DOCTOR SHAFFER: Thank you.

Chair James and members of the Commission, thank you for the invitation to be here today, as you examine this very important and complex matter.

I'd like to dedicate my testimony today to the memory of my special friend and colleague, Tom Cummings, who passed away suddenly last week. Tom dedicated his life to the compassionate care and understanding for gamblers who are struggling against their impulses.

Humans have gambled at least since the beginning of recorded history, and now that Americans are gambling as much as at any time in the 20th Century we are faced with considering how we will gamble, and whether the consequences of gambling are socially acceptable.

Science, I believe, can make a meaningful contribution to this deliberation. Ultimately, an inquiry of gambling in America is both an economic and social cost benefit analysis. Scientists can provide considerable information about the factors that influence gambling choices, and what happens to people

who do gamble.

However, science cannot determine the social value of this information. The rightfulness, the wrongfulness of gambling, ultimately, is a judgment that rests deep within the tapestry of values and traditions that embrace our American heritage.

I think that behaviors are complex and difficult to understand. Attempts to understand compulsive and pathological gambling resembles someone trying to shoot a fish in a clear, calm pool of water with only a bow and arrow. While it's easy to see the fish and take direct aim, refraction makes the task almost impossible.

Observers, for example, tend to view disordered gambling through their own lenses that refract their capacity to understand the problem. People struggling with addiction tend to experience this disorder as a restricted set of choices, and often fail to recognize exactly how their pattern of behavior is self-destructive for them.

Ultimately, addictive behaviors represent an intellectual, emotional and neurobiological co-

opting of both the mind and the brain. People with addiction experience important shifts in their cognitive, emotional and biological systems. They lose control over important aspects of their behavior and experience a desire for the object of their addiction, and this desire can range from a mild to an intense craving.

Finally, they often continue their excessive behavior pattern, in spite of its adverse consequences for them and the result, as you heard last night, is often despair, depression and even worse.

Disordered gambling can develop into an addictive disorder as virulent and self-destructive as any of the other better known chemical dependencies. Just as alcoholism is multi-dimensional, there's no single clinical pattern which we can call pathological gambling. Gambling disorders are truly multi-faceted problems, perhaps, best understood as a syndrome or cluster of phenomena.

In Asia Minor, the ancient Lyddians gambled to distract themselves from hunger during periods of

famine. Similarly, gambling can serve as an anodyne for depression and other types of emotional suffering. It also can provide relatively safe recreation and entertainment. Whether gambling offers a safe or destructive haven is a function of the expectations of the gambler, the setting within which they gamble, and interactive characteristics of the games they play.

When gambling serves only as an amusing activity, providing no meaningful relief from emotional suffering or financial problems, the rate of gambling disorders is likely to be very low. However, when people use gambling to buttress emotional vulnerability, or pursue gambling as a vehicle to achieve financial gain, the risk of disordered gambling increases.

Recently, my colleagues and I completed a study which includes the most comprehensive analysis of the gambling prevalence research literature in the United States and Canada. This work revealed considerable conceptual confusion and inconsistency about the terminology that scientists have used to describe intemperate gambling, and Doctor Volberg

commented on that before. As a result, we adopted some different language to classify intemperate or disordered gambling, and that classification system was ultimately a public health system, referring to level one, prevalence rates that reflect people who do not have any gambling problems at all, level two represents those individuals who failed to satisfy the multiple criteria for a clinical disorder, but do experience some of the adverse symptoms that can be associated with gambling, and level three reflects those people who meet sufficient criteria for having a disorder.

These diagnostic criteria, for example, can include, among other things, being preoccupied with gambling, risking more money to get the same desired -- or a desired level of excitement that they had previously experienced, committing illegal acts, relying on others to relieve desperate financial needs, and there are others.

People with level two problems, those people who do not meet diagnostic criteria, can move in either of two directions. They can move toward a

more healthy state, level one state, or they can move toward more serious level three states.

Psychiatric disorders in general, and disordered gambling in particular, are subject to shifting cultural values. Shifts in prevalence rates can reflect shifts in behavior patterns, or evolving cultural values, or a combination of both.

