Report on the Possible Regulation of Intrastate Internet Poker in the State of Iowa

Submitted by:

Iowa Racing and Gaming Commission

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Executive Summary

The Iowa Legislature studied a gambling bill during the 2011 legislative session that considered the legalization of intrastate internet poker for the State of Iowa. The bill was modified during the session taking the form of Senate File 526 and, subsequently, passed the Senate and House before being signed by the Governor on May 26, 2011. Senate File 526 directed a report be prepared by the Iowa Racing and Gaming Commission (IRGC) regarding the creation of a framework for the state regulation of intrastate internet poker.

The United States Department of Justice (USDOJ) believes that interstate internet gambling is illegal based on various federal acts including: the Wire Act of 1961, the Unlawful Internet Gambling and Enforcement Act, the Travel Act, and the Illegal Gambling Business Act. Interstate internet wagering on horse races is legal in many areas of the United States (U.S.) due to the 2000 amendment of the Interstate Horseracing Act. It is the opinion of many industry experts that federal law does not prohibit internet wagering within the borders of a state (intrastate), therefore a number of states, including New Jersey and California, have considered legalizing some form of intrastate internet wagering. Some technical questions have been raised about information traveling over the internet with respect to being in a closed loop; therefore, the activity may not be exclusively conducted intrastate. The USDOJ has not responded to inquiries regarding those questions. As a result, some state lotteries have proceeded with intrastate internet lottery sales. While Nevada was the first state to legalize intrastate internet gambling, in April of 2011, the District of Columbia became the first jurisdiction in the U.S. to begin

to implement intrastate internet gambling games, although operations have yet to begin in the jurisdiction.

The focus of the report prepared by IRGC staff is to address the specific considerations required by Senate File 526 while factoring in the public welfare of the citizens of Iowa. The objective is to evaluate intrastate internet poker and determine the strengths and weaknesses of the many facets of internet gambling regulation in order to ascertain the prospect for effective regulation. The report specifically addresses the current state of unregulated internet poker in Iowa, the available measures and regulations possible to protect participating consumers, and the potential responsible gaming measures that can be employed. The target audience of the report is the Iowa General Assembly. As stated in Senate File 526, this report will not make specific recommendations regarding the legalization of intrastate internet poker in Iowa.

There is considerable and comprehensive literature available on the topic of regulating internet poker that IRGC staff used to conduct a thorough analysis regarding the creation of a framework for the state regulation of intrastate internet poker. The current state of unregulated internet poker play was reviewed: specifically researching the history of internet poker; “Black Friday” events leading to the shut down of three internet poker websites; and studies and projections estimating the internet gambling market. A number of consumer protection areas were reviewed including: licensing of key individuals and companies; prevention of fraudulent behavior; cheating, identity, location and age verification; and security and randomness tests of the gaming network. Existing federal internet gambling regulations were reviewed including those from: the United Kingdom, Canada, Antigua and Barbuda, Alderney, and Isle of Man. Proposed intrastate

internet gambling regulations were also reviewed including those from: Nevada, California, New Jersey, Florida, and the District of Columbia; as well as federal legislation introduced for the U.S. Congress to consider. Current Iowa codified responsible gaming measures were reviewed to determine the possible effectiveness in an internet environment along with existing internet responsible gaming measures employed in jurisdictions where internet gambling is legal.

A considerable amount of research for the report was collected from interviews with knowledgeable parties. Interviews and discussions were held with representatives from the following licensees regulated under Iowa Code chapter 99F: poker room and compliance managers from all licensees, Kehl management, Isle of Capri representatives, Ameristar representatives, Caesars Entertainment representatives, Peninsula representatives, and the Iowa Gaming Association. In an effort to obtain additional information for the report, two potential intrastate internet poker operators were interviewed: U.S. Digital Gaming and SciPlay. IRGC staff met with the independent casino game testing laboratories, Gaming Laboratories International (GLI) and BMM Testlabs (BMM), to receive information about technical standards related to internet gaming. Regulators from Canada and Washington D.C. were contacted and interviewed by IRGC staff in an effort to understand the regulations in place or drafted for internet gambling in those jurisdictions. Information was also received through discussions with the Iowa Lottery, tribes that have entered into a compact with Iowa, and the Omaha Poker Players Association. Third-party vendors such as Aristotle, LOC-AID Technologies, and Quova were also interviewed to learn about technology available to assist with regulation.

A small portion of the data for this research was collected from a survey of brick-and-mortar poker players in relation to any play they may have conducted on the internet. One-third of survey respondents did not play poker online while half of the respondents played a few times a week or more. The respondents identified game integrity as the most important regulatory measure of concern and noted equal levels of dissatisfaction with: loss of internet connection during play, obstacles in depositing and withdrawing funds, existence of poker bots (computer programs that simulate live human play), questions or comments about the legality, randomness of the distribution of cards, and the protection of the identity of the player. This information is the basis for the subsequent research that was conducted in the area of consumer protection.

As demonstrated by the surveys and research of existing studies performed by financial experts, gambling on unregulated internet poker does occur in Iowa. In an effort to determine the amount of unregulated internet poker play occurring in Iowa, three revenue studies were reviewed by IRGC staff. The studies were based on aggregate projections of poker play in the U.S. IRGC staff used assumptions when analyzing the projections and applied them to the population of Iowa. Three methodologies were created by using and applying the assumptions to the studies. The methodologies resulted in a range of approximately $13 million to $60 million in rake by the operators annually. Assuming a tax rate of 22 percent, these projections indicate approximately $3 million to $13 million in potential tax revenue for the state annually. During the 2011 legislative session, a number of sources reported potential tax revenue of $30 million to $35 million to the state annually. One potential company in which the projection originated confirmed the estimate, but was unable to provide the methodology due to

concerns with respect to privacy of the projection. The company did indicate the projection was based on a market after at least three years of operation. Further research is needed in order to obtain tax revenue projection estimates for Iowa. A sound revenue projection may be important and would impact the business model determined by the Iowa Legislature with respect to the liquidity of the market and, indirectly, the regulatory framework. Liquidity, as discussed in this study, is the direct effect the amount of players on a network has on the diversity of the betting limits and game types offered. A network that does not have a high level of liquidity may not meet expectations of internet poker players that are familiar with other internet poker sites. Subsequently, players may not make the transition to a network with less perceived or actual liquidity.

There are two common taxation methods discussed when internet poker is debated. The most widely discussed taxation form is a tax on the Gross Gaming Revenue (GGR), or rake, of the poker site. This methodology uses the same logic as the current Adjusted Gross Revenue (AGR) tax structure on brick-and-mortar casinos in Iowa. The second taxation method would be a tax on each deposit made by each poker player. This tax rate would be significantly smaller than the GGR method as it taxes the money when the poker site receives it rather than on game play. This method has been proposed in situations where countries with broad ranges of liquidity are pooling players. IRGC staff has determined it could adequately audit the taxes paid to the state under either of these methods. Similar to casinos licensed pursuant to 99F, consideration may be given to require the network provider to post a bond to the State of Iowa that guarantees tax payments and that the operation otherwise conforms with the rules and regulations in which the network provider operates.

A key to building a framework for intrastate poker in Iowa is determining which business model fits best. The report evaluates three models, although it recognizes overlapping characteristics and existing differences within each group. A Single Network or Single Hub Model represents a regulatory environment allowing for only one network or provider of online gambling. For the purpose of this report, a hub is a company that facilitates the operation of a network. The Single Network or Single Hub Model is a common structure in Canada. A Single Network Model appears to result in consistent technology and security measures used, allowing for ease of regulation. A Single Network Model would also mean that there would be no competition; therefore, this model may create a conflict with current casino operators should their revenues decrease as a result. In addition, concerns were noted with regard to the perception of independent regulation if the single model is operated and regulated by the State.

A Limited Hub Model would license a limited number of hub operators to provide online gambling. California and New Jersey proposed a similar model in their draft legislation. As with the Single Network Model, a Limited Hub Model would offer limited variations in technology, allowing for ease of regulation. In addition, it is also likely that a Limited Hub Model would increase participation by current casino licensees. The Limited Hub Model does allow for some competition, resulting in smaller liquidity to the networks.

A Multiple License Model represents a regulatory environment that licenses multiple companies to provide online gambling. Alderney, Antigua, and the United Kingdom are jurisdictions with similar models. This model provides for regulatory oversight in a fully competitive environment although it appears the model would be

more challenging to regulate due to multiple networks using various forms of technology. As multiple licenses may cause the number of players to be diluted over all of the networks, liquidity may also be of concern with this model. Consideration should also be given to the potential for new federal regulation and a potential federal model as various federal bills have been previously proposed and are currently being reviewed by federal lawmakers.

All jurisdictions reviewed for this research have fundamental consumer protection standards included in their rules and regulations. The framework for regulation of intrastate internet poker in Iowa should be no different. Age and identity verification is a critical component of consumer protection. Many third-party companies or hub operators use technology that compares personal player information to government websites or public listings to properly identify the player's age. Another possible method of age verification would require individuals to appear in person to register or deposit funds into an internet poker account. Both methods appear to be effective in properly identifying many new internet poker account holders; however, these methods would not completely prevent all underage individuals from participating or attempting to participate in regulated internet poker. For example, if an underage party received internet poker account information (i.e. user name, password, funding source) from an established internet poker account holder voluntarily or involuntarily, it would not be possible to prevent the underage individual from participating in internet poker using either verification method discussed above.

Fraud and cheating detection methods should also be incorporated into any internet poker regulatory framework in order to prevent collusion, money laundering, or

other activity impacting the integrity of the poker game. Third-party companies or hub operators may employ auditing software containing all possible hand outcomes in order to detect various patterns of game play suggesting irregular behavior. This audited and recorded game play can be reviewed by the operator or regulator to determine if fraud or cheating occurs. The player could, subsequently, be banned from playing on the network. Research indicates the software available to detect fraudulent and cheating behavior is very effective; therefore, it should be part of the regulatory framework of internet poker. However, it is not possible to prevent all occurrences of cheating and fraudulent behavior because the detection methods rely on game history. For instances of cheating to be detectable, historical information and data would need to be established regarding any specific activity or method of cheating for any individual involved to be identified by the software.

Methods to ensure the availability of player funds and security of accounts should also be part of any regulations that are developed. Current Iowa gaming law require brick-and-mortar casinos to submit an external audit of their gambling operations to the IRGC annually. These or other types of regulations that address player access to their accounts should be incorporated. External threats to the security of the internet gambling website with respect to player accounts should also be considered. Third-party information technology companies could be utilized to perform periodic penetration tests and to report on or provide recommendations to the internet gambling website in the area of account security.

The approval and testing of the game software and testing of the network and player account security should also be incorporated into regulations. Iowa utilizes the

services of two independent testing laboratories to conduct testing of casino gaming technology. One of those companies, GLI, has developed and published technical standards for the testing of internet gaming networks. GLI-19, the new standard for testing and technical regulations in iGaming, was developed through in-depth consultation with software developers, experienced regulators, and research through current legal and established internet jurisdictions. GLI's internet testing division has a great deal of experience testing networks in Canada and other jurisdictions where internet gaming is legal. Any internet poker provider for Iowa should be subjected to continuous testing of game randomness, network security, disaster recovery, and player account security by an independent company with experience in testing internet gaming systems.

A licensing process incorporating a complete and thorough suitability assessment as a means to prevent criminal or undesirable entities and individuals from participating in the operation, manufacture, or distribution of technology related to the internet poker network should be implemented. Suitability assessments are currently employed for companies and key individuals of entities operating or owning casinos in Iowa and companies supplying gambling games or implements of gambling to casinos in Iowa. This licensing process appears to have successfully prevented participation by individuals unsuitable and not in the best interest of racing and gaming in Iowa. Suitability assessments for parties participating in internet poker in Iowa could be implemented using a similar structure. The costs associated with background investigations are often high, depending on the structure and number of key individuals of a company. Although the entity subjected to the background investigation would likely pay the costs, the

amount involved may limit the pool of potential companies and providers to those who can afford to pay.

A method to identify the location of a person, called geo-location, should also be incorporated into any regulatory framework. Geo-location would provide the technology needed to ensure only players within the boundaries of Iowa are participating. Geo-location software identifies a user's geographical location using the Internet Protocol (IP) address associated with the connected device. Many companies provide geo-location software and claim to offer a high level of accuracy identifying the location of the user. However, research conducted by IRGC revealed geo-location technology using IP addresses can be "spoofed", in addition to its inability to precisely determine the location of a computer. This may cause situations where players located just within the borders of Iowa may not be able to participate in internet poker or allow players just outside of the borders of Iowa to participate, depending on how the geo-location tools are configured. In internet gambling jurisdictions where location is necessary for compliance with regulations, the jurisdictions have typically employed other controls combined with geo-location technology to accurately determine the location of the user. Specifically, some jurisdictions have implemented physical residency requirements, financial account residency requirements, and/or require payments to only be made to registered mailing addresses. Further research on the topic of geo-location and residency may be needed to determine the acceptable ranges and levels of accuracy allowed or desired when developing the regulatory framework for this area.

Various responsible gaming measures can be incorporated into an internet poker environment and most jurisdictions where internet gambling is legal have done so. The

most common measures require the operator to provide educational material to their customer, allow for the ability to set-up self-imposed limits of time spent playing and/or number of games played or amount of money spent, and provide for a process to exclude oneself from participating at all. The self-imposed limits typically require a "cooling-off" period a player must wait before changing the limits set. Iowa law currently requires the brick-and-mortar casinos to participate in a statewide voluntary self-exclusion program. In addition, Iowa casinos have adopted uniform standards to address problem gambling at their facilities. These measures have been tested over time in Iowa and could be incorporated into internet gambling regulations as well.

Definition of the Report

Senate File 526

The administrator of the state racing and gaming commission shall prepare a report for delivery to the general assembly no later than December 1, 2011, regarding the creation of a framework for the state regulation of intrastate internet poker. The report shall consider the current state of unregulated internet poker play in Iowa, consumer protection, and responsible gaming measures that can be implemented through regulation, licensing structures, regulatory recommendations, affiliations with licensees regulated under chapter 99F, and the collection of wagering taxes. The administrator may consult with licensees regulated under chapter 99F, with tribes that have entered into an agreement or compact with the state of Iowa as described in section 10A.104, subsection 10, with potential internet poker hub operators, and with any other interested parties in the preparation of the report. The administrator shall not be required within the report to make specific recommendations regarding the legalization of intrastate internet poker in Iowa. The director of public health shall prepare a report for delivery to the administrator of the state racing and gaming commission no later than October 1, 2011, regarding the societal impacts of internet poker in Iowa for inclusion in the administrator's report. The director shall not be required within the director's report to make specific recommendations regarding the legalization of intrastate internet poker in Iowa.

Background. Senate Study Bill 1165 was first recorded on February 28, 2011. The study bill was for an act discussing topics related to horse racing, pari-mutuel wagering, gambling games, and intrastate internet poker. Specifically, the bill was segmented into three divisions. Division 1 legalized advance deposit wagering and addressed and settled horse racing topics that had previously been a point of contention between the interested parties; Division 2 eliminated the county gambling referendum; and Division 3 legalized intrastate internet poker. Senate Study Bill 1165 became Senate File 458 on March 7, 2011, and was approved by the State Government Committee. The bill was subsequently referred to the Ways and Means Committee on March 9, 2011. Senate File 458 became Senate File 526 and was introduced on April 18, 2011. Division 3 of Senate File 526 was modified to remove the language legalizing intrastate internet poker and replaced with a requirement for a report to be completed by the IRGC regarding the creation of a framework for the state regulation of intrastate internet poker. Senate File 526 was approved by the Ways and Means Committee on April 18, 2011, passed the Senate on April 20, 2011, passed the House on May 3, 2011, and was signed by the Governor on May 26, 2011. As noted, the report to be completed by IRGC is regarding the creation of a framework for the state regulation of intrastate internet poker and specifically provides that IRGC's Administrator shall not be required to make recommendations regarding the legalization of intrastate internet poker in Iowa.

The Wire Act of 1961 prohibits a person from knowingly using a wire communication for the transmission of interstate commerce of bets or wagers (Watson, Liddell Jr., Moore, & Eshee Jr., 2004). Most industry experts agree using the internet is a form of wire communication. In addition, most industry experts agree the Wire Act of

1961 does not apply to intrastate commerce as demonstrated by the recent boom in proposed intrastate gambling legislation by a number of states. Some technical questions have been raised with respect to information traveling over the internet in regards to being in a closed loop therefore the activity may not be exclusively conducted intrastate. With that said, the majority of the debate surrounding this federal statute questions whether the Wire Act of 1961 only applies to gambling on sporting events via the internet as determined by the U.S. Fifth Circuit Court of Appeals or to all forms of gambling, including poker.

The Travel Act was enacted in 1961, in the same series of legislation as the Wire Act, to prevent organized crime and racketeering. The Travel Act is directed at prohibiting interstate travel or use of an interstate facility in the aid of an unlawful business enterprise. The Act defines an unlawful activity, in part, "as any business enterprise involving gambling offenses in violation of the laws of the state in which they are committed or the U.S. (Rodefer, n.d.a)." Courts have determined that the use of telephone and credit cards are sufficient to establish that a defendant used a facility of interstate commerce to aid in an unlawful activity (Rodefer, n.d.a).

The Illegal Gambling Business Act of 1970 was passed as part of the Organized Crime Control Act. The Act was directed at illegal gaming operations where the gambling "is in violation of state or local law where it is conducted, involves five or more persons that conduct, finance, manage, supervise, direct or own all or part of the business, and remains in substantially continuous operation for more than thirty days or has a gross revenue of $2,000 in any given day (Rodefer, n.d.b)." The Illegal Gambling Business

Act has been used by the USDOJ in recent cases where charges were brought on executives operating unlawful internet gambling websites in the U.S.

The Interstate Horseracing Act (IHA) was signed in 1978 and allowed interstate wagering on pari-mutuel races (simulcasting) in instances where pari-mutuel wagering is authorized in the states that are participating in the transaction. The original IHA, like the Wire Act of 1961, was created before the inception of the internet; therefore, it did not specifically address internet gambling. In 2000, the U.S. Congress amended the definition of "off-track wager" in the IHA to include a wager transmitted by "other electronic media" (Ciaccio Jr., 2010). A number of states have passed legislation authorizing internet pari-mutuel racing and companies like TVG and Twinspires.com are currently accepting wagers via the internet.

The Unlawful Internet Gambling and Enforcement Act (UIGEA) was signed into law in 2006. UIGEA was part of the Safe Port Act and was the first federal law to specifically address internet gambling (Joint Committee on Taxation, 2010). The purpose of UIGEA was to prevent "unlawful internet gambling" by requiring payment systems like banks, credit card processors, and internet transaction processors such as PayPal and Net Teller to identify and prohibit restricted transactions (Legislative Update, 2006). UIGEA does not make internet gambling illegal itself, instead it prohibits gambling businesses from knowingly accepting payments in connection with the participation of another person in a bet or wager that involves the use of the internet and that is unlawful under any federal or state law.

A number of states have proposed and moved intrastate internet poker or gambling bills through various stages of government in their respective state. New Jersey

received a great deal of attention in 2010 by nearly legalizing various forms of intrastate internet gambling. In 2010, Iowa House leaders supported a bill legalizing internet poker in Iowa (Duffelmeyer, 2010). In addition, California, Florida, Nevada, Hawaii, and North Carolina have pursued legislation legalizing intrastate internet poker. In April 2011, the District of Columbia authorized internet poker for play within the District. While operations have yet to commence, this legislation sets the District of Columbia up to be the first jurisdiction to offer this type of internet poker. The landscape of intrastate internet poker in the U.S. changes frequently; therefore, it is likely other states will have considered the legalization of intrastate internet poker during the time this report was created.

Research Statement. When reviewing potential frameworks regarding the state regulation of intrastate internet poker in Iowa, it is important to identify what specific regulatory measures, concepts, and actions to incorporate. The focus of the report authored by the IRGC is public welfare, along with addressing specific considerations required by Senate File 526. The report's objective is to identify the pros and cons of key regulatory points that may be a part of any framework when regulating intrastate internet poker in the State of Iowa.

In order to properly answer the primary research statement, a series of sub-questions will also need to be studied in the report. What is the current state of unregulated internet poker in the State of Iowa? How much are Iowans currently spending on internet poker? What measures and regulations are possible to protect consumers who may participate in regulated intrastate internet poker in the State of Iowa?

What responsible gaming measures can be employed through existing regulations, regulatory recommendations, licensing structures, the collection of wagering taxes, and affiliations with licensed casinos in the State of Iowa for people that participate in regulated intrastate internet poker in the State of Iowa?

Report Objective. The target audience of this report is the general assembly of the State of Iowa. The report is being prepared as a result of Senate File 526. The report is beneficial because it will evaluate various frameworks and means of regulating intrastate internet poker providing the general assembly with information needed to make an informed public policy decision with respect to the legalization of intrastate internet poker in the State of Iowa. The report will state the pros and cons for these frameworks and regulatory concepts, specifically addressing what can and cannot be expected in regard to regulating intrastate internet poker. The report will also address an assortment of revenue projections and models, indicating the source and methodology, as well as reviewing a collection of licensing models that have been proposed or developed in other jurisdictions.

