll be the sooner that we have a database available.

In terms of when some of this information will be available to you, now these are just estimates so don't hold me to them, but what we'd like to do is be able to provide distributions for you a year or two after we begin to receive contributions. What the distribution means is, and I again use cholesterol as an example, we'll be able to tell you that x percent of the insureds have cholesterol between these ranges and another percentage has it between another range. We'll try to provide that before the mortality information is available so that you will get some useful information earlier. It's probably going to be about five years from when contributors start collecting that we'll have enough statistically significant data to analyze. It'll probably be 10 or 15 years before absolutely everything's available. I expect the lab data, because the labs will have it available for you, to be ready after maybe five years, but some of the other information will take a little bit longer than that. Again, obviously the sooner we get started, the sooner we'll be able to do this.

Now that you're interested, what do you do? First, feel free to contact any of the task force members for more information. MIB and the pilot companies are certainly willing to help as well. Feel free to contact me and I will give you a contact at each of the pilot companies. Tom is the contact at Guardian, but I can provide you with contacts at the other companies as well.

Mr. Rhodes: Al, just one point. Again, I want to emphasize that by contributing to the study you'd be contributing to the SOA study and you would get back information on your experience and industry experience. By contributing to the SOA study in the FIRST format, the pooled data will produce significant results years before your company's data alone would produce significant results.

Mr. Klein: Thanks Tom. The other thing to keep in mind is that we're heading toward the end of June. In the next couple of months most companies are going to enter their budgeting process for 2001. If you don't have resources available this year to start working on this, please make sure that they get into the budget

for next year so that we can start on this. And finally, stealing from Nike, "Let's do it now."

So with that, I appreciate your attention and we have time for questions.

Mr. David B. Atkinson: Al, thank you and your group for doing this wonderful work. This is really important to not just our profession, but I think the whole world in terms of analyzing how mortality is really going to go. I guess I have a really basic question. Who's going to have access to the information when we're all done? Is it public? Is it just summary information available or will there be incredible detail available, I guess, at least at MIB? What do we release?

Mr. Rhodes: Can I answer?

Mr. Klein: Go ahead.

Mr. Rhodes: Basically, the FIRST study can be viewed as a standard SOA study where data goes confidentially to MIB, it gets analyzed by a committee that maintains confidentiality, and we give out the reported results to everyone at the same time. Allowing more flexible reporting using queries on a relational database was discussed but was not implemented. If such an approach were ever used, it would have to have the explicit written consent of each company that would participate in that arrangement. At all times, we wanted to keep confidentiality not only of individuals but of companies. Again, the result of FIRST contributions will be treated as with every existing SOA study. Any resulting report will be through the normal SOA process.

Mr. Atkinson: I know there are other studies like the Framingham Study, now you can get it on a CD-ROM in incredible detail for all the people in Framingham who've participated for what, 50, 60 years now, and there are National Institute of Health studies that fill volumes of CDs as well.

Mr. Rhodes: There's a problem if you give out too much data, so that one company could in essence be figured out. If this is a certain type of plan and certain issue ages, it must be this company.

Mr. Atkinson: Right.

Mr. Rhodes: When we give out data, our intention is to give out as much data as possible. We have to create rules so that people can't look at the data and determine, "Ah, this must be Guardian."

Mr. Atkinson: Right.

Mr. Klein: Well, we have put some parameters together so that no company or individual can be identified. Despite these parameters, there are some other issues which may keep us from publishing extensive detail versus the summary data we

intend to provide. As Tom said, if all contributors agree to something, we may be able to do more.

But in terms of publishing the data, I think we're going to use whatever technology we can. Right now I believe that it will be published on the SOA Web site. And, again, we will try to keep up-to-date with the technology.

Mr. Atkinson: Yes. OK. Well, good luck with all that.

Mr. Klein: Thank you.

Ms. Mary Ann Broesch: I have a question. This is really exciting and I'm really glad to see the study taking place. As a reinsurer, how can we contribute to the study and avoid double counting with our clients' information? Would we just be submitting things that have been underwritten facultatively? What's the process for getting information from a reinsurer in the study?

Mr. Klein: Right now we are just looking to collect information from the insurance companies. We haven't really discussed it thoroughly in terms of collecting data from reinsurers. We're hoping to collect it from insurance companies because we believe that everything that's reinsured has come through an insurance company and we don't want to double-count. I think where reinsurers can help out is by encouraging their clients to contribute to the study and maybe even working with them in terms of the data submission.

Ms. Broesch: Thank you.

Mr. Rhodes: Also go ahead and encourage your clients to contribute to the SOA studies, to save lab data and other at-issue data, and to plan to move to FIRST format to contribute to all individual life studies.