I provided you with two tables. Table I reflects lifetime estimates of disordered gambling rates from our meta-analysis, and Table II presents past year rates, which tend to be more conservative and more precise because these estimates avoid some of the technical time frame problems often associated with prevalence research.

Whether we use lifetime or past-year rates, disordered gambling reveals itself with remarkable consistency across research study protocols. Doctor Volberg also referred to this. Disordered gambling does not, however, appear with equal prevalence among every segment of the population. For example, young people evidence higher rates of gambling disorders when compared with adults, from the general

population. Psychiatric and drug abusing patients experience even higher levels of gambling disorders than do adults and young people from the general population.

In general, our research revealed that these estimates are very robust across methodology and methodological instruments, measurement instruments, jurisdictions, regardless of the methods used to calculate these rates, or the protocols, as I mentioned, or even attempts to weight our values by the quality of the research, estimates of pathological gambling remained remarkably consistent and within a very narrow range of less than one percent.

I'd like to make a few comments about the state of gambling research in general. To date, the conventional wisdom surrounding addictive behaviors, alcoholism and other drug dependencies for example, has been used to inform the study and treatment of pathological gambling. However, I believe, and have for quite a while, that the study of disordered gambling holds greater potential to inform our understanding of drug addiction than the other way

around.

To illustrate, during the study of addictive behaviors that involved the use of psychoactive drugs, scientists have been unable to separate the impact of these drugs from the effects of a repetitive pattern of emotionally stirring experiences. A study of pathological gambling permits us to begin to sort out these influences.

Presently, the only funding initiative focused on a scientific study of gambling disorders has been undertaken by the National Center for Responsible Gaming. The emergence of this young organization has been very important for two primary reasons. First, it's encouraged a growing number of scientists to contemplate and investigate gambling problems, and, second, it represents an understanding by a segment of the gaming industry that we must address gambling related problems.

In addition to the value of studying pathological gambling for its potential contributions to the understanding of other addictive behaviors, disordered gambling itself represents a meaningful

public health concern. Disordered gambling is as prevalent as many other conditions that receive considerably more attention and research funding. This inattention is the result of limited ideological understanding and institutional inertia.

Our new research reveals that during the past 23 years, in spite of higher rates of disordered gambling among adolescents and substance abusing or psychiatric patients in treatment, only the adult segment of the general population has shown an increasing rate of gambling disorders.

Among the risk factors for gambling disorders, gender, age, psychiatric status and family history appear among the most prominent. For example, adults in treatment for substance abuse or other psychiatric disorders are almost nine times more likely to have a level three gambling disorder during their lifetime, when compared with adults from the general population. Similarly, adolescents from the general population and college students have a greater risk of experiencing a gambling disorder compared with their adult counterparts by a factor of 2-1/2 to three

times.

Males from the adult general population are almost two times more likely than their female counterparts to suffer level three gambling problems during their lifetime. Male college students are almost four times more likely to have serious gambling problems, compared with their female counterparts.

The rate increase we observed among adults from the general population could be due to many factors. For example, during the past two decades there's been an increased availability and accessibility to gambling. There's been an increased social acceptance of gambling. There are few messages about the potential risks and hazards of gambling. There's been an increasing desire to participate in risk-taking activities in general. And, perhaps, there's been a decline in the belief that one can achieve the American dream, a growing sense of emotional discomfort, a malaise or dysthymia among the American people. All of these things could play a role in increasing the rate for disordered gambling among the general adult population.

Observers tend to think that disordered gambling is growing in direct proportion to the expansion of legalized gambling opportunities. This may not be an accurate perception. Assessing shifting social trends is very difficult without evidence from prospective research, and as Doctor Volberg has already mentioned we have no prospective research to date, and I'm very excited about the prospects of her work.