Scope/Limitations. This report will not make specific recommendations regarding the legalization of intrastate internet poker in Iowa, nor will the report express opinion on the likelihood of the legalization of intrastate internet poker in Iowa. In addition, the technology reviewed for this report is relatively new and unfamiliar to the gaming industry and to gaming regulators in the U.S. It is possible for this developing technology to evolve quickly to comply with other potential state or federal legislation

that may be proposed resulting in adaptations from what is discussed in this report. This report will not speculate on possible federal legislation impacting intrastate internet poker in Iowa in any manner or express any opinions with respect to whether or not intrastate internet poker infringes on any current or proposed federal laws. Any revenue projections included in this report will include the source of the projection or methodology. The methodologies for projections are untested and may not accurately depict future outcomes due to legislation written that varies from traditional internet poker, other potential state or federal legislation, changes in the economic climate, incorrect use of assumptions or methodology, or any other outside or future influence after the report is written.

Literature Review

There is considerable and comprehensive literature available on the topic of regulating internet poker that can assist with conducting a thorough analysis regarding the creation of a framework for the state regulation of intrastate internet poker. The literature has been organized in this chapter into sub-topics that will best demonstrate the research questions that will assist in identifying the pros and cons of key regulatory points that may be a part of any framework when regulating intrastate internet poker in the State of Iowa. Many other interviews were conducted with respect to the sub-topics and are summarized in the research methodology section of this report.

The various research questions focused on gaming regulation of internet poker as well as the public safety considerations as required by Senate File 526. Specifically, it was necessary to research the current environment of unregulated internet poker; understanding current challenges faced by operators and regulators, demands and concerns of patrons, comments by other interested parties, and amount of current or anticipated play by patrons. This information served as the foundation of the report and will assist with creating a framework for state regulation. It was also necessary to research various consumer protection topics to better comment on the effectiveness of regulations or measures that may be implemented with respect to creating a regulatory framework. Another topic researched was existing internet poker regulations developed by other various state or federal gaming jurisdictions to determine if similar regulations are feasible for Iowa. Responsible gaming measures in internet and brick-and-mortar settings were also researched in order to comment on the effectiveness of the measures for inclusion in a possible regulatory framework.

Current state of unregulated internet poker play. While conducting research in this area, literature was obtained in order to briefly summarize the history of internet poker. In June 1999, the National Gambling Impact Study Commission (NGISC) released a final report on gambling in the U.S. (Watson, 2004). In their report, the NGISC recommended to the federal government that online gambling be prohibited beyond its current authorization (Watson, 2004). The concern cited by Watson was the safety of youth and problem gamblers due to the apparent ease to gamble online (2004). The casino industry was hesitant to support online poker due to the federal regulations against internet gambling. Recently, the industry and some of its major players began to support federal legislation to legalize online poker. Gary Loveman, CEO and president of Caesars Entertainment, wrote an opinion article for Fortune Magazine in April 2011 where he stated legalized internet poker would allow Americans to play from the privacy of their homes, create thousands of new jobs, and produce millions of dollars in new economic activity (2011). Nathan Vardi reported for Forbes in 2011 that Steve Wynn, chief executive of Wynn Resorts, was joining PokerStars in an effort to bring regulated online poker to the U.S. Wynn stated that current regulation of internet gaming in the U.S. was occurring even though the current laws and law enforcement did not have the tools to stop what was happening (Vardi, 2011). Three weeks after announcing his alliance, Steve Wynn cut his ties with PokerStars following the USDOJ indictment of company executives on “Black Friday”, April 15, 2011 (Bertoni, 2011).

In his monthly article for Global Gaming Business, American Gaming Association president and CEO, Frank J. Fahrenkopf Jr., writes on the growing support for and, what he calls, the three biggest misconceptions of the risk of legalizing online

poker (2011). Fahrenkopf notes some people will always be opposed to all forms of gambling but it is the industry's responsibility to educate those who are uninformed of the ways online poker can be regulated (2011). Fahrenkopf notes the largest misconceptions of online poker are susceptibility for fraud and criminal activity, lack of control over who is playing, and increased opportunities for problem gamblers (2011). Fahrenkopf also outlines how online casinos would be regulated and investigated with just as much scrutiny as brick-and-mortar casinos and can have additional technologies for verifying a person's identity by setting limits for a player's quantity of play or even allowing a player to set their own limits (2011).

Literature was also reviewed pertaining to the recent "Black Friday" events involving several internet gambling sites. On Friday, April 15, 2011, the USDOJ seized the URL of three of the world's largest internet gambling websites, PokerStars, Full Tilt Poker, and Absolute Poker charging eleven company executives who operated those sites with bank fraud and other gambling offenses (Rose, 2011). Rose discussed the potential merit of the federal case and whether playing poker online is actually illegal under the Unlawful Internet Gambling Enforcement Act of 2006 (UIGEA) (2011). In a responsive move to the USDOJ indictments, the Alderney Gambling Control Commission (AGCC) suspended the license of Full Tilt Poker on June 29, 2011. According to a statement released by AGCC, the Full Tilt Poker license was suspended because "…these licensees and their business associates were operating contrary to Alderney legislation" (Holloway, 2011). As questions were raised as to what would happen with the other two sites licensed in the Isle of Man, a statement was released shortly after the AGCC's suspension

clarifying the Isle of Man is a separate jurisdiction from Alderney, and PokerStars' and Absolute Poker's licenses would continue to be in good standing (Holloway, 2011).

While conducting the research, literature was also obtained from studies and projections estimating the internet gambling market and its revenue. The size of the online gambling market is difficult to measure and, as such, the estimates vary. The American Gaming Association's (AGA) White Paper 'Online Gambling Five Years After UIGEA' by David O. Stewart of Ropes & Gray, LLP estimates Americans spend $4 billion every year participating in online gambling (2011). The AGA's White Paper states millions of people continue to gamble online even though it is illegal in the U.S. The paper estimates potential federal and state tax revenues of $2 billion per year if online poker was legalized (2011). Stewart said as of June 30, 2010, a survey found 2,679 gambling sites for online casinos, poker rooms, sports betting sites, bingo and lottery (2011). Stewart estimates over the past decade, 10 million Americans have gone to internet websites to place bets on sporting events, play poker, or play other variations of casino games including craps, blackjack, roulette, and slot machines (2011).

On CasionAdvisor.com, Adam Baker wrote that investment banker Goldman Sachs wrote to their investors they estimate the online U.S. poker market alone was worth $1.5 billion in 2008 (2009). Goldman Sachs uses 'conservative estimates' in predicting a thirty percent market penetration of legalized online poker with the average player revenue to the poker sites at $300 totaling a $3 billion a year market (Baker, 2009). According to Baker the 'more liberal' estimates are a forty-five percent market penetration with a per player revenue to the poker sites of $400, which would double the online poker market up to $6 billion per year (2009).

In an article entitled 'Online Poker Should be Taxed, But How?' the Law Offices of Sanford I. Millar discussed the advantages and disadvantages of the two most commonly debated tax models of legalized online gambling (2011). Millar Law Offices described the two models as either Deposit Tax or Gross Gaming Revenue Tax. The Gross Gaming Revenue tax models would require licensed operators to pay a tax based on the revenue they generate from poker rakes and fees. The Deposit Tax Model would have licensed operators pay a smaller tax percentage on all monies deposited by players to their website. Millar Law Offices continue to evaluate the potential benefits and drawbacks for each of the tax models that have been largely discussed on the federal level (2011).

Areas of consumer protection. Literature was reviewed for this research addressing general areas of consumer protection that have been or could be regulated for internet poker. "Can Internet Gambling Be Effectively Regulated? Managing the Risks", authored by Malcolm Sparrow, analyzes specific potential risks posed with online gambling and possible protections used to mitigate these risks (2009). The risk categories included are: gambling by minors, criminal and fraudulent behavior, and network access, including data privacy and security. The conclusions of this study were that online gaming could be regulated effectively, and well-structured regulation could provide the protections necessary to mitigate the risks analyzed as well as offering several detailed processes or possible regulations that may provide the necessary protection (Sparrow, 2009).

"Online Gambling Five Years After UIGEA" analyzed the potential market for internet gambling within the U.S., as well as preventative measures that could address common consumer protection concerns (Stewart, Ropes, & Gray, 2011). The concerns raised and addressed by this study include: ensuring the integrity of the games, respecting territorial limits on the market, and excluding underage gamblers. This study ultimately concluded that effective legal regulation of online gaming is more beneficial than current illegal gaming operations taking place within the U.S. and offered several suggestions and comparisons to brick-and-mortar operations to facilitate consumer protection (Stewart, Ropes, & Gray, 2011). The report also concluded state-by-state authorization of internet gaming would be necessary and consistent with previous U.S. gaming laws, but state-by-state regulation would create a legal climate inhibiting legitimate online gaming operations and promote the continuation of prospective players seeking other illegal and unregulated means to participate in online gaming (Stewart, Ropes, & Gray, 2011). A report conducted by the State of Florida Office of Program Policy Analysis and Government Accountability (OPPAGA) outlines how poker is regulated in Florida, what factors may affect the future of internet poker, and what options the legislature could consider to provide consumer protections for internet poker (2009). The report provides information referencing federal law, state law, pending legislation, and options for consideration by the Florida legislature.

In a Wall Street Journal article, Alexandra Berzon details the process a potential online poker player takes to create an account and a subscription, how to play, responsible gaming features, and spending thresholds (2011). Berzon reported a company called U.S. Digital Gaming states they have licensed software for online poker

and have acquired technology that can verify online a person's location as well as their age (2011). U.S. Digital Gaming currently has no revenue stream, but is trying to position itself as a provider of all the services companies would need to run online gambling sites, including software and guidance on laws and licensing rules (Berzon, 2011). In Casino Enterprise Management, Barow discusses the belief that because of the availability of smart phones, legalized mobile gaming will provide unregulated access to underage gamblers (2011). He states that in Europe, several forms of identification are requested which are cross-referenced with national databases to verify the age and identity of a player (Barow, 2011).

Literature was reviewed from Quova, a geo-location company that is being utilized in Italy to assist with online gaming licensing requirements (Quova, 2010a). Italy requires geo-location services be detailed and submitted with the online operators' license applications to ensure those outside of the gaming framework are not allowed to participate. These restrictions and requirements help prohibit illegal gaming and assist with tax revenue collection; therefore, many other European countries are modeling their online gaming structures after Italy (Quova, 2010a). In an additional paper, Quova discussed how geo-location works in software to ensure compliance with laws governing online gaming restrictions (Quova, 2010b). As a vital part of licensing, geo-location services assist in location verification, consumer protections, safe financial transactions, tax collection, and preventing violations of state and federal laws (Quova, 2010b).

Information was reviewed with respect to the identification and prevention of underage individuals gambling via the internet. "Legalizing Internet Gaming, Part VI: Problem and Underage Gambling" by Glenn Light and Karl Rutledge addresses

techniques that could provide safeguards against underage gambling in online gaming (2011c). Specifically, online identity verification coupled with strong controls to provide personal information or passwords when accessing online gaming sites are offered as essential tools in prohibiting underage play (Light & Rutledge, 2011c). For underage gambling, this article concludes in many ways, online gaming controls could exceed the security in place to prohibit underage gambling at a casino (Light & Rutledge, 2011c).

John Andrle writing for the *UNLV Gaming Research & Review Journal*, analyzed online gambling, the debate of prohibition of online gambling versus regulation, and a proposal for international regulation (2006). The report analyzes consumer protection and states opponents of online gambling are concerned with access to online gambling by minors, fraud, addiction, and tax preservation (Andrle, 2006). The report also analyzes online gambling and regulation in foreign countries including the Caribbean, Australia, European Union and other nations (Andrle, 2006). The report concludes certain criteria are essential to international regulation (Andrle, 2006). The Safe and Secure Internet Gambling Initiative, an entity which promotes the freedom of individuals to gamble online with the proper safeguards to protect consumers and ensure the integrity of financial transactions, reported regulated internet gambling would offer protection to consumers from fraud and identity theft, require licensed operators to block minors, and implement compulsive gambling controls and generate new tax revenue (n.d.). They further report millions of Americans wager more than $100 billion annually via offshore internet gambling without consumer protection (Safe and Secure, n.d.).

Literature was reviewed studying the possible game cheating methods witnessed with respect to internet poker in an effort to identify the best methods available to protect

consumers. Gabriel Dance stated in an article written March 13, 2011, that some players have had suspicions they were competing against computers referred to as bots (robots) while playing online poker (2011). The article analyzed how robots have been programmed to play poker better than the average person and were openly for sale online (Dance, 2011). Steven Levitt reported on actions taken by PokerStars and Full Tilt Poker to limit bots from playing poker on their websites (2007). He also analyzed how players at Absolute Poker became suspicious of a certain player and how the player seemed to know his opponent's hole cards (Levitt, 2007). The article referenced how players conducted their own detective work and received information that led them to believe cheating had occurred (Levitt, 2007). Ed Honour authored a report outlining a number of areas that should be considered for regulation. He detailed a 2007 cheating incident at Absolute Poker where an employee compromised the system resulting in a scheme to view other player's hole cards without their knowledge and use that information in a detrimental manner (2011). He also detailed a similar cheating scandal at Ultimate Bet that had taken place from 2005-2007 (2011).

Consumer protection literature involving the overall protection of customer information was also reviewed. 'Legalizing Internet Gaming, Part 3: Regulating the Operation' by Glenn Light and Karl Rutledge details some possible best practices to regulate criminal activity and fraudulent behavior as well as possible areas that have been considered for regulation in current jurisdictions and could be considered for future online gaming jurisdictions (2011a). This article covers licensing, security of the poker network, fairness of games, and registration of players. The authors conclude each jurisdiction could offer requirements that fit particular goals, but there are certain

fundamental areas necessary to make regulation of online gaming effective (Light & Rutledge, 2011).

"Building Trust in Online Gaming: Market Security Risks" by Marcus Whittington offers opinions on areas that may be at risk in online gaming. It covered fraudulent bets, chargebacks, and possible data theft by spyware (Whittington, 2011). In conclusion, this article offers several technical solutions that could prevent these types of attacks and fraudulent behavior and offered a few examples for a solution (Whittington, 2011). EGaming Review website stated Bet24 revealed arrests have been made in reference to a security breach which resulted in customer information being stolen including name, address, date of birth, account names and credit card details (2011). The article concluded the credit card details in question remained encrypted (2011).

Literature was also reviewed discussing various controls intended to protect financial information of players. "Legalizing Internet Gaming, Part IV: Enforcement" by Glenn Light and Karl Rutledge details possible measures that can ensure enforcement of gaming regulations in online games. Primarily, this article covered methods of enforcement for website security, financial stability, and funds security. It also offered some insight into effective internal controls and auditing for online gaming. This article concluded in an online gaming environment, not only are particular regulations important, but methods and procedures for enforcement for the regulations play an important role in any jurisdiction offering online gaming (Light & Rutledge, 2011b).

"Business: Poker face off; Online gambling", an article written for The Economist, analyzed foreign firms operating in the U.S. as well as the indictment of many executives of PokerStars, Full Tilt Poker, and Absolute Poker on charges of

operating illegal gambling businesses, criminal fraud, and money laundering. The article concluded the indictments are a setback for those who hoped online gambling would be made legal in the U.S. (Business: Poker face, 2011).

Existing federal and state internet poker regulations. The legal environment for online poker is varied and quickly evolving. The literature reviewed focused on existing laws and rules, past or pending legislation, and other standards or practices that may help determine a path toward developing a framework of regulation for intrastate internet poker in Iowa. Research investigated internet gambling outside of the U.S., federal law, and various States' approaches toward gambling online. Incorporating this information into a larger framework may help decision makers determine how to best move forward.

Literature was reviewed with regard to the regulations of internet gambling in the United Kingdom. The United Kingdom Gambling Commission lists the operational conditions and codes of practice imposed. Specifically, regulations on cash handling, protection of customer funds, marketing, responsible gambling, and "fair and open" practices for remote and non-remote gambling are all included; as well as literature specifying the remote gambling and software technical standards describing, among other items, how the generation of random outcomes, interrupted gambling, rules, and cheating methods will be tested and monitored (United Kingdom Gambling, 2009a & United Kingdom Gambling, 2011). In addition, the testing strategy for remote gambling was obtained and reviewed describing the evaluation techniques for the software and types of testing conducted by the UK Gambling Commission and the types of testing outsourced (United Kingdom Gambling, 2009b). Industry statistics were also available and reviewed

showing 40,351 people were listed as self-excluded out of 17,160,876 active remote gambling accounts in the 2009/10 fiscal year (United Kingdom Gambling, 2010). In addition, there were 108 incidents of a person who attempted to gamble or gambled online and, when challenged, were unable to prove their age (United Kingdom Gambling, 2010).

In Canada, the Mohawk Territory-Kahnawake Gaming Commission (KGC) has regulated internet gaming since 1999. Licensees have included BoDog, Party Gaming, Full Tilt Poker, PokerStars, and others. This organization has associations with Playtech and Microgaming, as well as close relationships with other jurisdictions like Alderney and Antigua. The KGC has encountered cheating scams that previously occurred at some of the licensees they regulate. This experience seems to have strengthened the KGC's ability to protect players moving forward. Lessons learned include utilizing the knowledge of the online poker player community to improve regulators oversight capability (Marshall, 2011). The KGC also found it beneficial to hire a Dispute Resolution Officer to handle player issues (Marshall, 2011).

Antigua and Barbuda are homes to internet poker's history of legal disputes with the U.S. The World Trade Organization (WTO) ruled in favor of Antigua finding the U.S. had violated the General Agreement on Trade in Services (GATS) by restricting internet gambling. Although the U.S. was asked to bring regulations into compliance with GATS, the ruling has not changed the federal stance against internet gambling to this point (Mendel, 2006). Antigua continues to maintain Interactive Gaming and Wagering Regulations to provide consumer protections. These include requirements for continuous monitoring of licenses to ensure the integrity and conduct of the license

holder. These regulations include a requirement for age verification and allows for players to self-exclude themselves for six months or limit their wagers. Credit cards, debit cards, electronic funds transfers, wires, and checks are accepted (Antigua Directorate of Offshore Gaming, 2007)

Alderney, an island in the English Channel, has authorized and regulated internet gambling, including internet poker, since 2009. Alderney has authorized several levels of standards, including license regulations, host site requirements, technical standards and guidelines for internal control systems. License regulations cover aspects of obtaining a license, as well as requirements for submitting a license application. The technical standards and host site requirements offer comprehensive regulation to cover areas including fraud mitigation, protection of funds, player verification, and technical requirements for the gambling sites (Alderney Gambling Control Commission, 2009). In conclusion, while Alderney is a relatively small area geographically and is not currently home to any brick-and-mortar casinos, the published regulations offer many controls and minimum standards that could mitigate risks in any online gaming environment.

The Isle of Man Gaming Commission regulates gambling in the Isle of Man. The Isle of Man Online Gaming Regulation Act of 2001 requires online gambling operators to prohibit minors from participating by specifically requiring online gambling operators to verify age and identity prior to players being allowed to participate in online gambling. The Isle of Man requires online operators to be licensed and have regulations governing technical and system standards for online gambling providers. Standards include game play, randomness testing, game history, financial reports, financial security, and secure betting (Isle of Man, 2007b). The Online Gambling Betting and Miscellaneous

Regulations of 2007 require online operators to keep and provide betting account information for participants. The 2008 Registration and Accounts Regulations provide for rules and procedures that must be followed by online operators in registering customer accounts, management of accounts, and account privacy. Additional regulations, including player monies being held by an operator, security of deposits, segregated accounts and client bank accounts are set forth in the Online Gambling (Participants Money) Regulations of 2010. The Proceeds of Crime Money Laundering Online Gambling 2010, law requires online gambling operators to establish anti-money laundering procedures, training, and record keeping. Additional regulations include disaster recovery in case of an event which results in the operator's site not being available to the public.

Literature was obtained relating to the various licensing and operational models of all previously mentioned federal jurisdiction sources. Additional literature was obtained from OnlineCasinoCity.com which lists 74 jurisdictions that have allowed internet gambling in one form or another (n.d.). The website summarizes each operational and licensing model by jurisdiction and is an additional source for outlining the various model's pros and cons in order to evaluate a regulatory effectiveness for an Iowa intrastate poker network.

The U.S. passage of the Unlawful Internet Gambling Enforcement Act (UIGEA) in 2006 affected many internet gambling operations outside the country. This act may be viewed as largely unsuccessful in preventing online gambling, but its impact most certainly has shaped the debate across this country today. This act may have passed where others failed, in part because it was related to homeland security concerns such as

money laundering and identity theft. UIGEA deters interstate financial transactions but does not specifically address online wagers. However, it does empower law enforcement officials to enforce internet gambling laws within a jurisdiction (Casino Advisor, 2008). Many questions surround the best approach to protect consumers, prevent security threats, and regulate operations.

The two most recent approaches to address internet gambling in Congress have been House Bill 1174 and House Bill 2366. H.R. 1174; the Internet Gambling Regulation, Consumer Protection, and Enforcement Act seeks to develop a framework for internet gambling through strict licensing, consumer protection measures, and to enforce restrictions as established by states and Indian tribes. The bill includes provisions for ensuring the location and legal age of players, as well as protecting against problem gambling by providing a self-exclusion list. The bill empowers the Secretary of the Treasury to provide licensing, consumer protections, and establish tax code. States and Indian tribes may opt-out of bill provisions to limit gambling within their borders. It also prohibits the use of credit cards (H.R. 1174, 2011). The latest bill aimed at addressing internet gambling on a federal level is H.R. 2366; the Internet Gambling Prohibition, Poker Consumer Protection, and Strengthening UIGEA Act of 2011, introduced on June 24, 2011. This bill seeks to establish a program for state licensing of internet poker with U.S. Department of Commerce oversight and does not allow other types of internet gambling such as sports betting or games other than poker. Another key feature of this bill is it calls for limiting (within the first two years) initial licensing to operators that have already been established as land-based operations. This bill outlines requirements to protect consumers, prevent against fraud and money laundering, and preserve the

prerogative of states. The bill also has an "opt out" clause where states can decide if they want to disallow internet poker within their borders and, therefore, not participate in the internet poker activity as allowed by H.R.2366. Requirements of the bill include state oversight of operators, licensing standards, and reporting requirements (H.R. 2366, 2011).

Research revealed Nevada has taken steps to get in front of potential approval at the federal level with Nevada Assembly Bill 258. Approved by the governor, this bill requires the Nevada Gaming Commission (NGC) to establish regulations for interactive gaming, but requires that licenses will not become effective until federal legislation is passed or the USDOJ confirms interactive gaming is not in violation of existing law (Nevada A.B. 258, 2011). Nevada also approved Senate Bill 218 which may work in tandem with the interactive gaming bill. This authorizes the NGC to provide regulation for hosting centers and service providers of interactive gaming. It establishes the framework for providers to perform certain actions on behalf of establishments that are licensed to perform interactive gaming (Nevada S.B. 218, 2011). The Nevada Gaming Commission has moved forward with drafting proposed regulations for interactive gaming. These include licensing requirements, internal controls for operators, detection and prevention of criminal activities, player account and registration standards, self-exclusion policies, dispute resolution procedures, and other regulations (Nevada Gaming Commission, 2011).

California has also moved forward with multiple attempts at passing legislation. The most recent is Senate Bill 40, Internet Poker. This bill, if passed, would authorize intrastate poker as long as none of the provisions conflict with UIGEA or other federal

law. Intrastate internet poker would have the same rules that already exist at gambling facilities in California. Players would need to be 21 years of age and be physically located within California borders. This model would allow up to five licensed operators to provide internet poker via websites as authorized (California S.40, 2010).

In 2010, the governor of New Jersey vetoed legislation allowing intrastate gambling. This bill would have permitted online gambling in Atlantic City casinos under certain circumstances. Poker, roulette, blackjack, craps, slots and other games would have been offered online if the transactions occurred within licensed casinos in Atlantic City. The legislation further provided all gambling and gaming-related equipment to be tested and approved by the New Jersey Casino Control Commission and were restricted to approved areas where gambling takes place (New Jersey S. 490, 2010).

In 2011, the Florida legislature introduced House Bill 77 legalizing intrastate internet poker but has yet to pass legislation. This bill would have allowed for one or more hub operators to be licensed with card-room affiliates acting as ports for gambling activities. This would have ensured players were present within Florida borders in order to comply with UIGEA. The bill further provided player registration at card rooms so the card rooms could have controlled limits on deposits, losses, and playing time. The bill also outlined requirements for hub operators and card rooms to comply with self-exclusion rules and protect consumers (Florida H.B. 77, 2011).

Lotteries have also ventured into the online environment with approaches that may prove helpful to evaluate. The Lottery Modernization Act of 2010 opened the door for games to be offered online. The DC Lottery issued a Notice of Proposed Rule Making for Games Offered Over the Internet; this notice described authorization of

intrastate internet demonstration games. Lottery rules allow for games to be offered with credits awarded, however the credits could only be redeemed for participation in other games or contests. Poker may be offered along with blackjack, bingo, random number generator games, and other games. Initially, the DC Lottery appears to be offering these games for free. Rules limiting games to locations within the District of Columbia have also been established, but there are concerns about how this may be enforced. One proposed solution has been to limit the ability to play online games to certain physical locations within the District. DC Lottery also specifically protects players, by limiting hours of operation, amount of wagers, implementing account limits, and including software and technology to prevent cheating. Age verification is used to ensure players are 19 years or older (Lottery and Charitable Games, DC, 2011).

In 2010, the Illinois Lottery researched the viability of offering lottery ticket sales via the internet. Legislation appears to have passed for a pilot program of this nature, however Illinois has yet to implement. This program does not address internet gambling but included approaches to study for these purposes. Specific aspects of the pilot program include age verification, geo-location, self-exclusion, and computer security. Also, a legal analysis of the UIGEA, interstate commerce, and illegal business acts was completed and detailed in the White Paper issued by the Illinois Lottery (Illinois Department of Revenue and Illinois Lottery, 2010).

In November of 2010, Minnesota partnered with Scientific Games and began offering online lottery ticket subscriptions. Players set up an account online for the purpose of purchasing Powerball, Mega Millions, Hot Lotto, and other lottery tickets. Ticket subscriptions may be purchased online for 6 to 52 weeks. Registration includes

age verification and other responsible gaming measures. Players can impose their own limits including those lower than offered by the Minnesota Lottery. This provision includes a 24-hour cooling off period before any limit increases take effect. Players also have the option of excluding themselves for any length of time including indefinitely. Another aspect of this program worth noting is the use of a virtual wallet. Minnesota Lottery pays winnings up to $600 into a player's virtual wallet which may be used for future lottery ticket purchases (Public Gaming International, 2011).

Responsible Gaming Measures. Literature was reviewed relating to various responsible gaming measures available when gambling via the internet. The literature discussed the pros and cons of these measures. Information was reviewed concerning general measures available for individuals susceptible to problem gambling. Watson, Liddell, Moore, and Eschee provide both a legislative history on internet gambling and discuss responsible gaming issues (2004). They relate how gambling addiction closely mirrors other addiction models and how the ability to gamble anonymously aids the addiction. Also discussed is the need for uniform responsible gaming measures to include age verification and marketing to unintended audiences (Watson, Liddell, Moore, & Eschee, 2004). President and CEO of the American Gaming Association, Frank Fahrenkopf, wrote an editorial supporting the need for a joint effort between law enforcement and the gaming industry to establish a safe and regulated online gaming environment (2011). He also stated it is easier for an online structure to regulate responsible gaming with regards to age and addiction, and that operators can address the opposition's concerns about internet gambling (Fahrenkopf, 2011).

In “Legalizing Internet Gaming, Part 6: Problem and Underage Gambling”, Light and Rutledge laid out the symptoms and behaviors of gambling addiction and how online gambling amplifies the problem (2011c). The article noted significantly higher risks of problem gambling when dealing with online gambling (Light & Rutledge, 2011c). Additionally, the article suggested ideas and areas of concern for regulation. In an article appearing in European Gaming Lawyer, D. Lane wrote about the Island of Jersey’s move to internet gambling (n.d.). Along with their core licensing principles, anyone wanting a license would contribute to a social fund they developed. The fund receives advice from a panel made up of industry representatives, health professionals and independent counsel.

A study entitled “Can Internet Gambling Be Effectively Regulated” by M.K. Sparrow offered detailed research and conclusions about problem gambling behaviors and underage gambling. It concluded for these areas, there are already risk management tools available through existing technology and, with proper legal regulation, will actually prove to be safer for online gamblers long term (Sparrow, 2009). Additionally, the study states problem gambling habits will not be more adversely impacted by online gambling (Sparrow, 2009).

Public Gaming International published an article describing a trial program with Scientific Games and the Minnesota State Lottery for players to participate in the lottery online initiated on the lottery’s home page. It included responsible gaming measures such as a maximum global amount imposed by the lottery and a function allowing players to set a self-imposed limit (Online game internet, 2011). Also included were options to self-exclude for a short or long-term time limit.

A journal article by Nelson, et al, detailed past and ongoing studies regarding problem gaming, not only through monetary issues, but commitment of time. Studies look for ways to identify problem gamblers by studying their patterns, playing habits and questioning those who have sought treatment (Nelson, et al, 2008). The article also detailed the use of self-limit tools by individuals who feel their gambling is becoming problematic.

Research Methodology

Research Approach. The purpose of this research is to determine the pros and cons of key regulatory points that may be a part of any framework for the regulation of intrastate internet poker in Iowa. In order to properly make that determination, information was gathered on the current environment of unregulated internet poker in Iowa, various consumer protection areas related to internet poker, existing internet poker regulations developed by other federal or state gaming jurisdictions, and various responsible gaming measures related to internet poker. The approach for this research is similar to a feasibility study. This approach aims to objectively evaluate intrastate internet poker for Iowa and determine the strengths and weaknesses of many facets of internet gaming regulation in order to ascertain the prospect for effectively regulating intrastate internet poker.

The data for this approach was collected from existing scholarly articles and studies, existing rules and regulations from other federal jurisdictions where internet gambling is legal, existing gaming trade publications, surveying Iowa brick-and-mortar poker players, interviewing or discussing with parties including: Iowa Code 99F licensees, potential hub operators, independent game testing laboratories, poker player interest groups, tribes compacted in Iowa, Iowa lottery officials, various companies manufacturing segments of internet gambling consumer protection utilities, and other interested parties in intrastate internet poker for Iowa. Existing data and studies, existing rules and regulations from other jurisdictions, surveys of Iowa poker players, and an assessment of Senate File 526 were used to determine what areas should be researched

when reporting on the creation of a regulatory framework for Iowa. Once the areas were identified, interviews and discussions were conducted with the aforementioned and related parties to appropriately and judiciously report on the possibilities of regulating the key areas. Existing scholarly and trade articles were also gathered to supplement the research for the report.

It is anticipated information with respect to internet poker will continue to be gathered throughout the writing of this report due to the rapid evolution of events relating to internet poker; therefore, this report will make every effort to include information available up to the December 1, 2011, deadline.

Data Collected. Data was primarily collected from scholarly articles and published studies researching various consumer protection topics, various responsible gaming measures, and the current unregulated internet poker market in Iowa. Data collected from interviews conducted of interested parties researching various consumer protections and the current unregulated internet poker market in Iowa. Data was also collected from published internet gambling rules and regulations in other foreign and state jurisdictions and from articles in current trade publications to research the effectiveness of current internet gambling regulations and to better understand the areas of consumer protection and responsible gaming controls. A survey (Appendix A) was conducted of Iowa brick-and-mortar poker players to research the current environment of unregulated internet poker in Iowa. Table 1 illustrates the categories of data collected for this research.

Table 1- Categories of Data Collected

Research Approach	**Research Area**
Scholarly articles and studies	- Identify current unregulated internet poker play in Iowa - Measures and regulations available to protect consumers who participate in regulated intrastate internet poker - Responsible gaming measures that can be employed
Interviews of interested parties	- Identify current unregulated internet poker play in Iowa - Measures and regulations available to protect consumers who participate in regulated intrastate internet poker - Responsible gaming measures that can be employed
Trade publications	- Measures and regulations available to protect consumers who participate in regulated intrastate internet poker - Responsible gaming measures that can be employed
Published gaming regulations and gaming legislation	- Effectiveness of current internet gambling regulations - Measures and regulations available to protect consumers who participate in regulated intrastate internet poker - Responsible gaming measures that can be employed
Survey of brick-and-mortar players	- Identify current unregulated internet poker play in Iowa - Measures and regulations available to protect consumers who participate in regulated intrastate internet poker

To report on the creation of a framework for state regulation of intrastate internet poker in Iowa, it is important to understand the current unregulated internet poker environment in Iowa and identify the potential areas in need of regulation. Scholarly articles and published studies were used to gather data projecting the number of people and amount of money wagered in the unregulated U.S. internet poker market. A review

of rules and regulations from jurisdictions that have legalized internet poker were used to initially identity the consumer protection areas in need of additional research. A survey of brick-and-mortar players was conducted to supplement research related to both the current unregulated internet poker environment in Iowa and the key areas poker players feel should be regulated. It was impractical, due to cost and time, to survey the population of the entire state, therefore the research approach focused on scholarly articles and published studies, as well as surveys from participating poker players in Iowa poker rooms.

Once the measures and regulations to protect consumers participating in regulated intrastate internet poker were identified, interviews of all interested parties were conducted along with additional research from trade publications, scholarly articles, and other regulated internet gaming jurisdictions. The interviews and research assisted in clarifying the pros and cons of the identified regulatory areas. The interviews and research provided information of additional consumer protection areas where regulation should be considered. Research from scholarly articles, trade publications, interviews, and other gaming jurisdictions revealed various responsible gaming measures that could be adopted. The interviews and research assisted in ascertaining the effectiveness of the responsible gaming measures identified.

While researching information to develop this report, additional information pertaining to internet gambling was discovered. Specifically, information speaking to the legality of interstate and intrastate gambling with respect to the views of the USDOJ was reviewed. Information and opinions were also observed related to the economic and societal impacts of internet gambling along with information discussing the possible

expansion of federal or state internet gambling. Information and data in these areas were not collected as they did not directly relate to Iowa Racing and Gaming Commission's task at hand.

Data Collection Procedures. A small portion of the data for this research was collected via survey. The survey was created by IRGC staff and inquired into several aspects of basic game play and regulatory areas for internet gambling to assist the IRGC in obtaining a general understanding of the current environment of unregulated internet poker play in Iowa. The survey was reliable and valid due to the surveyed populations' understanding and experience of the game of poker. The IRGC has no prior experience conducting surveys and did not have complete custody of the surveys as noted in the subsequent method of distribution; therefore, the results should be used as a guideline to this research and not viewed as any formal or official results. The survey population consisted of poker players participating in poker games at regulated brick-and-mortar casinos in Iowa. This sample was selected because of their knowledge of the game. The survey should be considered random, as it was distributed to all players in the same manner at the participating poker rooms. There was not any bias in the survey group selection as all members of the target population had a survey available. The surveys were distributed via the poker rooms at regulated casinos in Iowa for a period of approximately six weeks during the initial stages of research. Poker room managers were asked to make the surveys available by setting them out in a conspicuous and secure location in the room. Survey respondents returned the surveys to the poker room shift manager or supervisor for return to the local IRGC office. Returned surveys were

collected and tabulated by IRGC staff in Des Moines. The survey's respondents will remain anonymous, as no name or other identifying information was requested.

A considerable amount of data for this report was collected from various parties with knowledge of all aspects of internet poker. The questions for the interviews varied depending on the organization or person interviewed and their specific expertise with respect to internet poker. The individuals or groups selected have considerable knowledge of specific facets of internet poker including: Iowa Code 99F licensees, potential hub operators, independent game testing laboratories, poker player interest groups, tribes compacted in Iowa, Iowa lottery officials, and various companies manufacturing segments of internet gambling consumer protection utilities. The groups were contacted by phone or email to set-up a subsequent, more formal, discussion by phone or in-person. Other interested parties with information to share were able to contact the IRGC staff for possible consideration or inclusion into the report. There may have been some bias in the groups interviewed depending on the organization they represent or business they conduct. The affect of any bias was considered by staff when utilizing the information from the interviews for research and inclusion in the report.

A considerable amount of data was collected from scholarly articles, published studies, trade magazines and existing published gaming regulations and gaming legislation for the report. The data collected was important when researching the pros and cons of key regulatory facets that may be a part of any regulatory framework for Iowa, including what measures and regulations are possible to protect consumers who may participate in intrastate internet poker and what responsible gaming measures can be

employed. All data is available to the public as it was retrieved from published research, studies, articles, or from government websites.

Approach and Results of Data. The surveys disseminated to the brick-and-mortar poker players in Iowa casinos were created in a categorical and Likert style format and were analyzed accordingly. The results indicated approximately one-third of the respondents did not play poker online while half of the respondents played a few times a week or more. The most popular aspects of internet poker were: convenience of play from home, the ability to find a game at any time, and the tournaments offered. Survey respondents noted approximate equal levels of frustration over the following areas of internet poker: loss of internet connection during play, ease of depositing and withdrawing funds, poker bots, questions or comments about its legality, randomness of the distribution of cards, and the protection of the identity of the player. Game integrity was identified as being the most important regulatory measure to the survey respondents. Approximately two-thirds of the respondents indicated they would play internet poker more frequently if it was regulated by the state or federal government or if the state or federal government passed legislation legalizing the play of internet poker. 87 percent of the respondents stated they would visit the casino and play the same amount of time even if intrastate internet poker was legalized in Iowa.

Interviews of individuals and organizational representatives having expertise in various areas of internet poker were conducted in order to obtain the most current information. A content analysis of the information received during the interviews was conducted. Interviews where substantial or relevant information was acquired are

subsequently summarized in the report. The interview summaries are organized by area of expertise and then randomly placed within that summary area.

Interviews and discussions were conducted with representatives of a number of licensees regulated under chapter 99F including: poker room and compliance managers at Iowa casinos; management from the following Iowa casinos: Kehl (Riverside and Grand Falls), Isle of Capri, Ameristar, Caesars Entertainment, Peninsula Gaming (Diamond Jo and Diamond Jo Worth); and the president of the Iowa Gaming Association. The poker room managers stated the majority of their in-house players have discussed playing internet poker at one point or another and most people who played generally spoke of the "big three" websites that were recently shut down by the federal government (Absolute, PokerStars, and Full Tilt). Poker room managers generally agreed their "weekend type" players or non-regular players seemed to be those most often talking about playing poker online. They maintain their regular players do not utilize online poker because of the belief the brick-and-mortar setting offers a more social type of environment attractive to many poker players.

The median estimate by facility of the percentage of customers that also play poker online is 25 percent. The group discussed the effects of Black Friday and many managers agreed they observed a "small ripple effect" when the internet sites were closed. Some casinos stated revenues were up eight to ten percent over the same time period last year claiming their late night play has increased and extended into longer hours, although recently seeing revenues gradually return to pre-Black Friday levels.

There are mixed feelings by the poker room managers as to the demographic and preference of limits by their customers who also play online. The poker room managers

feel convenience of gambling at a faster pace appears to be a larger factor rather than dollar limits of the game or age of the player. Poker room managers assert the following reasons why many players choose to play internet poker rather than coming to the casino's poker room: convenience, ability to play in multiple games simultaneously, faster pace, tournament availability almost anytime, no dealer errors, anonymity, and better complimentaries offered. Poker room managers state the common complaints heard from their players about playing online include: concerns over legality, concerns with respect to cheating and collusion, timely withdrawal of winnings, inconvenience of funding accounts, and concern over randomness of cards. The poker room managers further stated internet poker sites are able to offer deposit bonuses for their players, technology allowing the visibility of opponents' statistics, rake back bonuses, and tournament free rolls. These types of bonuses are not feasible to offer in the brick-and-mortar environment due to expenses associated with running a card room. There was further discussion amongst the group with respect to electronic poker tables, which are currently approved for use in Iowa, to determine if any controls or regulations used with those could be implemented in an internet poker environment.

During the same discussion, compliance managers discussed a number of current controls in various regulatory areas implemented in their poker rooms to determine if they could somehow be implemented in the internet poker setting. Specifically, controls utilized by poker rooms to identify underage gamblers, controls used to assist in identifying self-excluded or problem gamblers, and controls which integrate the statewide self-excluded database. The entire group expressed concerns over the difficulty of preventing intoxicated patrons from gambling in the privacy of their homes, preventing

underage or self-excluded people from gambling if they utilize someone else's account, and general concerns over preventing collusion. The group also expressed concerns over losing revenue in other areas of the casino citing an example of a poker tournament player coming to the casino to play and bringing their spouse along to play slot machines. It was also noted by the group the recent success and popularity of internet poker might be attributed to the inherent lack of controls. They stated internet poker may not be as popular or attractive to players if it was "over-regulated" or was constructed in a manner that varied from the current internet poker environment.

A group representing Kehl management introduced a consultant to IRGC staff with knowledge of internet poker. The consultant had experience in the development of system-based poker networks and internet poker websites. A demonstration was given to IRGC staff of a 'play for fun' system emulating a true intrastate internet network, affording many of the same controls they anticipate a regulatory body would require, that would soon be offered at Riverside and Grand Falls casinos. The group discussed the development of an 'Iowa Poker Network', possibly in partnership with other Iowa casinos, and how the 'play for fun' model would be similar to the Iowa Poker Network. The consultant offered material to IRGC staff that included a matrix addressing key regulatory features explaining how their system would comply, a GLI certification letter of a similar system the consultant had developed and installed in California, a listing of poker cheating incidents, and other information they felt would be valuable to IRGC staff. Specific discussions occurred with respect to the security of player data, and the group gave a number of examples of how players personal and account information

would be secure. Further discussions were had on the topic of geo-location and examples of the process to prevent outside individuals accessing the website.

Kehl management appears to be an advocate of the concept of requiring customers to sign up and deposit money in person at a licensed casino. They believe it provides for better controls in preventing underage gambling and problem gambling. The group does not believe the requirement to sign-up in person and deposit money at a casino would negatively impact the popularity or demand of intrastate internet poker. Liquidity was not a concern for this group. They are comfortable with the risk of limiting potential income to Iowa players. The group also mentioned if Iowa was one of the first states to legalize intrastate internet poker, other states may follow and there may be potential to share participating players.