However, gambling certainly has expanded much more rapidly than the rate of disordered gambling. We do know that. Tobacco, arguably the most virile and objective chemical dependence, has been widely available, and despite this wide availability tobacco has a much smaller user base than 20 years ago. We must conclude that availability is not a sufficient, sole explanation for the increased rate of gambling as an addictive disorder in the United States.

In part, the history of gambling research inadvertently has fueled this very perception that expanded gaming, and by expanded I mean lottery,

casino, charitable gaming, is the sole course of increased gambling problems. And, the reason for this is that early gambling prevalence studies tended to focus on the adult general population. This is the population segment with the lowest rate of gambling disorder. More recently, as Doctor Volberg described, their research interests have become much more diversified and they've examined young people and other high-risk population segments. Consequently, the shifting evidence provided by more recent studies of new population segments with higher rates of the disorder have, perhaps, biased the prevailing subjective impressions of our disordered gambling prevalence rates.

At the risk of being misinterpreted and misrepresented, I'd like to note that many economists, researchers and social policymakers have made two important assumptions about disordered gambling that are often incorrect. It's incorrect that all gamblers who experience problems with gambling eventually progress to become level three or pathological gamblers. Secondly, it's incorrect to assume that

once someone becomes a disordered gambler only professional treatment will arrest the problem.

Just as most people who occasionally feel depressed do not progress to a state of clinical depression, most gamblers with level two gambling-related problems do not experience a progression to level three states.

Further, in addition to professional treatment, there are many different pathways out of disordered gambling. Gamblers Anonymous, perhaps, is best known, but natural recovery is certainly another pathway out of disordered gambling.

Current research has not identified reliable methods for determining which gamblers will develop gambling disorders, or who will recover with or without treatment.

Furthermore, without precise estimates of the duration of gambling disorders, and the extent of people who recover without any treatment at all, it's not possible to estimate accurately the economic and social impact of disordered gambling.

While the rate of disordered gambling among

adults may continue to increase, such an increase is not without end. Just as Americans have been reducing their use of tobacco and alcohol during the past two decades, in spite of the widespread availability of these products, the rates of gambling excess will also begin to diminish as people learn of the potential personal and social risks associated with gambling. This has happened on two previous occasions, it's likely to happen again.

Scientists and lay observers alike have questioned the validity of our disordered gambling measures. The problems associated with determining construct validity, or what it is that we're actually measuring, begin with its very definition. Validity is the capacity of an instrument to measure what it purports to measure. Validity is neither a static nor an inherent characteristic of a screening instrument. Validity raises the question of what purpose is the instrument being used for, and how accurately does the instrument perform for that purpose.

Determining instrument validity is an unending and dynamic process. We simply cannot

conclude that any single instrument is reliable and valid for all purposes in all settings. Validity is the consequence of applying an instrument to a measurement task, guided by a theoretical frame. When conventional wisdom or theory change, the validity of a screening instrument can end in an instant.

Existing methods of estimating the rate of disordered gambling include bias, and I know that many of you have expressed interest in this particular issue. Over-estimates emerge because almost every attempt to measure the prevalence of disordered gambling have failed to exclude other psychiatric disorders that can complicate this picture. Doctor Volberg is about to embark, I think, on one of the first of these that will carefully address that issue. These disorders can stimulate or mimic gambling disorders. Similar prevalence estimate inflation can occur when investigators employ lifetime time frames of reference.

Alternatively, underestimates can occur when the general population studies fail to include

high-risk groups. These estimates are inherently unrepresentative of the entire population.

Psychiatric patients, homeless individuals, incarcerated prisoners are under-represented in most population studies. Telephone-based studies tend to underestimate the extent of gambling problems, since some population segments fail to have access to or answer the telephone consistently. Disordered gamblers, in particular, may be gambling when investigators make screening calls. Ultimately, all of our current estimates of disordered gambling prevalence either over or underestimate certain segments of the population. For example, general population rates over-estimate the prevalence of female gambling disorders and simultaneously grossly underestimate the rate of gambling disorders among male psychiatric patients.

There's no single estimate of gambling disorders that will suffice for the country. Prevalence estimates must, in my opinion, be stratified by important population segments, so that risk factors can be prioritized for reduction and

prevention.