Isle of Capri corporate representatives spoke with IRGC staff in regard to general items on the regulatory framework from their perspective. The group expressed some concerns with the proposed legislation in 2011 that would have created a hub operator/affiliate relationship. Specifically, they questioned whether it made economic sense for the casinos, considering the number of poker players in Iowa, to split up proceeds between the hub operators and all of the affiliates. Concerns were also expressed about a state-run operation mentioning the perception of fair play and regulation should be segregated for an internet poker operation. The preference by the group would be for legislation that is flexible and allows for the regulators to adjust or adapt to technology since legalized internet poker is new to everyone in the U.S. Further discussion on the topic of international regulation of internet poker with the group occurred, specifically suggesting a review of European regulations may assist with

developing a regulatory framework for Iowa. The group indicated their experience with European regulators was very fair when dealing with a casino in Europe. The group mentioned it would be extremely difficult to project revenue generated from intrastate internet poker in Iowa, and stated they would not want to make any estimates.

Representatives from Ameristar discussed general areas with regard to developing the regulatory framework. Ameristar stated they are not against internet poker; however they have concerns with the revenue projections possibly being overstated when presented during the 2011 Legislative Session. Ameristar expressed concern over the liquidity of the number of players and availability of games in Iowa and is uncertain if there is a large enough poker base in Iowa to warrant a proper return-on-investment. The group mentioned there are good examples of regulations in other jurisdictions and a number of U.S. companies able to provide services (age and identity verification, geo-location, problem gambling tools, etc.) to assist with regulating intrastate internet poker. Ameristar thought the Nevada approach made a lot of sense as it reduced the confusion of various internet poker laws as written by individual states. They stated if legislation was passed allowing for intrastate internet poker in Iowa, they believed IRGC would be the best equipped to regulate the endeavor due to their prior experience in regulating poker in brick-and-mortar casinos.

IRGC staff had a discussion with a representative of Caesars Entertainment regarding various areas related to the regulatory framework of internet poker. Caesars indicated they are not opposed to state regulation of internet poker; they believe federal legislation makes the most sense. There is concern by Caesars of the liquidity of internet poker at the state level as well as equal enforcement of regulations by each state. The

company mentioned the USDOJ might have opinions with respect to the Interstate Wire Act and the method of transmission in an intrastate environment specifically questioning the possibility of making a "closed loop" connection. The representative acknowledged Caesars is not concerned with the cannibalization of poker in the event internet poker was legalized; however, they would have concerns if full-scale casino gambling was allowed. The company believes internet poker will only promote the growth of the poker industry, and they further offered that illegal internet poker, along with the publicity from the World Series of Poker brand, may have contributed to the popularity and resurgence of poker in casinos. The company offered some additional information and studies for IRGC staff review specifically addressing areas of internet poker regulation.

IRGC staff met with representatives of Peninsula Gaming and was introduced to SciPlay, a company Peninsula had been working with. SciPlay stated they have been working with several other states approaching or reviewing possible internet gaming regulations. Based on the conversation with SciPlay, as well as working with Peninsula, IRGC assumes SciPlay offers a hub infrastructure. The company answered a number of questions with respect to regulatory framework and provided staff with some additional information for review including existing and emerging technology for geo-location services. The information indicated geo-location is effective although accuracy for computer tracking is less than 100 percent.

A possible licensing structure was discussed by SciPlay where a hub operator would receive licensure or be operated by the state. Multiple casinos would offer a connection to the hub for their customers via their own site and, in effect, maintain the customers at each of their properties. The platform operated by the hub would determine

revenue for each casino based on the play from designated casino customers. The revenue model would be similar to a pari-mutuel model and the settlements associated. SciPlay also noted they felt more information will develop on the topic of internet gambling prior to and after the December 1, 2011 deadline.

IRGC staff met with Wes Ehrecke representing the Iowa Gaming Association (IGA). Ehrecke stated IGA does not oppose internet poker although members have expressed concerns in the following areas: overall liquidity, liquidity agreements between facilities in the same community, reciprocity with other states in terms of consistent regulation and the need to be regulated by an agency familiar with poker. The IGA noted the self-exclusion database has been an effective tool for the casinos in identifying individuals and stated the list could be modified or used in its current format by a hub operator or a licensed casino as a responsible gaming measure. The debt offset database administered by the Iowa Department of Administrative Services was also discussed and it is unclear how or if that could be tied into the customer registration process.

IRGC staff invited representatives of the tribes which have compacts to conduct gambling with the State of Iowa. At this time, the tribal representatives did not offer any official opinion on intrastate internet poker in Iowa. The representatives did note that they will continue to monitor legislation that is proposed that relates to internet gaming, and appreciated the opportunity to discuss the report and the inclusion of the tribes in the process.

IRGC staff spoke with a potential hub operator, U.S. Digital Gaming (USDG), and requested information on internet poker for Iowa. The discussion entailed the current state of unregulated internet poker and concepts and ideas for regulating internet poker.

When asked about age verification services, USDG stated the verification should occur through various methods, and Aristotle was a specific company they know has data that can be used for proper verification. USDG also pointed out age verification should be just as important to the operator as well as it is to the regulator. USDG felt responsible gaming measures established at a regulatory level could also be used with internet gambling. When asked what measures could be taken to prevent forms of cheating, USDG said industry best practices should prevail and they also suggested the use of proxy services should be banned. Security or protection for online transactions was also discussed with USDG along with deposit and transaction limits. Two licensing models were discussed with USDG: an operator model where licensed hub operators work with licensed facilities and a model where a hub operator is contracted out and is not related to existing gambling. USDG also indicated they felt high license fees to vet operators was important in the regulatory process and they mentioned revenues for casinos in the online gambling market should be taxed the same as current casino revenues.

A subsequent discussion with USDG ensued to review previous phone conversations and offer any aid IRGC staff could need with the formation of this report. Kirk Uhler, president of Government Affairs for USDG, stated they could not give their revenue projection methodology as they viewed it as a trade secret. He did note the $30 million to $35 million USDG had been quoted stating in early 2011 was done prior to "Black Friday", April 15, 2011, when the USDOJ seized the domains of the three largest off-shore poker operators doing business in the U.S. Mr. Uhler also made it clear the earlier estimate was a projection for three years after the network started so they were able to establish market penetration to grow the player base.

IRGC staff met with independent casino game testing laboratories, GLI and BMM, in order to discuss areas of consumer protection and responsible gaming measures in the internet poker environment. The labs have considerable experience in testing internet gaming technology considering the industry's state of infancy. The meeting with GLI began by identifying the areas IRGC is looking into measures and controls for, including age verification, geo-location and money laundering. GLI stressed their standards (GLI-19) for internet gaming govern that each system must have controls for these, but the regulator decides the specific levels and methods to use. GLI also mentioned specific third party companies that protect against the above mentioned areas. GLI offered to obtain contact information for companies involved with internet poker and provide those to IRGC staff. BMM stated they also have experience testing internet gaming systems. A discussion ensued with respect to various consumer protection areas. BMM offered contact information for other regulatory and professional entities IRGC staff could contact and obtain additional information.

IRGC staff met with Iowa Lottery (ILOT) officials to obtain a perspective from lottery interests of internet gambling and internet poker regulation. IRGC provided an update on the report and an explanation of its role in the report. ILOT provided information it felt was important and could possibly be included in the report. A report explaining ILOT's perspective on internet gambling is attached as Appendix C. ILOT expressed concern over the intrastate internet poker revenue projections discussed during the most recent legislative session.

The Washington D.C. Lottery was contacted by IRGC staff as, during the writing of the report, the District was preparing to start an internet gambling application. Paul

Dorsey, from the D.C. Lottery explained how D.C. enacts legislation with respect to the federal government. He mentioned the close proximity to federal lawmakers allows for ease of information gathering and understanding of federal concerns. Dorsey explained they initially offered free games online with the intention of moving to offering both free and pay-for-play games of hold 'em, blackjack, bingo, and others. Dorsey listed and elaborated on D.C.'s biggest challenges in moving forward: location tracking, complying with IRS tax laws, payment processing, ID and age verification, responsible gaming, fraud, bots, and collusion. Dorsey stated they consider their potential market to be residents, working people just outside of D.C. and tourists. Dorsey explained revenue estimates used for decision making were conservative but still considerable. He commented intrastate poker in Iowa would be quite a different model.

A poker player association was also contacted to obtain a perspective of internet poker regulation and an understanding of the current state of unregulated internet poker in the area. A representative from the Omaha-based association stated he had a concern as to how each player proves he/she is over 21 years old. The association has not heard of any issues for buy-ins or cashing out and getting monies owed to them with the current illegal internet poker environment, nor do they have any concerns with the actual game play, selection, randomness, or cheating. They are not opposed to state regulation but expressed they believe the biggest goals of regulation should be to make the play fair for all players and to secure a system for players to verify that they are at least 21 years of age.

Aristotle, a company specializing in identity and age verification over the internet, was also interviewed by IRGC staff. Aristotle explained their company's software is

integrated into websites to validate a person's age and identity when signing up for various forms of gaming (online poker, online lottery, online pari-mutuel/horse wagering, etc.). Aristotle uses a series of questions to have players prove their identity including personal questions, address, family, and other identifiers. If answers do not yield a match, the player is denied access to the website. Aristotle's software is currently used in the New York and Oregon online lotteries. Aristotle has been meeting with regulators in Europe and, while they believe the European market for online poker is larger, they foresee the U.S. market progressing beyond Europe as more entities and governments with budget shortfalls consider the possibility of online poker. They also mentioned the federal law reducing the availability of tax-evading low cost tobacco products purchased over the internet (PACT ACT) has language pertaining to online age verification.

A phone interview was conducted with a representative from LOC-AID Technologies, a geo-locating company that provides operators with individually tailored software for mobile gaming. LOC-AID currently has products approved by the Nevada Gaming Commission and is also working with the D.C. Lottery for software development for mobile online gaming. The software uses network initiated location, which is the same structure as used by phone carriers. The higher the density of cell towers, the more accurate a location can be determined for the mobile gaming device. On average, the combination of both the cell tower location and GPS will provide a more accurate location than standard IP land-based locations, with the accuracy normally plus or minus 5 meters to 5000 meters. Comparatively, the company representative stated IP location has an average 10 to 50 miles variance for location and can also be easily spoofed by other software. With the ability to use real-time message texting, the device can be

located immediately and can be verified by an immediate response prior to use. LOC-AID's software also has the ability to set up a geo-fence that could curtail mobile gaming within one to five miles of the set area parameters. The software could be set to check location at both the beginning and end of gambling sessions and could either halt playing, or not allow any transaction cash-outs other than within the set gaming area. This software could also be set up for loss limits, quick updating about location being out of range (within 10 seconds) and monthly reminders about play.

An interview was conducted by IRGC with Baseline Business Geographics, Inc, a Quebec company that offers services to assist internet poker operations utilize and process geo-location data to achieve the desired results and controls. Baseline provided information regarding geo-location uses and limitations. Their company gathers IP addresses through independent data collection from internet service providers and does a comparison to the individual IP address to obtain an approximate location. It was noted geo-location can vary from provider to provider and the quality of the locating service is only as good as the quality of the data being obtained from these providers. Geo-locating services are expected to improve as technology continues to advance; however, it may never be 100 percent accurate. Baseline noted there is a significant amount of 'false positives' indicating gaming is being done outside of the regulated and approved jurisdiction, where the player is incorrectly identified as being out of the area. Many operators will follow up an out-of-area identification with a manual process where a player could call in or provide more information to obtain access to the site if incorrectly identified. In addition, some operators simply require a confirmation the player is indeed

within the approved jurisdiction, placing the responsibility for breaking the law on the player.

As previously mentioned, a content analysis was performed on the existing data collected from scholarly articles, published studies, trade magazines, and existing published gaming regulations and gaming legislation for the report. The analysis was successful in helping to understand the current state of unregulated internet poker in Iowa, in combination with the interviews, specifically identifying the pros and cons of methods to protect consumers who gamble online, the pros and cons of key regulatory facets that may be a part of any regulatory framework for Iowa, and what responsible gaming measures can be employed with internet gambling. The specific findings of the analysis will be displayed in the data presentation portion of the report. All data is available to the public as it was retrieved from published research, studies, articles, or from government websites.

Methodology Limitations. One limitation of this study is the lack of historical data relating to the topic of regulation of intrastate internet poker. There is substantial data available in related areas such as general casino regulation and poker regulation used for the report, but the internet gambling industry is new; therefore, the data has not been tested over the course of a long period of time. Another limitation surrounds the data available for estimating the current internet poker market in Iowa. The information available was based on estimates of the U.S. population. Discretion was applied when using these studies and methodologies for an estimate of the potential activity in Iowa. In addition, the estimates are based on an internet poker product similar to the current

unregulated environment (i.e. deposits online, open network, etc). The survey given to poker players in Iowa was not tested for reliability or validity. It was a survey created by IRGC staff to help understand common concerns of Iowa poker players when playing on the internet. In addition, discretion has been applied by the researcher when analyzing the overall results of the data reviewed for this research.

Data Presentation

The data utilized for this report will be presented in this section in text format with supplemental information displayed in the appendix. The data presentation will address the requirements of SF 526 by reporting on the current state of unregulated internet poker in Iowa, obtaining a regulatory foundation for the creation of rules, identifying various business models that would affect regulations, addressing specific consumer protection measures with respect to their effectiveness, and identifying responsible gaming measures available with internet poker. No specific recommendations regarding the legalization of intrastate internet poker in Iowa will be made in the report, although some recommendations and comments on other considerations for the regulation of intrastate internet poker may be included in the data presentation.

Current State of Unregulated Internet Poker Play in Iowa

As demonstrated by the surveys conducted by IRGC staff and research of existing studies performed by other financial experts, gambling on unregulated internet poker does occur in Iowa. An unofficial survey of brick-and-mortar poker players in Iowa conducted by IRGC staff demonstrated over half the respondents also played internet poker a few times a week or more. In addition, there have been multiple companies, individuals, and organizations studying internet gambling in order to estimate the potential revenue of internet poker on a national level as well as for individual states with respect to intrastate legalization. Research by a number of parties is currently ongoing due to the number of states proposing or considering legislation. The estimates vary

greatly in range mostly due to two key elements; the current state of internet poker is illegal and, as such, determining the current market size is extremely difficult, and the quantity of assumptions made by each study in order to form a basis for their calculations is high. This report will review the methodologies and assumptions used in each study and extrapolate that to the State of Iowa. Please refer to Appendix B for a comparison chart of assumptions used in each study as well as the assumptions used in this report for the State of Iowa.

The one common element that all of the methodologies will show is that it is projected that additional revenue is available with intrastate internet poker. The level of current play and projected market play for an intrastate product in Iowa varies but all assumptions agree that illegal play is currently happening and that a portion of that play along with new interest would support a legal poker network. The amount of revenue available is directly correlated to the liquidity of the network. A network that is highly liquid will likely offer a greater range of games and betting limits throughout a 24-hour period similar to some of the illegal networks that are currently being played. A network less liquid would not offer the same range of games and limits and may not be as attractive for the internet poker player and, therefore, affect their play on the less liquid network.

Potential Taxation Methods. There are two taxation methods discussed when internet poker is being debated. The most widely discussed taxation form is a tax on the Gross Gaming Revenue (GGR), or rake, of the poker site. This methodology is the same logic as the current tax structure on a brick-and-mortar casinos' Adjusted Gross Revenue

(AGR) used by the State of Iowa. The second taxation method would be a tax on the deposits made by the poker players. This tax rate would be a significantly smaller percentage than the GGR method as it taxes the money when the poker site receives it rather than on the final play and has been proposed in situations where countries with broad ranges of liquidity are pooling players.

A GGR tax model allows for estimating of tax revenue to government entities by attempting to estimate the rake a poker operator will make in a jurisdiction. A tax revenue estimate for a potential government using the deposit tax method is challenging as rake alone under the GGR method is difficult to estimate with the limited data and significantly fewer statistics are known of player deposits. One advantage of the GGR tax is that it is an accurate reflection of the income made from the poker network. One advantage to a deposit tax would be splitting the tax liability of a poker network among its multiple ownership members. The majority of operators are opposed to the deposit tax because of the significant up front cost to them with the unknown amount of revenue a player will generate for the site. In addition, player behavior has changed as a result of Black Friday where players are depositing and withdrawing their money after each individual session according to some industry observers.

Revenue Studies Reviewed and Projections. Unless otherwise stated in the reviewed studies, IRGC assumes a GGR taxation form for any models and estimates. IRGC uses 22 percent tax rate in the assumptions as that is the current maximum tax rate for each of the 15 licensed riverboats/gambling structures and one of the three licensed racetracks. It was discussed among industry experts at the 2011 Global Gaming Expo

convention that a different tax rate or license fee than that charged of brick-and-mortar casinos should be studied further due to the lower capital investment that internet poker operators take on in comparison to brick-and-mortar casinos or stand alone poker rooms.

In 2009 Goldman Sachs, a large investment bank and advisor, completed a review of the illegal internet poker industry and sent a note to their investors about the revenue potential in the event it were to be legalized in the U.S. Adam Baker of CasinoAdvisor.com reviewed the note to investors and summarized Goldman Sachs' findings as $1.5 billion of nationwide revenue for the internet poker operators (2009). As outlined in the article by Baker, Goldman Sachs did a 'simple grossing up' of Party Gaming's rake relative to its nine percent market share (2009). Goldman Sachs used Party Gaming's rake as it is one of a very limited number of companies who has public record of internet gaming data. Goldman Sachs went on to make an estimate of potential revenue should a legal internet poker website be able to attract 30 percent of offline poker players, or those who only play in brick-and-mortar casinos (Baker, 2009). They assumed an average amount of rake generated of each player's play at $300 and determined the revenue potential would be $3 billion per year (Baker, 2009). A calculation was also made changing the assumptions to 45 percent of offline players and $400 GGR which would increase the market to $6 billion per year (Baker, 2009).

As there were no other assumptions noted in the article and in order to relate this data to the State of Iowa, IRGC assumes no changes were made to any of the current methods in which poker players are able to register, deposit funds, and instantly play internet poker. Extrapolating the above estimates using a straight percentage of population based on the 2010 census data from 2010.census.gov, Iowa has one-percent of

the nation's population and, as such, IRGC can determine from the Goldman Sachs review that illegal play in 2008 by Iowans was approximately $15 million. Using the two potential revenue estimates, intrastate internet poker would generate $30-60 million GGR each year. This would correlate taxes to the State of Iowa to range from $6.6 million to $13.2 million.

$3 billion X 1% population ratio X 22% tax rate = $6.6 million

$6 billion X 1% population ratio X 22% tax rate = $13.2 million

IRGC staff reviewed a study done by H2 Gambling Capital (H2GC) which estimated amount of gross gambling revenue from players in the U.S. For 2010, the GGR generated from U.S. players was $1,331,400,000 (H2 Gambling Capital, 2011). If we use the Iowa population ratio of one percent, we estimate approximately $13,314,000 in GGR of online poker play. If Iowa were to tax that level of play, the revenues would be $2.93 million.

$1,331,400,000 X 1% population ratio X 22% tax rate = $2,929,080

H2GC made an additional forecast of online poker play for 2014 of $3,394,400,000 (2011). The increase is a reflection of their model legalizing online gaming starting January 1, 2013 with the states having to opt out of internet poker (H2 Gambling Capital, 2011). If IRGC makes similar assumptions for the impact legalization

would have on play in Iowa, the result would have been GGR of $33.9 million and taxes of $7,467,680.

$3,394,400,000 X 1% population ratio X 22% tax rate = $7,467,680

One of the major studies reviewed by IRGC staff was done by Blue Sky Consulting Group (Blue Sky) for The California Online Poker Association, studying the potential of an intrastate internet poker network. For a basis for their projections, Blue Sky was able to perform both a telephone survey as well as an online panel survey (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). The study proved beneficial because their report laid out the assumptions and methodologies used in the study so that we could apply them to Iowa. The variables were:

1. The amount of money Californians currently spend on online poker (on off-shore websites).
2. The fraction of these new players that would play on a legal California website.
3. The number of new players that would play on a legal California website.
4. The amount each of these groups of players would spend playing online poker.
5. The fiscal impact of this activity from online website operator fees, income taxes on online operator profits, income taxes paid by players on their winnings, and tax revenue resulting from the increased economic activity from online poker in California.
6. The growth of the online poker market over the next ten years (Gage, 2011).

In addition to their own surveys, Blue Sky referenced three other studies. The first was an online survey by Poker Players Research that estimated 2.8 percent of U.S. population had played online poker for real money at least once a month in 2009 (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). The second was a national survey by Pew Research Center from 2006 finding two percent of adults gambled on the internet (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). The third study referenced was also from 2006, a national telephone survey conducted by the American Gaming Association (AGA), finding four percent of adults gamble online (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011).

Applying these percentages to Iowa using the median percentage from the previously mentioned three studies of 2.8 percent, which is also the percentage from the most recent survey, we find online players in 2009 to be 85,300; 2.8% of 3,046,355 (2010 Census, 2011). If we use the average annual gross revenue per player noted in the Blue Sky study taken from PartyPoker's 2008 and 2009 annual reports of $647, the 2009 estimated illegal play would have been $55.2 million in GGR, equaling $12.1 million in unrealized tax revenue to the State of Iowa.

$647/player X 85,300players = $55.2 million GGR X 22% tax rate = $12.1 million

In moving from current illegal play to potential play on a legalized intrastate internet poker website, Blue Sky used data gathered from their own surveys. When Blue Sky asked their online panel of off-shore internet poker players, 28.5 percent stated they

would move all of their play to a legal website, while an additional 49.6 percent would play both the legal website and the off-shore websites (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). These responses were gathered after the players were told any winnings on the legal website would be taxed as personal income (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). To simplify the assumption, Blue Sky used 1.5 percent of population over 21 as the captured play of current players, generating an average of $650 per current player; we will do the same with Iowa estimating 34,500 current players being 1.5 percent of Iowa's 18 and over population of 2.3 million people (2010 Census, 2011). Blue Sky also found through their telephone survey that 7.5 percent of residents 21 and over would play poker online, generating an average of $75 per new player, if it became legal (Gage, Newman, McMahon & The Blue Sky Consulting Group, 2011). Using similar assumptions as the survey results found in California for the State of Iowa, IRGC estimates the market size as $35.36 million and taxes of $7.78 million.

34,500 current players X $650 + 172,500 new players X $75 = $35.36 million GGR

$35.36 million GGR X 22% tax rate = $7.78 million tax revenue potential

The American Gaming Association (AGA) published a formal report entitled "White Paper, Online Gambling Five Years after UIGEA" (Stewart, 2011). The AGA outlines statistical data regarding the prevalence of internet gaming in the U.S. Stewart states the legalization of online poker could create 10,000 high-tech jobs as well as

generate $2 billion annually in federal and state taxes; however, it is unknown what assumptions Stewart and his colleagues used to determine this (2011). The White Paper also states "Over the last decade, an estimated ten million Americans have gone to internet websites to place bets on sporting events, to play poker, and to participate in a range of electronic casino games, including slot machines, blackjack, craps and roulette (Stewart, 2011). From 2003 to 2010, Americans spent approximately $30 billion to gamble online" (Stewart, 2011).

USDG, a company from California seeking to be the State's online poker network provider for the legislation proposed in 2011, was also contacted for their estimates of the potential market size of an Iowa intrastate internet poker website. USDG vice president of government affairs Kirk Uhler was quoted as saying to the Des Moines Register, "An estimated 150,000 Iowans are already illegally playing online poker, depriving the state of $30 million to $35 million in gaming taxes each year" (Jacobs, 2011). In an interview with Mr. Uhler in September he indicated their estimate of $30 million to $35 million was made pre-Black Friday and after three years of a network up and running, allowing for establishment of a player base. When IRGC staff spoke with USDG, they declined to share the methodology and assumptions used to conclude the noted $30 million to $35 million taxes.

Limitations of Analysis. IRGC staff research has provided the summary of many projections and methodologies studied by other entities. IRGC was unable to perform their own study of the people of Iowa and possible reaction to an intrastate internet poker network as there were limitations on the time and budget available to perform such a

survey or study. IRGC is limited in its abilities to understand or predict the reactions of Iowans to additional registration hurdles poker players may face that differ from the current sign-up process offered by off-shore poker websites. Currently, poker players simply register for an account and provide a mailing address for any winnings or deposits that come in the form of checks, credit cards, or electronic funds transfers. The liquidity of an Iowa poker network may be impacted if the registration process deviated from what is currently being used by off-shore websites.

Regulatory Standards

Standards Shared by Jurisdictions. Research has revealed many common traits shared by jurisdictions towards managing online gambling. While all strive for similar results in terms of consumer protection, age and identity verification, and fraud detection, for example; the approaches on how to best regulate differ. Analyzing what has been proposed or implemented may help to build a framework in Iowa. This research includes examples from existing laws, proposed bills that are either pending or did not result in legislation, and implemented rules and regulations. The intention is to draw attention to best practices or ideas that may be helpful. This section will first give an overview of rules and regulations by examining standards applied across the industry. It will also report on the outside contracting used to meet these standards.

General Standards. All jurisdictions have standards that are at least general in nature. Early adopters started with fundamental rules and regulations and have added requirements as internet gambling has evolved. Antigua and Barbuda, for example,

authorized online gambling as early as 1994 classifying operators as financial institutions. Regulatory authority appears to have initially been built around already established safeguards for the financial industry (Directorate of Offshore Gaming, 2006). This allowed companies to legally operate internet based gambling websites from the island and appears to have been effective in allowing licensed companies to develop. While this jurisdiction has updated standards over time (Directorate of Offshore Gaming, 2007), it illustrates a solid starting point for developing a framework in Iowa. These basic standards were found to be generally in common for all jurisdictions: licensing, background investigations, investigative powers, minimum age requirements, and responsible gaming components. The existing racing and gaming industry in Iowa may provide a strong foundation for developing standards:

Licensing. Iowa Code 99D and 99F authorize IRGC to issue licenses to gambling operations, manufacturers and distributors, and employees.

Background Investigations of Organization and Affiliates. Iowa Code 99D and 99F authorize Iowa Division of Criminal Investigation to perform background investigations for gambling operations, manufacturers and distributors, and employees.

Investigative Powers to ensure fair play. Iowa Code 99D and 99F give IRGC and Iowa Division of Criminal Investigation power to investigate all alleged rule violations and to take disciplinary measures.

Minimum Age Requirements. Iowa Code 99D and 99F have specific wagering age restrictions.

Responsible Gambling Component. The Iowa Gambling Treatment and Prevention Program administered by the Department of Public Health and problem gambling assistance hotline are established in Iowa.

Player Limits. The Iowa Statewide Voluntary Self-Exclusion Program administered by the Iowa Gaming Association has been in place since 2004.

Specific Standards. The general standards previously mentioned are a good starting point; however, as the industry matured, jurisdictions recognized more specific standards were necessary. Regulatory authority was strengthened in these cases with an eye toward controlling the internet environment. This may be accomplished in a variety of ways. Examples of specific standards that should be considered are:

Age and identity verification. Methods to ensure players are of legal age and represent themselves during play are critical. Specific guidelines for setting up and maintaining player accounts have been established by a number of jurisdictions including, but not limited to, Isle of Man. This includes age and identity verification (Isle of Man, 2008b).

Location identification or limitation. This is important to comply with UIGEA. It may be accomplished by limiting to physical locations within the state or by geo-location technology. California may limit intrastate poker websites to up to five locations within state borders (California S.40, 2010). This attempts to keep a tight network for game play. New Jersey also proposed a bill that would have allowed online wagering with all transactions and equipment used to be physically located within approved casino areas (New Jersey S. 490, 2010). Geo-location technology and IP address tracking may

also be effective methods for insuring transactions take place within Iowa borders, although more research is recommended in this area as discussed later in this report.

Technology testing and approval. Requirements shall be established for operators to have all systems and games tested by a regulatory authority or designated testing facility. The United Kingdom, for example, appears to have strong testing requirements. Requirements include testing of technologies prior to play and policies for testing during play and when handling issues arise. The United Kingdom has requirements for in-house testing and third party test houses (United Kingdom, 2009b).

Fraud, Cheating, and Advantage Play Detection Methods. It is recommended that any network or hub operator provide a comprehensive protection plan to prevent money laundering, identity theft, account manipulation, bots, or other fraudulent or cheating methods. Alderney, one of the British Channel Islands, has technical standards which appear to thoroughly detail specific requirements for hosting facilities and gambling games toward protecting the players (Alderney Gambling Control Commission, 2010).

Currency and Transaction Handling Requirements. A determination needs to be made as to what forms of currency shall be accepted. Nevada has proposed to accept cash, checks, electronic checks, electronic transfers, credit, debit, or other forms of currency (Nevada A.B. 258, 2011). Additionally, restricting transactions to approved locations may be considered. For example, Florida proposed limiting player account registration transactions to approved card rooms to control limits on deposits, losses, and play time (Florida H.B. 77, 2011).

Player Claim and Dispute Resolution System. A system to resolve issues may be critical to maintain the integrity of the games. For example, the KGC employs a Dispute Resolution Officer to handle issues and investigate claims (Marshall, 2011).

Player Account Protections. Priority should be given to insuring player privacy. The Nevada Gaming Commission drafted proposed regulations with specific requirements for operators of interactive gaming to have internal controls addressing this need. The regulations include requirements for defining "personally identifiable information", the storage and access of this information, and how to handle breaches of data security (Nevada Gaming Commission, 2011).

Contracting. Outside contractors are often utilized by jurisdictions to strengthen the ability to regulate and provide increased protection. Considerable competition exists with vendors seeking to assist regulators of online gambling. In many cases, expertise gained in other industries has been leveraged to utilize established technologies. Potential areas where using outside contractors may strengthen regulatory ability include:

Testing Laboratories. Knowledge of technology advancements and interactive gaming systems is a specialized area of expertise. A testing laboratory is recommended to analyze and certify systems. GLI has developed standards for systems that may provide intranet poker in Iowa (GLI Interactive BV, 2011).

Website Hosting. The KGC created and licenses a separate organization, Mohawk Internet Technologies (MIT), to host internet gaming operators. The hosting facility provides control over licensees and appears to enable the KGC to maintain regulatory duties separate from operations (Marshall, 2011).

Online Poker Software and Related Technology. Companies can provide network management, game choices, age and identity verification, geo-location capabilities and more. SciPlay, a joint venture of Scientific Games Corporation and Playtech, is one provider of these solutions (SciPlay, 2011). Companies like this provide technology and expertise not found within many regulatory agencies. For example, the California Online Poker Association (COPA) announced via press release on June 20, 2011, they selected SciPlay as a provider of online poker technology (COPA, 2011). The British Columbia Lottery Corporation (BCLC) and Loto-Quebec use OpenBet to provide their online gaming platform. According to Terry Towns, Vice- President of Corporate Security and Compliance for BCLC, this platform has been effective by providing strong player identification, location restrictions, and player self-regulated limits.

Potential Business Models

As much as determining what guidelines or technologies are important, one key to building a framework for intrastate poker in Iowa may be determining what business model fits best. This report attempts to organize examples into three types of structures; Single Network Model, Limited Hub Model, and Multiple License Model. We emphasize there are overlapping characteristics and differences that exist within these groups, though this approach should help to narrow the focus.

Single Network Model represents a regulatory environment which allows for only one network or provider for online gambling. Research indicates Canadian lotteries in British Columbia and Quebec follow this format. Each province independently offers a variety of lottery and gambling games via their lottery websites; however, they share

access to the Canadian Poker Network (Holdem-Online-Poker.ca, 2011). Increased liquidity appears to be an important aspect to this model with the potential for other provinces to join in the future. The District of Columbia lottery indicated it may operate intrastate poker on a single network (Marshall, 2011).

Pros	*Cons*
- Ease of Regulation	- Less Competition
- Consistent Technology	- Potential Conflict with Land Based
- Large Pool of Players	- Operation vs. Regulation Interests
- Security of Network	

Limited Hub Model represents regulatory environments that license a limited number of hub operators to provide online gambling. The number and location of hubs or hosting centers can vary based on how the jurisdiction chooses to regulate. For example, California proposed to allow up to five hub operators (California, S. 1485, 2010) while New Jersey's proposal appeared to have limited hubs to existing casino locations (New Jersey S. 490, 2010). Florida proposed one or more hub operators with card room affiliates acting as ports for gambling activities (Florida H.B. 77, 2011).

Pros	*Cons*
- Maintain Oversight	- Smaller Player Pool
- Land Based Participation	- Hub Competition

Multiple License Model represents regulatory environments that license multiple companies to provide online gambling. This model allows providers of online poker to independently manage their networks and offerings. Examples of jurisdictions that generally follow this model are Alderney, Antigua, Isle of Man, and the United Kingdom.

The Mohawk Territory (Kahnawake) also appears to follow this model although they do utilize a hosting center for licensed operations (Marshall, 2011). Nevada's laws also appear to follow this model and authorize interstate interactive gaming to become effective once federal legislation or the USDOJ allows (Nevada A.B. 258, 2011).

Pros	*Cons*
- Maintain Oversight	- More Challenging to Regulate
- Full Competitive Environment	- Higher Fraud Risk
	- Multiple Networks/Locations
	- Management of Player Accounts

Evaluation of these models should take into account the quickly evolving environment. Our attempts to present models for intrastate poker in Iowa cannot account for all possibilities. Consideration should be given to the potential for new federal guidelines, improvements in technologies, and changes in competitive forces. It is reasonable to believe partnerships or affiliations may form to take advantage of this emerging market. For example, one conversation during this research revolved around the possibility of independent hub or network operators working together to expand their markets. A number of providers licensed in jurisdictions outside Iowa may seek licensure to market their hubs within Iowa. A business model with characteristics similar to race simulcasting where shared benefits could be seen by expanding the market across state lines may develop. Shared resources or pools, if legal models are presented, have potential. Decision makers should consider appropriate guidelines that allow for changes to the legal or competitive environment and are capable of taking advantage of opportunities that may not yet exist.

Consumer Protection Areas

Research and data was collected on possible consumer protection measures and regulations that could be implemented in an intrastate poker environment. Consumer protection covers several areas that include: licensing entities that promote the best interests of gambling for Iowa, protecting against fraud during operation, maintaining integral controls for location restrictions, and network security including financial transactions. Additional consumer protections include game integrity, identifying and restricting cheating and collusion efforts, and restricting access of minors. These issues will be the focus of the consumer protection research. The scope of data collected was limited to review of gaming association studies, scholarly studies, and information from gaming and other private corporations specializing in data collection and identification.

Licensing Procedures. In several sources reviewed, licensing considerations are presented as a means to control unlawful or undesired activity prior to approved internet gambling taking place. In "Can it be Regulated" and "Online Gambling Five Years After UIGEA", rigorous and strict licensing processes, as well as thorough suitability checks are promoted as a necessary control to prevent criminal or undesirable entities and individuals from participating in internet gambling (Sparrow, 2009 & Stewart, 2011). A well conceived licensing process can also identify entities that have the financial support and proper experience to promote legal and fair practices in internet gambling.

While internet poker is a new concept, the IRGC has performed suitability assessments on entities and individuals involved in gambling in the State of Iowa for many years. Suitability assessments in Iowa currently include background investigations

on licensed entities and owners, as well as a wide range of backgrounds on key individuals in each company. The background investigations are currently performed by the Iowa Division of Criminal Investigation, and any negative or concerning information is presented to the IRGC Commissioners or the IRGC staff for final suitability determinations. The IRGC currently performs licensing and backgrounds for entities in two categories; companies operating or owning portions of casinos in Iowa, and companies supplying gambling games or implements of gambling to licensed casino facilities in Iowa. While intrastate internet poker adds new elements to the gambling industry as a whole, licensing should include similar suitability assessments and background investigations for the owners and key individuals of companies involved in internet gambling.

As with current brick-and-mortar operations, licensing can play a key role in regulation and protection of consumers; however, there should be additional controls and regulations in place to prevent and protect against activities that are not in the best interest of consumers or the gambling industry as a whole. Often, cost is a mitigating factor that plays a key role for companies seeking licensure. As noted above, the Iowa Division of Criminal Investigation performs the background investigation and, outside of the license fees established by Iowa Code, additional costs of a background investigation are often prohibitive for many companies. Due to these costs, the pool of potential companies could become limited.

Another element to be considered when establishing licensing requirements, which was widely discussed among industry experts at the Global Gaming Expo, was that license holders should be required to establish a reserve or guarantee of deposits at

financial institutions. Many industry experts referenced the actions of Full Tilt Poker which would change financial institutions whenever the USDOJ would freeze one of their accounts while still reporting the cash as available on financial statements. A licensing requirement that all player funds be held in liquid accounts would ensure that all players could cash out at all times.

A strict licensing process offers essential measures to exclude criminal and undesirable elements from participating in internet gambling opportunities. While the process is an essential starting point for any regulation and restriction, it must be combined with other controls to achieve a balanced, well-regulated internet gambling environment. For example, Iowa's brick-and-mortar casinos are required by Iowa Code to file written reports with the IRGC detailing any incident where an employee or patron violates Iowa Code chapter 99D or 99F, commission rule or order, and internal control violations. Additionally, Iowa's brick-and-mortar casinos must also provide immediate notification for incidents involving employee theft, criminal activity, 99D or 99F violations or gaming receipts. (491 Iowa Administrative Code 5.4(5)c).

491 IAC 5.4(5)c provides Iowa's brick-and-mortar casinos with clear incident reporting requirements and failure to comply with the provisions set forth in 491 IAC 5.4(5)c may result in administrative action against the licensed casino. Additional Iowa regulations and statutes allow for IRGC access to all areas of a casino for inspection and compliance duties including access to all information and records. Any Iowa intrastate poker regulatory framework could include similar language that can be applied to any internet hub operator for reporting of incidents and allowing for regulatory access to all areas of the internet hub operation including records and information.

In addition to licensing standards and clear conduct requirements for licensees, there are also concerns about unlicensed or unregulated entities continuing unapproved online gambling in Iowa. While there are no direct correlations, the Iowa Legislature considered and approved measures that could be similarly applied to internet gambling when approving Advanced Deposit Wagering. While authorizing legitimate Advanced Deposit Wagering opportunities and entities, the legislation states offering or participating in unauthorized activity is a felony. These measures, while requiring additional enforcement, could be important when considering approval of intrastate internet poker and protecting consumers and licensed entities from participating in or competing with unauthorized gambling. Additional research may need to be completed in the enforcement of authorized-only activity.

Fraudulent Behavior. Fraudulent behavior in online gambling falls into several categories and can potentially affect consumers directly and indirectly. Website security, fund security, and fund management all present risks to any online gambling operation and should be addressed by regulation and oversight. While controls by regulators are an important part of maintaining a safe and secure online gaming environment for the gaming public, operators also have a responsibility to maintain current and complete best practices for data protection and asset management. Regulations should include areas that allow for the rapid evolution of online fraud and theft detection. Restrictive or encompassing regulations could limit the ability of operators to maintain a degree of current best practices in an online gaming environment.

A primary step in maintaining a secure environment for online gaming is the use of well documented identity verification processes and procedures. While some vulnerability may be exploited without utilizing an online gambling service, risks can be minimized by requiring comprehensive processes when obtaining an online gambling account. In practice, the most all-inclusive identity verification processes utilize third-party companies. Many companies with online services use these types of third-party verification services to compare varying degrees of provided information with government databases. These third-parties can compare a wide variety of information to available public records as well as flagging accounts to provide more information, even to the degree of requiring in-person identity verification at an approved site.

While identity verification plays an important role in protecting the authenticity of a site and an online gambling operation, there are also potential risks to consumers in website security. Some of these risks can be minimized by several regulations. Direct access to the online gaming companies' computer systems and data centers should be restricted to certain well-defined users and roles within the company. Considerations should also be made in physical server security. Controls regarding access to servers are an important component of regulating and restricting activities, many companies maintain their own security, but another solution could be to control servers off-site at a secure data center facility. While this option presents potential to eliminate some of the risks by relying on a third-party that has experience handling and controlling access to servers, it would add other individuals and activities that may need to be monitored or regulated. While not strictly fraudulent in nature, control and maintenance of secure servers also presents opportunities and options for companies to implement backup and

disaster recovery procedures. While data loss is always a possibility, protecting and maintaining consumer data in multiple locations with backups and redundancies will help ensure that in events that are outside the operator's control, there are options to restore and reclaim the essential account information, including player balances and transaction histories. While many functions, including auditing and reporting, can safely and transparently be accessed off-site, restricting certain functions such as account administration, software access and updating, and system administration to authorized individuals physically present in the facilities can decrease vulnerability in some areas.

Fund security and management, if not regulated and restricted, could offer consumer concerns as well. Recently, during the shutdown of potentially illegal online gambling sites in the U.S., many participants were unable to obtain account funds and could not be reimbursed. Regulation should address several key points, including account fund separation, fund maintenance, and player access to funds. Operators should be required to separate any funds for player accounts from any company assets including any collections, during online play. Requirements for detailed liability accounting should also be used to maintain and oversee all funds in player accounts. These requirements could include periodic reconciliation of player account liability as well as demonstration that, upon request, all funds are able to be remitted to participating players through separate assets. In addition to these types of requirements, specific controls should be established allowing for players to not only obtain their account balance information, but also allow players to access any of their funds. Through regular independent audits of accounting practices, some of the risk can be removed when addressing availability of

funds. These regulations can provide assurance assets remain in place to cover all account funds and that account funds are available to players on demand.

In addition to controls in the above areas, operators should also be subject to ongoing security audits. Network security audits can illustrate and notify companies of potential risks before they are exploited and, if required on a regular basis, can help address concerns in the system on an ongoing basis. Similar to account auditing practices, network security auditing is offered by independent companies and can be tailored to any specific needs or requirements. The network security auditing results should be submitted to regulators as well as the operators with the expectation the operators will address any risks in the audit.