Variation among respondents, study methods and results across studies is a primary reason that meta-analysis has emerged in a wide variety of investigative areas beyond gambling, as the scientific method of choice for determining the meaning and value of research.

As I complete my testimony, I'd like to offer, respectfully, five suggestions for your consideration. First, since gambling problems, particularly, among the young, are not dramatically different from alcohol and other drug-using problems, I believe that gambling proponents and opponents alike should join forces to develop and implement prevention, education and treatment initiatives for disordered gambling that are commensurate with these other problems.

Second, to engage in this bipartisan program initiative, it will be necessary to use the most rigorous scientific information, and provide improved education, training and clinical supervision to both gambling and other addiction treatment

specialists.

Third, to advance this scientific knowledge, I encourage, respectfully, this Commission to prioritize a prospective or incidence study of gambling disorders among high-risk population segments, for example, adolescent males. More than any single prevalence study, an incidence study will help us understand what specific factors encourage level one gamblers to become level two or three gamblers.

I believe that the federal and state government should advocate for the treatment of those suffering with disordered gambling by requiring the insurance industry, if you will, to allocate the resources necessary to support this important and legitimate health care service.

Finally, I respectfully encourage this Commission to press the federal government, through its National Institutes of Health, to develop a rigorous research and treatment improvement initiative, along with the funding stream necessary to advance the study of disordered gambling and its

treatment.

In conclusion, I believe that while science can inform public policymakers about the nature of disordered gambling, the final decision about how America gambles is neither a scientific or an economic judgment. It requires the resolution of values.

Chair James and members of the Commission, once again, thank you very much for your invitation to be here, and thank you for your time and consideration.

CHAIRMAN JAMES: Doctor Shaffer, thank you so much.

I'd like to open it up now for questions for Doctor Shaffer.

Doctor Dobson?

COMMISSIONER DOBSON: Thank you, Doctor Shaffer. I found your report very interesting. I was interested, particularly, in your inability to link the increases in the numbers of disordered individuals with this particular problem with the availability of gambling. I'd like if you could elaborate on that. Is it not true that when gambling is introduced into

an area where it has not been before that, at least subjectively, hot line calls and Gamblers Anonymous and things of that nature almost always increase?

DOCTOR SHAFFER: Yes.

COMMISSIONER DOBSON: There is some subjective evidence that would tell us something, is there not?

DOCTOR SHAFFER: I think to clarify that point, if I could, because I think there's a great deal of misunderstanding around that issue and, perhaps, this is an instance where the rigors of science sometimes belie the utility of that evidence for policymakers.

We would expect all of those indicators to increase. I believe they have increased. However, my comments and my scientific research specifically addressed whether the prevalence of disordered gambling increases, not whether they increase in the aggregate.

We would expect in the aggregate those problems to increase. I was directing my comments, both in my written work and in my testimony this

morning, to the prevalence, which means that the percentage of people with the problem may or may not increase in certain segments of the population, but the number of people who are exposed to gambling will increase and, therefore, if we have ten percent of 100 people or ten percent of 1,000 people the aggregate numbers will change as more people are exposed to gambling.

We've been very interested, though, from a disease prevention point of view at the medical school, whether the availability of gambling would start what might be considered an epidemic or pandemic process, where the actual number of people suffering from the disorder increases, not just in the aggregate, but in the percentage, in the prevalence.

And, I think sometimes people misinterpret the distinction between those two concepts.

COMMISSIONER DOBSON: Do you have any impressions about the gambling industry's practices and how that influences the possibility of additional individuals with this problem, through advertising, what's been called predatory advertising, or the

environment itself, the environment of the gambling effort in a given area, anything of that nature?

DOCTOR SHAFFER: Well, advertising is, obviously, essential to the awareness of the American public to a variety of products, whether it's gambling or grocery products, advertising plays a key role in exposing people.