Another concern for governments, regulators, brick-and-mortar casinos, and online gaming is money laundering. Money laundering is the disguising of illegal sources of money and making the money appear legitimate and legal. According to American Gaming Association, "the risk of money laundering with currency is eliminated from online gambling sites that do not accept currency," and "every financial transaction with an online website is recorded and therefore subject to audit and questioning by both the operator and regulators (Stewart, 2011)."

A common form of money laundering involves the depositing of money followed by limited gambling and then attempting to cash out. Options to combat and identify money laundering could include auditing software and restrictions on the transfer of money from online gaming sites to player accounts. According to the AGA, many online gambling operators will transfer a customer's money only to a pre-designated account in a financial institution which allows for the transfer of funds into or out of one account

from one source. Another form of money laundering is called 'chip dumping' where a player will attempt to lose to another player at the same table in order to transfer assets to the other player (Stewart, 2011). This transfer of assets could also be accomplished by one user operating multiple accounts on the same network.

Location Restrictions. Maintaining requirements prohibiting gambling by persons outside the geographical jurisdiction authorized is important for protecting the integrity of any authorized online gambling. Geo-location software, as well as user identification, has been used as the primary means for identifying and restricting gambling from users outside of proscribed geographical locations.

Geo-location software identifies a user's geographical location using the internet protocol (IP) address associated with the connected device. The IP address is used with a database of locations associated with IP addresses and the general location of the user can be found. While this software offers an automated and general way of obtaining a users location while participating in online gambling, there are varying degrees of accuracy. Concerns have been raised about the level of assurance such software can offer when eliminating players from playing from unauthorized locations. In "Can it be Regulated" by Malcolm Sparrow, several figures are cited placing the accuracy of geo-location software between 70 percent and 99 percent (2009).

One company providing geo-location services, Quova, states geo-location is also used by internet websites offering live audio and video streaming of professional games to subscribers. These websites must identify their user's geographic location so the webcasts don't infringe on the high value contracts paid to sports team owners by

national and local television broadcasters. By implementing IP geo-location into these websites, a broadcast can restrict access to ineligible users by state and country for national blackouts or by zip code for local blackouts. Despite the current uses of geo-location services in these broadcasts, in two documents provided by Quova, "Quova Geolocation: Ensuring Compliance With Online Gaming Regulations" and "Quova Getting Back in the Game: Geolocation Can Ensure Compliance with New iGaming Regulations", Quova notes some of the limitations of geo-location by IP address (2010a & 2010b). Specifically, geo-location data can help identify the location of the IP address at the country, state, and city levels, however that IP location may not be the same as the user's location. According to Quova, robust analysis of the accuracy of publically available geo-location data, as well as a comprehensive policy to tackle IP address discrepancies can address some of the issues associated with location determination, but no specific figures are provided (Quova, 2010a and Quova, 2010b).

A concern for intrastate internet poker is the accuracy and reliability of geo-location technologies to identify a user's true location. Based on information provided by Ed Honour, accuracy of geo-location database varies depending on which database is used (Honour, 2011). For IP to state database, some vendors claim to offer 98 to 99 percent accuracy although typical IP to state database accuracy is more like 95 percent. According to the AGA, to enforce each state's determination, online gambling operators will have to ensure only bettors from authorized jurisdictions can play on their sites. Identity checks can be reinforced by geo-location systems that locate the IP address of the computer the customer is using. Existing databases of IP addresses will reveal the jurisdiction in which the customer is located, except when that location is close to a

geographic border or is otherwise cloaked. AGA stated there are techniques for defeating geo-location systems and suggested a territorial screening system can identify when those techniques may be in use. An online gambling operator can then decline to provide service until a customer provides additional evidence of location (Stewart, 2011). The Illinois Internet Lottery Pilot Program white paper discussed the use of anonymizers which are applications designed to hide the end user's location by acting as a buffer between the user and the website visited. In this situation, the user's IP address is only transmitted to the provider of the anonymizer and then is assigned a new IP address by the anonymizer in relation to any websites visited. However, the white paper discussed geo-location provider, Quova**,** has developed the ability to detect the use of known anonymizers which allows it to determine when an end user is attempting to mask their location. (Illinois Department of Revenue Illinois Lottery, 2010)

Additional concerns include the ability of a participant to access a home computer while not being present and accessing the online poker network. According to "State of Illinois, Internet Lottery Pilot Program white paper", VPN or mobile gateways can circumvent the ability to accurately pinpoint the end users actual location. However, the white paper indicates the type of internet connection associated with these types of IP address coupled with routing characteristics of the IP address can indicate risk to accurately verify the end users location and, therefore, a user's account can be blocked (Illinois Department of Revenue and Illinois Lottery, 2010).

LOC-AID, a company that currently offers location services based on mobile phone carriers to determine the location of users, has offered an option in minimizing some of the risk in traditional IP geo-location services. While primarily involved in the

use of mobile phones to make and place bets, the geo-fencing services used in these forms of gambling could be used in conjunction with IP geo-location. These services could require that any person placing a bet on an online site utilize a mobile phone at the time of login, either to receive or send a text message. Using currently available mobile phone technology, this method could locate a user within a 5 to 5000 yard radius, compared to an IP geo-location solution which generally gives a user's location within 10 to 50 miles.

The D.C. Lottery appears to have recognized challenges in this area and explored the use of internet hotspots as a method of compliance. An internet hotspot can be defined as a fixed location from which internet access can be gained for the purpose of online gambling. Jurisdictions may choose to license hotspot operators to ensure games are offered within the limits of their authority. A hotspot could be any licensed location such as a bookstore, restaurant, or simply existing locations where other forms of gambling are already approved and operating. This approach has control benefits and may offer flexibility in terms of growth but other factors should be considered. Existing brick-and-mortar casinos appear to be opposed to this model as it may alter the competitive environment. Consideration should be given to the level of investment existing casinos have made in terms of buildings, equipment, and development for example. Jurisdictions have historically had high standards for brick-and-mortar casinos impact on communities, tourism, and employment. The industry does not appear to support a model with low barriers to entry for new operators.

In most situations, geo-location software can be combined with certain user registration prohibitions. Generally, requiring residency in the authorizing jurisdictions

provides several options for regulations to confirm address and location information prior to allowing any online gaming to take place. An additional safeguard in ensuring the location of the user could also include a requirement for the financial account or payment method used by the patron to have the same address as the registered account address. Some jurisdictions where internet gambling is legal have also required that accounts can only be set up or only accept payments from people with a registered mailing address. In all cases, residency within the state could be confirmed using more stringent registration processes in initial setup of an account as well as utilizing aforementioned identity verification procedures. In the case of restricting access to online gaming to the desired geographical location, there are several methods, when combined, which offer some assurance the restrictions are met. While methods are constantly evolving, there are still many questions as to the accuracy and compatibility of these resources, therefore further research on the topic of geo-location and residency may be needed to determine the acceptable ranges and levels of accuracy allowed or desired when developing the regulatory framework for this area that offer some assurance the restrictions are met.

Security of Online Gaming and Network. Security of the online gaming network and platform, game integrity, financial transaction security, cheating and money laundering are important issues when considering regulations. Any regulation of an Iowa intrastate online poker network should address these concerns and provide a regulatory framework for auditing. This may include the need for software detecting types of cheating and other game play irregularities. Participants, online gaming providers, governments, and regulators must be confident of the network security and gaming

platforms in order to uphold game integrity and protection of personal information. If the online gaming network is unsecured or hacked into, this may result in a participant's personal information being stolen which may result in identity theft and fraud. Additionally, an unsecured or hacked network may compromise gaming integrity resulting in a lack of confidence in the online gaming website for participants.

According to the AGA, software operating online games should be subjected to testing to ensure the games play according to their rules and pay off as advertised. This includes the testing of the random distribution method used for the dealing of the cards for each hand (Stewart, 2011). An independent lab such as GLI or BMM could test the overall security of the network, randomness of cards, game data transmission, data encryption, virus software, and other controls to combat hacking. This should be required as a part of any regulatory framework for intrastate online poker.

Many government regulators and gaming commissions worldwide contract with independent testing labs for the testing of electronic gaming equipment. The State of Iowa does not have its own gaming technology testing lab. The IRGC utilizes GLI and BMM, both independent testing facilities, for testing of electronic gaming equipment including slot and gaming systems. Testing includes verification of randomness of game outcomes and certification of the gaming device to ensure it meets the requirements of the adopted testing standards of the IRGC. One gaming regulatory agency, British Colombia Lottery Corporation, currently contracts with Technical Systems Testing (TST); a GLI Company for testing of the randomness for their online casino gaming, poker, and lottery network. They have recently released a new technical standard, GLI-19, where through testing provides that software meet a standardized level of proficiency

in iGaming. IRGC anticipates reaching out to an independent testing lab such as GLI or BMM for testing of the security of the online gaming network provider as well as the gaming integrity (randomness) of the online game play in the event internet poker is legalized in Iowa.

Cheating and undesirable behavior. Security of the online poker network and platform includes prevention and detection of known cheating methods, as well as identifying undesirable behavior which may impact the integrity of gaming on the network or the perception the public has on gaming activities. Several forms of online poker behavior have been researched and included in this report.

One example of cheating is a situation where an employee or former employee of an online gaming operator or a hacker obtains information relating to participants of a game or tournament. This information is relayed to another player in real time who is playing in the same game or tournament. The recipient is now provided an opportunity to cheat and has knowledge relating to the other players' hands and has now gained an advantage unavailable to other players.

For example, in 2007 members of the Absolute Poker website suspected cheating had occurred during online poker games. According to the NY Times, Freakonomics "The Absolute Poker Cheating Scandal Blown Wide Open", players became suspicious of how a certain player was playing the game. The player seemed to know what the other players' hole cards were (Levitt, 2007). One player requested Absolute Poker to provide hand histories from the tournament. In this case, Absolute Poker did not send the usual hand histories. A file containing all players' hold cards, observations of the tables and IP

addresses of every person playing was provided instead. The poker players analyzed the data and noticed an observer watched every hand played by the cheater. They traced the observer's IP address and account name to the same set of servers that host Absolute Poker, and an individual that seemed to be part owner of Absolute Poker. Accordingly, the cheating would have transpired by an insider at the website who had real time access to all of the hole cards and was relaying this information to an outside accomplice (Levitt, 2007).

On October 16, 2007, the KGC began an investigation into these incidents of cheating at Absolute Poker and on January 11, 2008, the KGC found accounts on Absolute Poker's website were used to compromise Absolute Poker's systems by using software that enabled other players' hole cards to be viewed. The KGC subsequently issued a fine in the amount of $500,000 to Absolute Poker for the incidents of cheating (Kahnawake Gaming Commission, 2008a).

The Ultimate Bet poker site experienced a cheating scandal similar to that of Absolute Poker. Ultimate Bet claimed the cheating was perpetrated by employees of the former owners, Excapsa Software, which owned and licensed poker software to Ultimate Bet. The owner of Ultimate Bet, Tokwiro Enterprises, stated player accounts did have an unfair advantage obtained through software code that allowed the perpetrators to obtain hole card information during live game play (Brunker, 2008).

The KGC performed an investigation into the Ultimate Bet cheating allegations. On September 29, 2008, the KGC released a statement that found, from May 2004 to January 2008, an individual associated with the owners of Ultimate Bet was responsible for and benefitted from multiple cheating incidents. The KGC also issued a fine in the

amount of $1.5 million dollars to Ultimate Bet (Kahnawake Gaming Commission, 2008b). In September 2009, the KGC released another report in reference to their investigation of cheating at Ultimate Bet Poker and found between June 2003 and December 2007 cheating occurred on the Ultimate Bet website. It was discovered the cheating resulted from individuals using software developed by Ultimate Bets' prior ownership. The cheating was possible due to deficiencies in the control systems created and implemented by Ultimate Bet's new ownership (Kahnawake Gaming Commission, 2008b).

In order to combat this form of cheating, the security of the network and gaming platform could include regulations and internal controls for the operation of the network to allow for "the segregation of incompatible functions so that no employee is in a position to perpetrate and conceal errors or irregularities in the normal course of the employee's duties" (491 Iowa Administrative Code 12.3(1)d). Levels of access or controls legislated to an Iowa intrastate online poker provider coupled with software may be effective in combating this form of online poker cheating.

Cheating can be classified in two types: active and passive. Active is where players work in teams to raise other players out of the hand. Players who do this are playing as one. Passive cheating is also known as collusion (Honour, 2011). With collusion, players share their cards to make hand decisions. Players who collude at a table work together to defraud and beat other players by sharing information. This can be accomplished through instant messaging and communication by telephone between players in online poker where they can discuss their cards and strategy for play. Ways to

combat collusion can include software, observant security staff of the provider, and other players participating in the game or tournament.

According to the AGA, collusion amongst players is policed by other players and reported to the online gambling operator who can review the records of every hand of poker played on their system. Operators also deploy auditing software to review every hand of poker. If the operator concludes players have been involved in collusion, players can be refused play at the same table or excluded (Stewart, 2011).

Another form of cheating is called 'angle shooting'. Angle shooting is the disconnection of an internet connection, which allows the player's hand to not be folded and be allowed to see the rest of the hand without contributing more money to the pot. Poker software can detect internet disconnects and poker websites offer tables that may have disconnect protection. If the online software detects the player has disconnected, the players hand will not be folded and they will be allowed to see the hand through the river card without putting any more money in the pot. However, this has been abused because a player could pull his internet connection and would still be allowed to see if they had the best hand without having to put more money into the pot. Poker website rooms have attempted to stop this type of abuse by allowing players a set amount of disconnect protects and, once the player reaches the set limit; his hand will be folded if he fails to act in time. Any disconnects allowed by an operator should be limited (Honour, 2011).

There are also some concerns with activities and behaviors of individuals participating in online poker tournaments. These concerns include a player using multiple accounts and players selling their accounts for use during a tournament. Players

using multiple accounts during a tournament would present the appearance of collusion, and would give those players an unfair advantage by allowing the ability to gain access to more card and hand information. Individual identification of each person participating in an online tournament or game can be used to combat players attempting to gain advantages with these methods. Coupled with IP monitoring during tournament play, companies could eliminate unfair and undesirable practices like these.

A form of behavior that may be undesirable is robots, also known as 'bots'. Bot software can be easily purchased on the internet, and could provide users an opportunity to automate play functions and rely on decisions from the computer program while participating in online poker. Some online gaming operators have taken action to limit bots from playing poker on their websites. Software and security staff employed by the online network provider can be used to combat bots. According to AGA, bots tend to play in identifiable patterns and do not show the vulnerability human poker players demonstrate. Operators also routinely download bots into their computer systems in order to analyze how the bots play, which allows their systems to recognize those bots in future play. Operators also have auditing software to identify poker bots so they can then bar them and exclude players they suspect of using them (Stewart, 2011).

Software used to gather data and analyze patterns of play to be used in giving an advantage for a player is referred to as data mining. Data mining can be accomplished through extra personal assistance (EPA) programs which can include subscription services or a website. EPA programs data mine player information as well as provide interpretation of hand histories. To combat this, several online gaming websites have developed policies addressing the use of EPAs and data mining. Policies include

allowing players the ability to review only their own hand histories and barring any software that allows a player to use programs that share hole card data. To protect against data mining, online gaming providers in Iowa would need controls for dissemination and protection of player hand histories and data.

Online Gaming Network Provider Responsibilities. With various forms of cheating and irregularities at online poker, cheating may not be identified or detected in real time. In many cases cheating is not detected until after the fact or is not detected until an audit of hand histories or specific game play is conducted and analyzed. In order to maintain game integrity, an online poker network provider will need technology, software and security staff to recognize and combat the various forms of cheating and game irregularities. Any online gaming platform provider in Iowa would be expected to have technology and software detection tools to identify and detect cheating. The online provider would also be expected to develop player patterns of cheating for recognition and develop controls to detect the various forms of cheating. Once cheating or irregularities have been detected, the provider would be required to report the detected patterns of cheating or irregularities to the regulators for investigation and review. Action can then be taken against the player such as a warning or termination from the online gaming network. Laws and regulations will also be needed to address cheating at online poker including detection, prevention and a provision for penalties. Lastly, a framework for auditing is also needed to detect and combat the forms of cheating and gaming irregularities.

Identity and Age Verification. In Iowa, laws and regulations dictate participants in gambling shall be 21 years of age or older in order to make a wager at licensed facilities (Gambling Boat 99F, 2011). One priority for brick-and-mortar casinos to ensure compliance with Iowa law is to properly identify all persons who are participating in wagering and gaming activities. This is also true for the identification of participants in online poker by online gaming providers.

Many companies provide software services to poker websites for identity and age verification purposes in order to identify persons participating in online gaming and wagering opportunities. Identity and age verification is important to both operators and regulators in order to combat underage gaming, credit card theft and fraud including money laundering, and security of player accounts. Many online companies providing age and identity verification have software that matches personal information from the website applicant against government issued identifications and other databases to properly identify persons and their age through a series of questions.

One company providing age and identity verification services, Aristotle, reports there are three parts of identity and age verification: is the person who they say they are, is the person old enough to participate in online gaming, and is the person identified posing a risk? Aristotle's Integrity software validates a person's age and identity when signing up for online poker, online lottery, or online pari-mutuel horse wagering. An applicant's answers are compared to Aristotle's databases to prove or not prove the identity which allows for an online gaming company to enable accounts to be set up. Additionally, Aristotle reports if the customer is rejected, the player is given an

opportunity to verify identity and age through an offline provision of government documents (Aristotle 2010).

The "Online Gambling Five Years after UIGEA" white paper, states online gambling sites must identify customers accurately to: ensure the operator can exclude underage customers from gambling; exclude customers living in jurisdictions that have not legalized online gambling; exclude individuals who have engaged in cheating or otherwise violated the rules of the game; and properly evaluate financial transactions to gauge the risk of money laundering and other offenses (Stewart, 2011). AGA also reports many of the same steps used to determine a participant's geographic location can also be used for customer identification, and online gambling operators can usually determine when a participant is below the legal age for gambling (Stewart, 2011).

The AGA also reports "regulators in Canada, Oregon and Europe report they received almost no complaints that their operators have permitted underage gamblers on their websites and comparable age verification procedures are currently followed with success by online vendors of liquor and tobacco, and by the websites of Hollywood movie studios (Stewart, 2011)". For example, the AGA reports the Oregon Racing Commission requires a customer to provide his name, address, telephone, credit card information or bank account data. This information can be checked immediately through databases maintained by credit firms and public databases, such as motor vehicle registrations. If there is any question as to the customer's identity, the operator will follow up by requiring additional information, which can include a social security number or personal data only the customer should know (Stewart, 2011).

One concern about identity and age verification is that minors could attempt to access online gaming websites by using a family member's personal information or have an account activated by a friend of legal age. This would allow for the minor to use this account to participate in the wagering opportunity. This is a type of underage gaming comparable to a minor using a fake ID to gain entrance into a brick-and-mortar casino to conduct wagering and gaming. It is also important to note, similar account sharing on a college campus would be difficult to detect or prevent. Utilizing real information or login credentials from a person legally able to participate in online gambling presents an issue where persons otherwise prohibited from participating in online gambling circumvent the controls in place for age and identity verification.

Proper age and identity verification is a good policy to keep minors from underage gambling; however, in the example of a person of legal age creating an account for a minor or allowing a minor to participate on that person's account, there is little research on effective ways to combat this form of underage gambling. If intrastate poker becomes legal, a question of account set up and the process for account set up will need to be addressed in a comprehensive manner to control underage gambling. Will a player be allowed to set up an account online through the online hub operator(s), or will the initiation of an account be accomplished in person at a brick-and-mortar casino in Iowa? How an Iowa intrastate online poker network allows for account set up could have an impact on the success of identity and age verification processes for those participating in the online poker network.

The verification of a participant's age and identity for wagering or gaming activity is a priority for brick-and-mortar casinos in order to comply with laws and

regulations. This can be accomplished by brick-and-mortar casinos checking government issued identifications of participants at the casino entrances as well as having verbal interactions verifying the identification presented belongs to the participant. Participants of online gaming are not physically present to provide identification, but websites providing online gaming must have the ability to verify the age and identity of their participants. Research has shown software can be integrated into online gaming companies' websites for identity and age verification. However, little research is available showing the success or failure rates of the software. Any regulation or law concerning intrastate internet poker in Iowa should address the concerns of player and account identification in order to prevent and combat underage gaming, identity theft, fraud and other criminal acts.

Responsible Gaming Measures

Research was conducted on responsible gaming measures that can be implemented through the development of a regulatory framework for intrastate internet poker. The data presentation will address the current responsible gaming measures in place for brick-and-mortar casinos and discuss the ease of adapting to an internet environment. The information will also reveal other responsible gaming measures and speak to their effectiveness in other jurisdictions where internet gambling is legal. In addition, the Iowa Department of Public Health (IDPH) prepared a report regarding the societal impacts of internet poker in Iowa for inclusion in the IRGC report. The IDPH report is attached as Appendix D.

Current Responsible Gaming Measures. 491 IAC 5.4(12) requires measures be implemented by licensees to adopt polices and procedures to address problem gambling at facilities. IRGC has developed uniform standards for licensees to use in addressing problem gaming and require the licensee adopt and implement these measures, with IRGC randomly checking for compliance. Facilities must follow the rule-based requirements of the Uniform Standards for Iowa Racing & Gaming Commission which were adopted in conjunction with the Iowa Gaming Association for addressing problem gambling in April of 1999 and which are periodically revised and updated. These methods must be submitted by the facilities in their annual license renewal application addressing the four areas of concern, and their compliance is verified by IRGC. The four areas are: (1) the prominent display of problem gambling materials and signage; (2) staff development and training on problem gambling; (3) procedures established to deal with specific problem gambling behaviors; and (4) active participation in the Iowa Gambling and Prevention Treatment Program (IGPTP).

Because of these established procedures and standards, many of these areas of compliance could be met with minimal effort if online gambling should become legalized. In the licensed facilities, the prominent display of problem gambling materials and signage would include items such as brochures, cards and posters. These are posted near entrances/exits, cage areas, ATMs and on various printed materials. A website link must also be included to the IGPTP website and signage must be posted with a responsible gaming message and helpline number. Operators of online gambling could be required to maintain advertisements for help lines and provide information about problem gambling on the gaming websites and on the same pages as the games

themselves. Website links could be provided on the network(s) and the possibility of instant message chatting could be implemented which would connect a possible problem gambler directly to someone at a treatment agency.

In 2004, a statewide voluntary self-exclusion program was put into place, enabling a patron to sign one form at a facility requesting a lifetime ban from all state licensed Iowa casinos. This law also included a provision that if the self-excluded patron was caught gambling, they would forfeit any jackpots, credits or chips to the state's general fund. The Iowa Gaming Association maintains the database for all self-excluded patrons in Iowa.

Technology is available to provide software that identifies potential problem gambling by analyzing patterns in play and exclusion of players who do not qualify (Light & Rutledge, 2011c). They can also provide access to play logs for analysis by both software searching for problem gambling and players themselves. Licensees can also require player imposed self-limits on their websites to assist with a player's commitment to gamble responsibly. These self imposed restrictions could limit monetary amounts of wagers or time spent on the website gambling. Licensees could be required to limit advertising and/or be required to put problem gambling in their advertisements on the website. Additionally, software could be used to prohibit gambling on credit or using credit cards for gaming (Light & Rutledge, 2011c).

Responsible Gaming Measures in Other Jurisdictions. In November of 2010, the Minnesota Lottery launched a trial of online game play and several responsible gaming measures were integrated. These included limits set by the lottery authority for

maximum spending, player imposed limits and player self-exclusion (Jason, 2011). Software today enables the regulating authority to not only limit monetary amounts spent, but time spent on the gaming site and establishes cooling off periods.

The British Columbia Lottery Corporation has an online platform that allows for several different types of self-regulating behavior settings. These include the traditional daily, weekly or monthly betting limits the patron may set. Additionally, they allow the patrons to set session limits (number of hands) and time limits. All of these settings have a cooling-off period which do not allow a change of the current limit for 24 hours after it has been requested. Their online platform also allows patrons to self-exclude themselves from the website.

The Gaming Commission of Alderney has established several regulations for their licensees to assist in monitoring and helping identify problem gambling. These include providing information on their gaming sites and continuing education on the part of the licensee to learn about new advances in technology and techniques for combating problem gambling. Alderney also required licensees to allow customers to set limits in terms of monetary amounts of wagers, number of transactions and/or time frame.

The responsible gaming measures taken in other jurisdictions might be used to provide an example of measures that could be employed by an internet gaming operator. The measures could be employed legislatively, through administrative rule, or through controls established by the operator. It was unclear from our research if and how effective the responsible gaming measures taken by other jurisdictions were in addressing responsible gaming concerns.

Summary & Conclusions

As required by SF 526, the report addressed the creation of a framework for the state regulation of intrastate internet poker. The report considered the current state of unregulated internet poker play in Iowa, consumer protection, and responsible gaming measures that can be implemented through regulation, licensing structures, regulatory recommendations, affiliations with licensees regulated under chapter 99F, and the collection of wagering taxes. Specifically, the report discussed the potential number of players and revenue of intrastate internet poker for Iowa by including studies on revenue projections of internet poker along with taxation methods. Rules and regulations from other federal jurisdictions were reviewed for the report to assist IRGC staff with obtaining a high-level understanding of various internet regulatory models and structures throughout the world. Business models were reviewed to identify the pros and cons for each model that may be utilized in Iowa. Extensive research was conducted and reported in the area of consumer protection including, but not limited to: identity and age verification, security of customer data, cheating and undesirable play detection, geo-location, and licensing of operators. Responsible gaming measures can be implemented in the internet poker environment such as time and dollar limits set by the consumer along with incorporating current brick-and-mortar responsible gaming measures.

Taxation Methods and Revenue Projections. There are two methods most prevalent when taxing the proceeds from internet poker. The most common method is similar to how poker is taxed at a brick-and-mortar casino. A rake is taken by the operator and a percentage tax is applied to the total rake taken in by the operator. An

alternative method imposes a tax on the deposits made by the poker players to the internet poker site. Typically the tax rate for this method is lower than the method to tax on rake.

Three revenue studies were reviewed by IRGC staff. The studies were based on aggregate projections of poker play in the U.S. IRGC staff used some assumptions when analyzing the projections to apply to the population in Iowa. Using the assumptions by staff and applying the studies, three methodologies were created. The methodologies resulted in a range of approximately $13 million to $60 million in rake by the operators annually. Assuming a tax rate of 22 percent, the assumptions would demonstrate approximately $3 million to $13 million in tax revenue for the state annually. During the 2011 legislative session, a number of sources reported potential tax revenue of $30 million to $35 million to the state annually. One potential company in which the estimate originated confirmed the estimate, but was unable to provide the methodology due to concerns with respect to privacy of the projection. The company did indicate the projection was based on a market after at least three years of operation and prior to the events surrounding 'Black Friday'.

Rules and Regulations-Common Standards. The research conducted for this report included the collection of a number of rules and regulations from federal jurisdictions that have legalized internet gambling along with some discussions from current or past regulators of internet gambling. Research concluded most internet gambling jurisdictions have regulations or requirements in the following areas: licensing of operators, background investigations of individuals conducting business, age

verification, identity verification, responsible gambling measures, location identification, technology testing, fraud and cheating detection, money handling or reporting, and dispute resolutions. The specific regulations and requirements within the areas varied by jurisdiction. If internet poker is legalized in Iowa, a best practices approach in the mentioned regulatory areas would be a recommended starting point for drafting regulations.

Research of other jurisdictions that have legalized internet gambling revealed many jurisdictions or internet gambling providers contracted out various technologies to third party operators. It was common for regulatory jurisdictions to utilize independent gambling game testing laboratories to assist with randomness and technical system analysis of the internet gambling system. IRGC staff has relationships and currently uses the services of two of these testing facilities. In addition, many online gambling network providers contract the services of third party companies to assist with identity verification, age verification, geo-location, cheating detection, and other areas to comply with rules and regulations. IRGC staff researched and interviewed some common third party providers to learn about the various capabilities.

Potential Business Models. One important aspect for building a framework for regulating intrastate internet poker is to understand how potential business models impact the regulation and what may fit best in the State of Iowa. Three possible structures were researched for the study: single network model, limited hub model, and the multiple license model. The single network model represents an environment that allows for only one network or provider for online gambling. The provider may be a single hub provider

or a state-run network. A limited hub model sets a limit to the number of hubs that can provide internet gambling in the jurisdiction. California has previously proposed to allow up to five hub operators in the state, while New Jersey's proposal appears to limit hubs to existing casino operators. The multiple license model represents regulator environments licensing multiple companies to provide online gambling. Many island and some European jurisdictions follow this model. IRGC staff researched the various models for the report and identified many pros and cons of each model.

Consumer Protection Areas. A substantial amount of research was conducted on consumer protection areas with respect to the regulation of internet poker. IRGC staff reviewed articles and regulations from other jurisdictions as well as discussed areas of consumer protection with all parties interviewed. The report focused on the more common areas of consumer protection as determined by IRGC staff. The areas included, but are not limited to: identity and age verification, security of customer data, security and access to customer funds, cheating and collusion detection, geo-location, and licensing of operators. IRGC staff determined there are a vast amount of resources and technology available to assist regulators with determining compliance in an internet environment, although some limitations were discovered. The report breaks down each of the regulatory areas and addressed the capabilities of regulation along with the limitations for each area.

Responsible Gaming Measures. When researching the potential responsible gaming measures that might be implemented, current measures already in place in brick-

and-mortar casinos in Iowa and gaming measures enacted in other federal internet gambling jurisdictions were reviewed to determine if they can be incorporated into an internet environment. Iowa law currently requires the brick-and-mortar casinos to participate in a statewide voluntary self-exclusion program. In addition, Iowa casinos have adopted uniform standards to address problem gambling at their facilities. These measures have been tested over time and could be incorporated into internet gambling regulations.

Most jurisdictions where internet gambling is legal have incorporated responsible gaming measures. The most common responsible gaming measures in an internet environment require the operator to provide educational material to their customer, allow for the ability to setup self-imposed gambling limits, time spent playing, number of games played, and/or amount of money spent, and allowing for a process to exclude themselves from participating. The self-imposed limits typically require a 'cooling-off' period a player must wait before changing any limits. IRGC staff included comments on the feasibility of incorporating these measures into a proposed regulatory framework for Iowa. In addition, the IDPH prepared a report regarding the societal impacts of internet poker in Iowa for inclusion in the IRGC report. The IDPH report is attached as Appendix D.

Future Research Suggestions. The research conducted by IRGC staff revealed areas where information was difficult to obtain or seemed to be contradictory. It would be prudent to research those areas further. The revenue projections used in this report included a number of assumptions in order to provide an estimate for the State of Iowa.

Although the methodology is explained and the basis of the information came from published reports, it would be beneficial to further study the projected amount of revenue. This amount may be important or impact the business model set by legislation with respect to the liquidity of the market and, indirectly, affect the regulatory framework.

Further information on the topic of geo-location may also be needed. Research conducted demonstrates technology is not available to precisely determine the location of a computer. This may cause situations where players located just within the borders of Iowa may not be able to participate in internet poker, or allow players just outside of the borders of Iowa to participate depending on how the geo-location tools are configured. With that said, some federal jurisdictions where internet gambling is legal have typically employed other controls combined with geo-location technology to accurately determine the location of the user. Further research on the topic of geo-location and residency may be needed to determine the acceptable ranges and levels of accuracy allowed or desired when developing the regulatory framework for this area.

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Appendix A

Consent Form

Report Title: Report pursuant to SF 526, (framework for the state regulation of internet poker)

Surveyor: Iowa Racing and Gaming Commission (IRGC)

What is the purpose of this survey?
The purpose of this study is to gather data from poker players of licensed Iowa casinos regarding play of internet poker. The data gathered in this survey, along with other data, will be utilized by the IRGC to assist in preparing a report to the general assembly regarding the creation of a framework for the state regulation of intrastate internet poker.

What will I do in this survey?
If you consent to take this study, you will complete the questions and return to the designee in the poker room that you received the survey. All answers will be anonymous. Surveys will be submitted by the poker room manager to the IRGC. Questions 1-5 must be completed for IRGC to utilize the data for this study.

How long will it take me to do this?
This survey will likely take you approximately 5 minutes to complete. There is no advance preparation needed.

Are there any risks of participating in the survey?
Participants are assured that their responses are confidential. Participation is voluntary.

What are the benefits of participating in the survey?
The benefits to participating in the study are that the participants will be assisting the IRGC in learning about current internet poker play in order to prepare a report for the general assembly.

Will I receive any compensation for participation?
There is no compensation or fee to be paid to any participant in this study. Participation is voluntary.

Who can I contact for information about this survey?
For more information about the survey, you can contact the IRGC at (515)281-7352.

Completing the survey implies my consent to participate in this research.

Thank you for your participation!

1) How often do you play poker online? (Choose only 1)
___ Never (Skip to question 4)
___ A few times a year
___ A few times a month
___ A few times a week
___ More than 4 times a week

2) I enjoy the following aspects of online poker? (Choose up to 3)
___ Low table limits
___ Game variety
___ Game at any time
___ Play multiple hands at once
___ Promotions
___ Tournaments
___ Convenience of play from home
___ Other: _____

3) I have concerns or get frustrated over the following aspects of online poker? (Choose up to 3)
___ Ease of depositing funds
___ Ease of withdrawing funds
___ Protection of identity
___ Randomness of distribution of cards
___ Poker bots
___ Loss of internet connection during hand play
___ Confusing or unclear tournament or promotional rules
___ Responses to complaints
___ Regulatory oversight of existing operations
___ Questions/comments on legality
___ Other: _____

4) The following regulatory measure is the most important to me (Choose only 1)
___ Protection of funds
___ Game integrity
___ Protecting confidential personal information
___ Prevention of underage gambling
___ Prevention of problem gambling from “addicted” or “susceptible” patrons
___ Other: _____

5) I would play online poker more frequently if: (Choose only 1)
___ I will not play
___ State or federal legislation was passed specifically addressing the legalization
___ Methods to fund online accounts were easier and/or more convenient

___ It was regulated by the state or federal government

6) If intrastate internet poker were legalized in Iowa, I would (Choose only 1)
___ Visit the casino less often to play live poker
___ Visit the casino more often to play live poker
___ Visit the casino the same amount to play live poker

Appendix B

		Per player Yield	Number of Iowa Players	Total GGR	Tax Rate	Taxes to State of Iowa
Methodology A	-conservative	X	X	$30,000,000	22%	$6,600,000
Methodology A	-aggressive	X	X	$60,000,000	22%	$13,200,000
Methodology B	-current play (for 2010)	X	X	$13,314,000	22%	$2,929,080
Methodology B	-projected 2014 play	X	X	$33,944,000	22%	$7,467,680
Methodology C	-current play	$647	85,300	$55,189,100	22%	$12,141,602
Methodology C projection	-current players	$650	34,500	$22,425,000		
Methodology C projection	-new players	$75	172,500	$12,937,500		
Methodology C projection	-total projected network play	X	X	$35,362,500	22%	$7,779,750
Methodology D	-lower	X	150,000	X	X	$30,000,000
Methodology D	-higher	X	150,000	X	X	$35,000,000

Summary of Assumptions not noted above (for complete description refer to paper):

Methodology A Goldman Sachs assumed current state of unregulated play in 2009 and forecasted a regulated market potential as shown above.

Methodology B H2 Gaming Capital did an international survey to determine the number of players involved in internet poker. We used the statistics for the United States and based on a population percentage estimated the number of Iowans playing.

Methodology C Current play was estimated using the findings from 3 different studies on the percentage of current population participating in unregulated internet poker. Projected network play was estimated using the same percentages Blue Sky disclosed from their own internet and phone surveys as to the tendencies of residents to join a poker network.

Methodology D The total taxes and number of players were the only data that IRGC was able to retrieve from USDG.

Appendix C

Iowa Lottery Perspective On Internet Gambling

One of the Iowa Lottery's fiduciary responsibilities to the state and its citizens is to investigate concepts that could enhance proceeds available for state causes. In recent years, the lottery has stayed abreast of developments regarding Internet gambling and its potential impact on lottery proceeds to the state.

Internet gambling has been an issue under discussion in this country for a number of years both on the federal and state level, especially as the federal government has attempted to regulate Internet gaming for off-shore organizations. Specifically in Iowa, the concept of Internet gambling has been discussed by lawmakers during both the 2010 and 2011 legislative sessions.

Public behavior shows that Americans already recognize that Internet gambling has modernized gaming for the convenience of the consumer. It is estimated that more than 2,500 unregulated Internet gaming sites currently operate within North America (*H2 Gambling Capital estimated the size of the U.S. market at $4.949 billion in 2010 Gross Gaming Yield)*. Unquestionably, this threat from illegal interests operating from outside our state's borders is real and growing.

Historically, states have retained the authority to establish their own gambling policies, which have been supported by the federal government. This states' rights authority must continue, as state governments have a closer understanding of the wishes of their particular electorate and can best respond to their citizens' concerns. On the state level, the discussion centers on intra-state gambling as opposed to interstate transactions.

Iowa state law allows the Iowa Lottery to utilize a variety of methods of delivery, including the Internet, to maximize the sales of its games of chance. The issue of when such a system would be implemented hinges on political opinion and public acceptance.

In April 2011, the District of Columbia became the first U.S. jurisdiction to authorize the licensing and regulation of Internet gaming by allowing the D.C. Lottery to offer online poker through its gaming system. The Iowa Lottery believes that Internet gambling will soon begin to be offered by states around the nation, and it is the lottery's fiduciary responsibility to investigate the concept and be ready to address it. To do otherwise would imperil the millions of dollars that the lottery raises each year for vital state causes. Without lottery revenues, state programs and services would require other funding sources, which very well could include various tax increases.

In order to maintain public trust, an Internet-based gaming system would need a clear focus on fraud and money laundering detection; detection and prevention of underage play; detection and prevention of abuse by those with gambling addictions; safeguarding

of player data; means to address the use of credit; and transparent reporting of financial and operational data.

Another important issue for all to consider in the Internet gambling debate is that any state-sanctioned gambling site will be at a significant competitive disadvantage against illegal sites with existing players in Iowa and around the world. We do not believe that 100 percent of those already gambling illegally online will leave their existing sites of choice to migrate to a state-regulated site. For this and other reasons, including the experience of Canada and other countries already operating government-regulated Internet gaming, the Iowa Lottery believes that the income generated by state-regulated gaming would be incremental rather than exponential. Internet gaming does appeal to an emerging millennial segment of the market, but we do not believe that a state-regulated system would result in a vast expansion of gaming. Thus, it should not be counted on as a large source of income for the state, but rather a replacement of lost income due to a changing players' market.

The Iowa Lottery has proven since its start in 1985 that it is an expert in running a statewide gaming network with security and integrity while maintaining the dignity of the state. Our network today covers thousands of square miles, providing real-time data by securely linking a back-office with lottery terminals, many of which operate 24 hours a day, in more than 2,400 retail locations.

From a business and state perspective, we do not want to be an offline business in an online society. In the past, there were little proven controls on age restriction, credit card use, and location of user. Today, there already are countries providing lottery services that are controlled as an intra-state game via the use of geo-location (guaranteeing in-Iowa only), put restrictions on maximum bets and loss limits, restrict the use of credit, and restrict playing age. These controls were not available until recent years. We are now convinced the technology is very secure and will provide the required safeguards.

Given that foreign sites already operate illegally in the United States, retailers in Iowa are already feeling the impact of virtual gaming. Electronic play offered by the Iowa Lottery would provide a safe and regulated gaming alternative to those foreign games and compete for the dollars already being generated illegally by foreign sites. The lottery will continue to monitor developments regarding Internet gaming and provide updates to our state's lawmakers as they continue their discussions.

Appendix D

Iowa Department of Public Health

Internet Poker: A Public Health Perspective

Internet Poker:
A Public Health Perspective

Prepared for

Iowa Department of Public Health
Division of Behavioral Health
Office of Problem Gambling Treatment and Prevention

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Disclaimer:

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INTERNET POKER: A PUBLIC HEALTH PERSPECTIVE

(Briefing Document)

Prepared for: Office of Problem Gambling Treatment and Prevention, Iowa Department of Public Health

Prepared by: Center for Social and Behavioral Research, University of Northern Iowa

Submitted: September 2011

The purpose of this paper is to provide an overview of potential public health issues related to legalizing Internet poker in Iowa. The paper does not advocate in support of or in opposition to Internet poker legislation. Regardless of whether or not there are legislative changes affecting the legality of Internet poker, some Iowans currently are, and likely will continue to be, engaging in real-money poker games online. Therefore, IDPH should continue education efforts designed to discourage Iowans from engaging in illegal gambling and to reduce problem gambling in Iowa. In addition, IDPH should continue to provide treatment services so individuals with gambling problems can receive the counseling and support services to assist them in quitting, reducing, or controlling their gambling.

Internet gambling was one of the least reported gambling activities engaged in by adult Iowans in 2011 (5% ever in lifetime, 2% in past 12 months) (Lutz & Gonnerman, 2011). About 3% of gamblers admitted for problem gambling treatment reported gambling online during the past 30 days (Lutz & Gonnerman, 2011). Some of the cited concerns about Internet gambling included the trustworthiness and fairness of websites, illegality, and security of financial transactions (Wood & Griffiths, 2008). However, **certain characteristics of online gambling may be particularly attractive to novice gamblers** who want to experiment with new games in an anonymous and private manner (Corney & Davis, 2010). If a legal, regulated Internet poker option becomes available, one can *speculate* that some Iowans who had not previously gambled online would start wagering on Internet poker games, at least on a trial basis. **People who gamble online tend to also gamble offline** (Wood & Williams, 2009); therefore, **more Internet gamblers would not necessarily mean an increase in the number of Iowans who gamble.**

People with gambling problems are disproportionately represented among Internet gamblers (Griffiths, Wardle, Orford, Sproston, & Erens, 2009). Internet gambling has the *potential* to lead to increased problem gambling for some individuals (Griffiths et al., 2009; Ladd & Petry, 2002), but the scientific literature has *not* clearly established a causal relationship between gambling online and developing a gambling problem (Shaffer & Martin, 2011). The prevalence of problem gambling for gambling of all kinds during the past 12 months is less than 1% in Iowa. Approximately 13% of adult Iowans have experienced one or more symptoms of problem gambling during the past 12 months (Lutz & Gonnerman, 2011). **Given the ease, convenience, and constant availability of online gambling, it is *speculated* that legal Internet gambling could exacerbate problems for an unknown number of Iowans with, or at-risk of developing, gambling problems.**

Adverse consequences associated with problem gambling affect people other than the gambler. For instance, 22% of adult Iowans said they have been negatively affected by the gambling behavior of a family member, friend, or someone else they know (Lutz & Gonnerman, 2011). Because of the **high level of comorbidity of problem gambling with other mental health problems** (Lorains, Cowlishaw, & Thomas, 2011), it is difficult to disentangle the social costs directly attributable to problem gambling from costs that could be attributed to other problems. It is even more difficult to quantify social costs that can be directly and solely attributed to a single form of gambling activity (e.g., Internet poker).