As we expose more people, we can expect in aggregate more problems. Whether or not that actually influences the prevalence rate, I really can't comment from a scientific perspective. I can comment from a clinical perspective, because in addition to my scientific work I still see and work with patients on a daily basis, and I can tell you that from the patients that come in to my office their sense that they can contribute to the outcome of gambling is fueled by advertising in general, primarily, I would say, by state lotteries.

My experience is that state lotteries imply to players that this is something less than a random event, that they can play numbers to achieve certain ends, and I guess that in my clinical work and in my

scientific work it's gambling because there is no skill involved.

So, when advertising implies skill, I would say that we are moving off responsible advertising track.

CHAIRMAN JAMES: I have one question just for clarification.

The difference between prevalence and the aggregate, and I understand that from a scientific perspective, if you are looking at prevalence numbers, that's about -- you know, that's what your research is centered on.

However, for a public policymaker or a decision maker at the local level, who is trying to decide whether or not this is good for the community, whether or not this is bad for the community, if it's a public policy question, is this when a state legislator is looking at making a vote, at the end of the day does your research say there will be more numbers of people who would potentially have a problem or be exposed to a problem?

DOCTOR SHAFFER: Currently, about 90

percent of the American public has gambled during their lifetime, approximately, depending which research study you read, but approximately 90 percent.

The question is, will the number of people, of the 90 percent who gamble, develop a level of this disorder differently now than they did 20 years ago or 20 years from now.

We have evidence that those problems are growing among the adult general population, but have not significantly changed among children, patients with psychiatric problems or substance abuse problems, or other segments of the population where the rates are already much higher than the adult population.

My own sense of this is that like tobacco and alcohol these rates will ultimately decline, the question is when. Science is not very good at predicting things in the future, and I wouldn't go out on that limb, so I would suggest that the real issue is how long will this increasing trend continue.

I am quite confident it will take a down turn. I have great faith in the resilience of the

human condition and its capacity to adapt. I do think that it will turn downward if we do nothing, my question for all of us to consider, for the Commission to consider is, can we tolerate the time period, do we just have to sit back and wait or is there something that we can do to keep this level at its lowest possible rate, and then let nature take its course.

But, I am quite confident that it will likely probably edge up a little bit more, then stabilize, and then move downward.

CHAIRMAN JAMES: Commissioner Leone.

COMMISSIONER LEONE: Yes. I have a couple of questions I want to ask the whole panel, but I have one specific question about your testimony, because a line struck me, and I want to ask it as a more general question than about gambling. You said an increasing desire to participate in risk-taking activities, which is a point I hadn't seen made before in general, and I just wonder if you could elaborate on that point. I found it interesting.

DOCTOR SHAFFER: Well, a lot of things have changed over the last 20 years, in addition to the

expansion of legalized gambling in the United States. We've seen, over that 20 years, a rapid increase, and now, hopefully, a meaningful decline, in violent crime, for example. We've seen risk-taking activities, like bungee jumping and sky diving increase exponentially during the same period. There seems to be a genuine hunger among the American people to take greater risks during this period of time.

They may be expressing that risk in gambling as well as in bungee jumping, driving automobiles rapidly and so forth.

COMMISSIONER LEONE: Has there been any speculation about what factors might be affecting this?

DOCTOR SHAFFER: It's very difficult to say, but these changes in the American psyche, if you will, and their behavior tend to parallel the use of psychoactive drugs. During the same period, we saw an increased use in stimulant-using drugs, and stimulant-abusing drugs, rather than sedating drugs, so that, America seems to go through a period where it likes to sedate itself, quiet, reflect and become more meditative, and then other periods where it likes to

get more aggressive, stimulate itself and take higher risks.

And, I wish I could do better than that for you.

COMMISSIONER LEONE: Has anybody -- I mean, there's one dangerous and obvious correlation, dangerous from a question of academic rigor, that I could make just off the top of my head, I just wonder if anybody has looked at this. Has anybody looked at this in terms of income stagnation and increasing wealth and equality over time?

DOCTOR SHAFFER: They may have, but I'm not aware of it. I'm just not familiar with that.

COMMISSIONER LEONE: It just happens to fit perfectly.

DOCTOR SHAFFER: With that and many other things as well.

COMMISSIONER LEONE: Yes, with many other things, that's why I said it was a dangerous conclusion, I just wondered with expected behavior and ways, if anybody has looked at that.

DOCTOR SHAFFER: That's a wonderful

question, an interesting matter, and another area that I think scientists should apply their skills.

CHAIRMAN JAMES: I do want to keep us as close to being on time as we can be, but we do have a little bit of fudge in the schedule, so, Commissioner Wilhelm, and we'll be getting to Doctor Lesieur.

COMMISSIONER WILHELM: If I might, Kay, I want to ask a question that flows from Doctor Shaffer's testimony, which I found extremely useful, but I would like to address it to Doctor Volberg, and that is this, Doctor Shaffer spoke in generally positive terms about the National Center for Responsible Gambling, which, as I understand it, is funded by the gambling industry. It seems to me, and you spoke in your comments about the need for additional funding for this kind of research, which makes a lot of sense to me.

Since the prevailing political wisdom is that family values require that the government doesn't spend anymore money, I'm assuming there's not going to be a sudden onslaught of federal money for this stuff, even if there should be. So, my question is this, in

your opinion -- well, I'm sorry, one more sentence to preface -- it seems to me the gambling industry is sort of damned if it does and damned if it doesn't. Yesterday, for example, on our bus tour there was a sign that somebody was holding as we went by that said that the gambling industry is making a lot of money in Atlantic City but the schools didn't have enough money. And then, one of our witnesses, somebody who testified last night was criticizing the gambling industry for contributing to schools in Louisiana, which I thought was a nice conjunction.

So, my question is this, in your opinion, do you think that it would be appropriate for the gambling industry to significantly increase the amount of funding that it provides, either through the National Center for Responsible Gambling or in some other fashion, for the kind of research that you are advocating?

DOCTOR VOLBERG: In my opinion, I believe that that would be something that would be appropriate. The National Center for Responsible Gaming is a very young organization, it's only been

existence, oh, for less than two years, but we have been calling, gambling researchers who have been in the field for a while, have been calling for some kind of effort to fund research for many years. The NCRG is the first effort that we've seen, and I absolutely have to applaud the casino industry for coming up with that particular method, it's a peer reviewed, scientifically sound way of getting research done, but, again, it's very early days. And so, you know, whether that effort will continue, how high a level it will take in terms of the funding that they are able to get from the casino industry, I think, you know, the casino industry is not the only gaming industry, the lotteries are, you know, also sizeable, charitable gaming is something that most people don't even -- when you ask them, you know, if they think that Bingo is gambling, many, many people will tell you that they don't think Bingo is a type of gambling. And so, the charitable gaming industries have probably been the least responsive in terms of addressing issues of research and treatment and problem gambling in general, the para-mutuals, too.

COMMISSIONER WILHELM: Thank you.

CHAIRMAN JAMES: We're going to do one more question and then we're going to go to Doctor Lesieur.

Leo.

COMMISSIONER McCARTHY: I want to thank all three panelists for appearing here today. They all have very good professional reputations, and it's helpful to us in trying to gather accurate perceptions of the data out there when we have to write a report to the President and the Congress at the end of our two-year life. And, it helps us frame future hearings as well, you know, what subjects to get into and what questions to ask.

Doctor Shaffer, as I look at your tables regarding level three adult population lifetime, is the number 2.2 million about right?

DOCTOR SHAFFER: 2.2 million people you are referring to?

COMMISSIONER McCARTHY: Yes.

DOCTOR SHAFFER: Those numbers correspond based on the last census data to about 2.2 million.

COMMISSIONER McCARTHY: Okay.

And, the year used for the census, '96, '97, or are you referring to the decennial census?

DOCTOR SHAFFER: We used the census data that was most recently posted on the Internet, so that people could test our numbers against that data, and I believe that's 1996 data.

COMMISSIONER McCARTHY: Okay.

So, 2.2 million adults, as to juveniles, as I look at the tables, it was approximately the same number lifetime, about 2.2 million.

DOCTOR SHAFFER: That's right.

COMMISSIONER McCARTHY: So, we are looking at a cumulative population of 4.4 million level three, the most serious kind of pathological gamblers, in the United States as we sit here, is that accurate?

DOCTOR SHAFFER: I provided that material to the Commission in this report. You should all have a copy of this available. If you don't, we'll be glad to provide it.

COMMISSIONER McCARTHY: That's how I read the numbers from that report, I just wanted to make sure at this public hearing that I was reading them

accurately.

DOCTOR SHAFFER: That is accurate.

COMMISSIONER McCARTHY: Thank you.

Now, on level two, in your testimony you mentioned that the majority of level two gamblers would not find their way to level three. Help me understand what that means, how many at level two would find their way to level three, an approximation that's valid based on your synthesis of the studies you and your colleagues have been reviewing.

DOCTOR SHAFFER: It would require new research to answer that question with any precision. That kind of issue is quite common, by the way, with all disorders, not just gambling. Most people have symptoms in their life of many different things and don't progress to the more virulent form of the disorder. For example, we have symptoms of colds and don't all develop pneumonia.

COMMISSIONER McCARTHY: And, I was accepting your statement that a majority of level two would not proceed to level three.

DOCTOR SHAFFER: Yes.

COMMISSIONER McCARTHY: What I'm trying to pinpoint, since level two is a fairly sizeable number of people, is it one third, is it one quarter that are likely to find their way at the level three condition or not, but your answer is --

DOCTOR SHAFFER: Well, it would roughly be, if we looked at the statistics that we had, it would be roughly one quarter to one third.

COMMISSIONER McCARTHY: Okay.

DOCTOR SHAFFER: Roughly, but I can't say that with the precision that would make me feel comfortable.

COMMISSIONER McCARTHY: No, I understand.

DOCTOR SHAFFER: But, it would be approximately one third to one quarter.

COMMISSIONER McCARTHY: There will be a tendency to look at your study sentence by sentence and grasp what sentence may back up a particular point of view, so I'm asking you in a way that, you know, you can answer in a conditional response. But, I just wanted an approximation so we have a sense of this going forward.

DOCTOR SHAFFER: I think the reasonable approximation would be about 25 percent.

COMMISSIONER McCARTHY: Now, you said in this testimony given to us, which is reflective of your study, while the rate of disordered gambling among adults may continue to increase, such an increase is not without end, and that's in common with that point made in a couple of other places. I'm looking at the paragraph which says the increased availability and accessibility to gambling, increased social acceptance of gambling, few messages about the potential risks and hazards of gambling, and we talked a little bit about risk taking, but those elements, and I was trying to think in my own mind, you know, why you've said that gambling certainly has expanded more rapidly than the rate of disordered gambling, and it struck me that, of course, in tobacco there has been such a volume of negative publicity, the requirement of the Surgeon General's warning message be printed on a package of cigarettes, everything up to these massive lawsuits that are pending now, the drum beat, the negative drum beat against the tobacco

industry, whereas, with the gambling industry, of course, whether we judge it to be appropriate or inappropriate, on a proportionate basis, a comparative basis, there is very little negative publicity attached to the risk. Is that an accurate perception on my part?

DOCTOR SHAFFER: I think it is. I think there are certainly exceptions that you'll find around the country. In Massachusetts, for example, we have point of sale information on lottery tickets that indicate that there's some warning about the poten<Àal risks and hazards of this activity, but on balance I think you are absolutely correct, and that may be a major factor in the difference between what we see in tobacco and gambling.

COMMISSIONER McCARTHY: That's what I was trying to get at here, to understand that. How much does the absence of any significant amount of negative publicity on the fact that there are 4.4 million level three pathological gamblers in the United States as we are sitting at this meeting, you know, I mean nobody knows that.

DOCTOR SHAFFER: If I might add, it's not

just the absence of that specific message, but it's also the absence of educating our children in the school systems about mathematics, about statistics and probability, and number sense, so that when exposed to advertising they have little capacity, or actually diminished capacity, when we compare our educational levels two years ago to understand and make sense of the whole phenomena of gambling.

So, I do think messages to the contrary could change these trends in an important way.

COMMISSIONER McCARTHY: So, how can I be confident that the rate of disordered gambling or pathological gambling is not increasing? I mean, in the absence of any negativepublicity, or the education in the context you just mentioned, isn't that a very persuasive reason?

DOCTOR SHAFFER: Well, let me just interject. It is increasing among adults in the general population, the rate is increasing among adults in the general population.

COMMISSIONER McCARTHY: Observers tend to think that disordered gambling is growing in direct

proportion to the expansion of legalized gambling opportunities, this may not be an accurate perception.

DOCTOR SHAFFER: Underscore in direct proportion. The question is, in direct proportion, it was --

COMMISSIONER McCARTHY: Oh, in direct proportion.

DOCTOR SHAFFER: -- but it's not proportionate, that the expansion of gambling is not directly proportionate to the amount of disordered gambling that we're seeing.

COMMISSIONER McCARTHY: All right.

And, is that an actual figure, it's not growing in proportion, or how is it related to increased social acceptance of gambling to few messages about the potential risks and hazards and so on.

DOCTOR SHAFFER: Those are all factors that could be responsible for the increase. They also can be responsible for tempering the increase, and in different amounts they could actually lead to a decrease. So, those are just likely factors that can

influence rate changes.

COMMISSIONER McCARTHY: Okay.

Doctor Shaffer, I appreciate that your study was not an original research, as you made very clear, you and your colleagues were analyzing and correlating a number of other studies on gambling that had been done. Are you confident that the methods used to estimate disordered gambling populations was not an understatement of the level three number of gamblers? As you've indicated, it widely varied, the methodologies, and you did, indeed, try to analyze ten or 12 different methodological tools. Are you confident that there was no underestimating of the number of disordered persons?

DOCTOR SHAFFER: Thank you for that question, that's one of my favorite questions, because I think that the technology that we used permits those researchers who may have overestimated to be balanced by those who underestimated, yielding a meaningful and a consistent estimate.

I do think, though, I should also add that the quality of the studies that were integrated varied

greatly, and the quality of the studies did not really influence the prevalence rate that they estimated, much to our surprise by the way.

So, I'm very confident that the numbers that we provided, using many different algorithms and methodologies, are robust and reliable, and I think fall within a surprisingly narrow range, so that this thing that we are talking about is disordered or pathological gambling I believe is a real phenomena and I believe that it's real with great consistency, and it withstands the manipulations that I and my colleagues and other scientists used to try and study them.

CHAIRMAN JAMES: At this point, I'm going to ask that we move on to Doctor Lesieur, but want to thank you, Doctor Shaffer, and also acknowledge to the full Commission that Doctor Shaffer and, hopefully, Doctor Volberg and Doctor Lesieur as well, will continue to offer advice and counsel as we go through this process. Doctor Shaffer offered yesterday to sit down and continue to talk through some of these issues with commissioners, and for that I am truly grateful

and thankful.

Doctor Lesieur.

DOCTOR LESIEUR: Chair James and members of the Commission, I'd like to thank you for inviting me to speak here.

I'd like to introduce myself first. I am President of the Institute for Problem Gambling. That is a non-profit organization that has been set up primarily for training treatment professionals to treat pathological gamblers. I'm also a member of the Board of Directors of the National Council on Problem Gambling. I am a member of the Board of Directors of the Rhode Island Council on Problem Gambling. I'm on the Advisory Board of the Council on Compulsive Gambling of New Jersey, and a good dozen other problem gambler-oriented organizations.

I've conducted research since 1971 on problem gambling, over 25 years. I'm the author of a book called, "The Chase," founding editor of the Journal of Gambling Behavior, which -- Journal of Gambling Studies, which Howard Shaffer now edits, and I was a member of the Workgroup on DSM-IV, one of the