Internet gambling is relatively new. Although the scientific literature on this topic is growing, the number of empirical studies is small and the number of studies assessing the social impacts of Internet gambling is limited. Currently, there is very little data about the gambling behaviors of Internet poker players in Iowa**. In conclusion, making an exact determination about the size and scope of potential social and public health impacts exclusively attributable to Internet poker in Iowa is not currently possible.**

Internet Poker: A Public Health Perspective

Introduction

The purpose of this paper is to provide a concise overview of several issues and considerations related to legalizing Internet poker in Iowa. Specifically, the emphasis of this paper is on describing the potential personal and public health impacts of Internet poker. The content of this paper is based on a summary of empirical research and expert commentary from the scholarly and scientific literature organized by the following topic areas: (a) a public health perspective on gambling, (b) trends in online gambling including Internet poker, (c) relationship of Internet gambling and problem or pathological gambling, and (d) potential societal impacts of Internet gambling including poker. This paper was prepared in consultation with, and at the request of, the Office of Problem Gambling Treatment and Prevention at the Iowa Department of Public Health as part of a contract with the University of Northern Iowa, Center for Social and Behavioral Research.

Before proceeding, it is also important to clarify that the purpose of this paper is not to (a) be an academic treatise or exhaustive review of literature on the societal impacts of gambling (see Williams, Rehm, & Stevens, 2011, for an annotated bibliography on the social and economic impacts of gambling), (b) interpret the legal issues related to Internet gambling (see Rose & Owens, 2009, and Casino City Press, 2010, for commentary on laws and regulations pertaining to Internet gambling; see also Grohman, 2006, for a discussion of regulations surrounding Internet poker), (c) provide a cost-benefits or economic analysis (see Holliday, Kelleher, Bradbury, and Keeble, 2010, for a summary of potential economic impact of legalized online gambling), (d) suggest

legislative policy considerations (see Stewart, Ropes, & Gray, 2006, 2011, for a discussion of pragmatic policy issues related to Internet gambling including poker; see also Casino City Press, 2010), or (e) advance a particular agenda or legislative position either in support or opposition to legalized gambling or the expansion of legalized gambling to include Internet poker. In this paper, the terms "Internet gambling" and "online gambling" are used interchangeably.

Gambling and Public Health

Approaching the issue of gambling from a public health perspective provides a framework for examining the potential health impacts of gambling for individuals, social groups, and systems. According to Korn and Shaffer (1999), "A public health perspective allows for a comprehensive analysis of the biological, behavioral, social and economic determinants of health and illness" (p. 306). There are a number of articles related to various negative consequences for individuals and social groups (e.g., families, communities) that may either directly or indirectly be attributed to gambling. These negative consequences include such things as emotional or other mental health problems, family and relationship dysfunctionality, substance use and abuse, criminal behaviors, and financial problems (see Korn & Shaffer, 1999; see also Shaffer & Korn, 2002; see Lorains, Cowlishaw, & Thomas, 2011, for discussion of common comorbid disorders with problem or pathological gambling).

Shaffer and Korn (2002) put forth a public health perspective on gambling that considers both the potential positive and negative effects of gambling for individuals and systems. In addition, they described the need for prevention, harm reduction, and treatment efforts targeted to three groups: (a) individuals who do not gamble currently,

(b) individuals who gamble without exhibiting problems, and (c) individuals who gamble in an unhealthy manner. A public health approach is focused both on promoting positive health and well-being through the prevention of gambling problems and on providing treatment services to those people personally experiencing problem gambling symptoms or who are indirectly harmed by another's problem gambling behaviors. In other words, the focus is on physical, emotional, relational, and financial consequences that may be experienced by gamblers, their families, and social systems as a direct or indirect result of gambling behaviors.

Therefore, the clinical distinction of "pathological gambler" versus non-pathological gambler is less central to the public health discussion of the social and health impacts of problem gambling. The term "pathological gambler" is used specifically in reference to clinical-related classifications as measured by screening instruments used to assess probable or possible pathological gamblers based on self-reported responses to questionnaire items (typically from survey research studies). In contrast, the term "problem gambler" may be used to refer to a particular classification for certain problem gambling screening instruments, or it may be used more generally to refer to individuals experiencing any moderate to severe negative consequences because of their gambling behaviors.

Trends in Online Gambling

Internet Access and Availability. Since the early 1990s, there has been a rapid increase in the percentage of households that have Internet access. Broadband services were *available* for 99.37% of households in Iowa as of April 2010, and 2 of 3 households (66%) had broadband connections in their homes (Connect Iowa, 2010). In addition to

home-based broadband connections, business and government entities are increasingly providing free Wi-Fi connections or "hot spots," thus allowing people even greater access the Internet. This increased availability has coincided with technological developments such as smaller and lighter laptop computers, tablets (e.g., iPad), and smartphones. These devices have made it more convenient for people to access the Internet from virtually any location at any time of day.

The Internet is interwoven into the everyday routines of many people in the United States. The Internet is commonly used and relied on extensively for information gathering (e.g., Google searches), communication (e.g., email), personal relationships (e.g., Facebook), shopping (e.g., Amazon.com), and entertainment (e.g., streaming music, videos, movies). Therefore, it is not surprising that gambling opportunities are available online (see Wood & Williams, 2007 for a synopsis on the history of Internet gambling). Although some of these sites provide easy access to gambling-related entertainment that allow people to play online without wagering money, other sites provide actual gambling opportunities involving real-money wagering.

Availability of Internet Gambling. In a paper reviewing the status of online gambling five years after the 2006 Unlawful Internet Gambling Enforcement Act (UIGEA), Stewart, Ropes, and Gray (2011) characterized online gambling as follows: "In little more than a decade, online gambling has exploded from a minor sideshow on the Internet to a substantial global industry" (p. 2). An indicator of the expanding presence of Internet gambling and poker is the amount of content related to these topics available online. Several Google searches were conducted on September 1, 2011; the number of "hits" or "results" yielded were as follows: (a) "internet gambling" 12.7 million, (b)

"online gambling" 24.2 million, (c) "online poker" 63.4 million, (d) "internet poker" 204 million, and (e) "poker" 520 million. A more direct measure of the availability of online gambling is captured in *Casino City's iGaming Business Directory*. This directory is published each year and provides data about online gaming sites and traffic patterns. The 2011-2012 edition of the directory includes 2,500 Internet gaming sites and 5,700 Internet gaming related or affiliate sites (Casino City Press, 2011). A study in 2010 estimated that there were 616 online poker rooms as of June 30, 2010 (H2 Gambling Capital, as cited in Spectrum Gaming Group, 2010). This estimate is similar to that found on www.pokerscout.com where over 600 real-money poker websites were available for players; however, not all sites were accessible for players in the United States (Poker Scout, 2011). Iowans seeking to gamble online could visit www.casinocity.com. This site is one of the most comprehensive portals dedicated to Internet gambling. It appears as though someone in Iowa could possibly access more than 250 online casinos and poker rooms through this portal.

Empirical Studies on Internet Gambling

Limited Scientific Knowledge Base. Although the popularity of Internet gambling is increasing, the published scientific literature on this topic is relatively limited. Much of the early research on Internet gambling was based on self-report and retrospective data about online gambling behaviors (National Center for Responsible Gaming, 2011). A systematic search of the PubMed and PsychINFO databases for articles published through March 7, 2008, yielded only 30 peer-reviewed research articles about Internet gambling of which 20 were commentaries, 10 relied on self-reported data, and none

relied on actual observed Internet gambling behaviors (Shaffer, Peller, LaPlante, Nelson, & LaBrie, 2010).

Current Research and Directions. The knowledge base about Internet gambling is growing within the research community. Questions about Internet gambling are now more common in gambling prevalence studies at the state, national, and international levels. In addition, researchers are discussing the methodological issues related to collecting data about Internet gamblers and their gambling behaviors (e.g., Wood & Griffiths, 2007). During the past few years, there has been an increase in published research relying on actual behaviors of those gambling on the Internet (e.g., LaPlante, Kleschinsky, LaBrie, Nelson, & Shaffer, 2009; Xuan & Shaffer, 2009). Emerging topics of study are the demographic characteristics of Internet gamblers, their actual online wagering patterns, and the relationship between Internet gambling and problem or pathological gambling.

Prevalence of Internet Gambling. The prevalence of Internet gambling varies by country (Wood & Williams, 2009). For instance, the prevalence rates of Internet gambling in the 2007 International Online Survey ranged from 6.9% in the United Kingdom (UK) to 1.0% in Singapore (Wood & Williams, 2009). The 2007 British Gambling Prevalence Survey showed that 6% of those surveyed had gambled on the Internet (Griffiths, Wardle, Orford, Sproston, and Erens, 2009). In a study of gambling in Canada, approximately 2% of adult Canadians reported having gambled on the Internet during the past year, thus making it the least common form of gambling assessed in that survey (Wood & Williams, 2009). In 2006, an estimated 4% of adults in the United States had gambled online (American Gaming Association, 2006), and an estimate of 1% was

reported in a large scale national study (Kessler et al., 2008). A recent state-level prevalence study estimated that 3.6% of Maryland residents had ever gambled on the Internet (Shinogle et al., 2011).

Prevalence of Internet Gambling in Iowa. The findings of a 2011 statewide study of adult Iowans showed 5% of adult Iowans said they had ever gambled on the Internet, with 2% reporting having done so within the past 12 months and about 1.5% during the past 30 days (Lutz & Gonnerman, 2011). By way of comparison, the prevalence of video poker, video keno, or video blackjack among adult Iowans was 24% lifetime, 7% past 12 months, and 2% past 30 days. In summary, only a small percentage of adult Iowans self-reported that they have ever or recently used the Internet to gamble.

Characteristics of Internet Gamblers. Research on the demographic characteristics of those who gamble on the Internet has shown that Internet gambling is:

- More common among men than women (Griffiths et al., 2009; Parke, Rigbye, Parke, Wood, Sjenitzer, & Vaughn Williams, 2007; Wood & Williams, 2009). For instance, the prevalence of Internet gambling in the 2007 British Prevalence Study was 9% of men and 3% of women; hence, of those who had gambled on the Internet, 74% were men and 26% were women (Griffiths et al., 2009).
- More common among younger adults (Griffiths et al., 2009; Ladd & Petry, 2002; Parke et al., 2007; Wood & Williams, 2009) and single persons (Wood & Williams, 2009). For example, a slight majority (55%) of those in the 2007 British Prevalence Survey who said they had gambled on the Internet were between the ages of 16 and 34 (Griffiths et al., 2009).

- Positively associated with higher levels of education (Griffiths et al., 2009; Wood & Williams, 2009), higher incomes (Wood & Williams, 2009), employed status (Wood & Williams, 2009), and professional/managerial occupations (Griffiths et al., 2009).
- More common among regular Internet users (Wood & Williams, 2009).

The relationship of Internet gambling with other health behaviors and conditions varies between studies and across populations. For instance, Wood and Williams (2009) found that Internet gamblers in Canada had lower rates of physical disabilities or chronic health problems than non-Internet gamblers, but this difference was not statistically significant when using an international sample of Internet gamblers. This same pattern was observed with mental health problems. Internet gamblers showed higher rates of tobacco and illicit drug use during the past month than did non-Internet gamblers (Wood & Williams, 2009).

Internet Gambling: Motivational and Psychological Aspects

Perceived Advantages of the Internet Gambling Experience. Internet gambling provides people with an easy and convenient way to gamble. It offers the chance to do so in a potentially anonymous manner and without the time and expense associated with traveling to traditional gambling venues such as casinos. Among those who gamble using the Internet, they commonly mention that the convenience (Parke et al. , 2007), ease of use, and 24-hour availability of the online gambling experience appeals to them or is something they find advantageous compared to offline gambling (Allen Consulting Group, 2003; Derevensky & Gupta, 2007; Williams & Wood, 2009). “Competition” was

the most common reason cited by adolescents and young adults for why they gambled online; this reason was followed by convenience, 24-hour access, privacy, high speed of play, good odds, and fair or reliable payouts (Derevensky & Gupta, 2007). Internet gamblers also commonly mentioned they like the fun and excitement of online gambling (Parke et al., 2007).

Perceived Disadvantages of the Internet Gambling Experience. The perceived disadvantages of online gambling compared to offline gambling varied some by country. This is likely due, at least in part, to differences in the legality of the activity among the jurisdictions and the cultural norms related to gambling. Among Canadians, the most commonly mentioned disadvantage of Internet gambling was the poorer social atmosphere because Internet gambling lacks the crowds and social interactions of offline gambling (Wood & Williams, 2009). Other disadvantages commonly mentioned by Canadian gamblers were: (a) easier to spend more money, (b) concerns about the safety of money deposited and of winnings being paid out, (c) absence of face-to-face contact makes it more difficult to bet, and (d) it was too convenient.

A common concern reported by Internet gamblers in the United States is related to the integrity of online gambling sites. Specifically, about one-half of Internet gamblers said they believe that online casinos or other players find ways to cheat during online gambling (American Gaming Association, 2006). This concern was echoed in a study of Internet gamblers representing a variety of countries (Wood & Williams, 2009) that found the most mentioned disadvantage of Internet gambling was the difficulty in verifying the fairness of the games or activity. Other disadvantages commonly mentioned by an international sample of Internet gamblers were: (a) concerns about the safety of

money deposited and of winnings being paid out, (b) absence of face-to-face contact makes it more difficult to bet, (c) illegality, (d) poorer social atmosphere, and (e) it being easier to spend more money. In addition, the results of a qualitative study of Internet poker players in Sweden further confirms the perceived trustworthiness of websites is an important factor people use when deciding where to gamble on the Internet (Wood & Griffiths, 2008).

Gambling Initiation via Internet Gambling. Some characteristics of online gambling may be particularly attractive for novice gamblers who want to experiment with new games in an anonymous and private manner. Because of the private nature of gambling online, there is less risk of public embarrassment when one plays poorly or demonstrates a lack of knowledge about the game (Corney & Davis, 2010). Also, as noted by Griffiths (2003), online gambling sites sometimes provide free practice gambling to attract and retain users. In addition, they may even provide financial incentives or special promotions for new users.

In one report, among those Australians who did not gamble on the Internet in the past 12 months, 5% said they thought they might start using the Internet for gambling (ACG, 2003). This low self-reported potential increase in Internet gambling should be interpreted within the context that the respondents likely answered. That is, one could plausibly infer that respondents would most likely be basing their future likelihood of gambling online on the assumption that there were no changes in the legality or regulatory nature of Internet gambling. This study was conducted several years ago, so people's intentions to begin gambling on the Internet may have changed since then.

Relationship Between Online and Offline Gambling. A study of Australian adults, however, suggests that those who gamble on the Internet gambling tend to already be engaging in offline gambling activities (ACG, 2003). Likewise, nearly everyone who said they had gambled on the Internet said they also gambled offline or at land-based venues (Wood & Williams, 2009). Moreover, they found that the more types of gambling activities engaged in was predictive of a higher likelihood of participating in Internet gambling. In other words, very few people are likely to be exclusively Internet gamblers.

Internet Gambling and Problem Gamblers. Certain characteristics of online gambling may also be particularly attractive for problem gamblers who want easy and ready access to gambling activities, the convenience and variety of experiences available online, and the excitement that can accompany the online experience. Griffiths and colleagues (2009) speculated that, "The medium of the Internet may be more likely to contribute to problem gambling than gambling in offline environments" (p. 199). Ladd and Petry (2002) also asserted that the expansion of gambling opportunities, including Internet gambling, could potentially result in increased problem gambling and have adverse effects for individuals and social groups. However, at present, the scientific literature cannot substantiate with causal data that any increases in the prevalence of problem gambling among the general population could be directly attributable to increases in Internet gambling (see Shaffer & Martin, 2011).

Development vs. Maintenance Factors. A biopsychosocial approach to gambling research is useful in demonstrating that the factors for why people report they currently gamble (i.e., factors maintaining gambling behavior) are not necessarily the same factors that contributed to the development of their gambling behaviors (Griffiths & Delfabbro,

2001). An implication of this finding is that the factors that initially contributed to a person gambling online or playing online poker specifically (e.g., less intimidating) may not be the same factors that contribute to the persistence of this gambling behavior (e.g., 24-hour access).

Internet Gambling: Adolescents and Young Adults

Free-Play "Gambling." In a study of adolescent gambling in Oregon, the most commonly mentioned type of Internet "gambling activity" reported was using the Internet to "gamble for free," with only a small percentage of adolescents in the survey reporting that they had actually placed real-money wagers on Internet gambling sites (Volberg, Hedberg, & Moore, 2008). This finding is similar to results showing that about 1 in 10 Ontario youth (ages 9 through 16) said they had gambled on the Internet; however, almost all of these activities were "free play" games where no real-money was wagered (Weibe & Falkowski-Ham, 2003, as cited in Abbott, Volberg, Bellringer, & Reith, 2004).

Gambling by Youth in Iowa. Based on findings from the Iowa Youth Survey (IYS), an estimated 4% of Iowa's youth in 6th, 8th, and 11th grades reported that they had "bet or gambled for money or possessions" on the Internet in 2010 (Iowa Consortium for Substance Abuse Research and Evaluation, 2011) and 7% in 2008 (Iowa Consortium for Substance Abuse Research and Evaluation, 2009). The 2010 IYS included data from more than 78,000 students in Iowa public and private schools yielding the following prevalence estimates for non-Internet gambling activities: card games with friends or family (18%); sports (14%); personal skill games such as pool, bowling, or dominoes (11%); video or arcade games (10%); lottery scratch off tickets or numbers (8%); and dice games (6%). When asked about how much money they have won or lost in any

single day when gambling, 76% said they had not gambled during the past 12 months (Iowa Consortium for Substance Abuse Research and Evaluation, 2011).

Problem Gambling Among Youth. The results of a longitudinal study of gambling among adolescents and young adults in Minnesota showed that the majority said they had gambled, with between 2.9% and 9.5% showing symptoms of problem gambling using SOGS-RA (South Oaks Gambling Screen – Revised for Adolescent; Winters, Stinchfield, & Fulkerson, 1993) with a "narrow criteria" or "broad criteria," respectively (Winters, Stinchfield, & Kim, 1995). According to Winters and colleagues (1995), "Gambling appears to be a common and fairly benign characteristics of the youth experience, not unlike experimentation with sex, alcohol, and other "acting-out" behaviors. The study's findings are also reassuring to public health officials who were concerned that the onset of the State's high-stakes and heavily promoted lottery would trigger a significant increase in the rate of problem gambling among youth" (p. 178). Later in their discussion, Winters and colleagues (1995) elaborated by saying, "Regardless of how benign gambling may be for the majority of adolescents, it is cause for concern as a generation of youths are exposed to gambling at such an early age with the spector [sic] that future gambling problems may lie ahead" (p. 179). Among adolescents, Internet gambling has been associated with higher levels of heavy alcohol use and poorer academic performance compared to non-Internet gambling (Potenza et al., 2011). Furthermore, at-risk or problem gambling rates were higher among adolescents who gambled on the Internet than among those who only gambled offline (Potenza et al., 2011).

Internet Gambling as an "Escape" for Youth. In a study of adolescents between the ages of 12 and 17, the two most commonly mentioned reasons for gambling were for

the enjoyment and for the excitement (Gupta & Derevensky, 1998). However, the reasons for gambling differed between those who were problem or pathological gamblers versus those without gambling problems; specifically, gambling "to escape, to alleviate depression, to promote relaxation, and to cope with loneliness" were more commonly mentioned reasons by those with gambling problems (Gupta & Derevensky, 1998). Gupta and Derevensky (1998) concluded that, "For problem and pathological gamblers, gambling is viewed as a medium for stimulation, enjoyment, and a way of coping with difficulties rather than a means of monetary gain" (p. 339). Adolescents with gambling problems reported that, when they gamble, they "enter a 'different world,' a world without problems and stresses" (Gupta & Derevensky, 2004, p. 177). Therefore, the characteristics of Internet gambling and Internet poker *may* be particularly attractive to adolescents with gambling problems to find escape from the problems in their "offline" reality (see Griffiths & Wood, 2004, for a discussion on the relationship of youth, technology, and Internet gambling).

Internet Poker: Popular Culture and Television

Poker in Popular Culture. The popularity of poker playing and its inclusion as part of our shared culture is evident in the popularity of live events and television programming. A key event in poker's rise in popularity occurred at the 2003 World Series of Poker (WSOP) (Caldwell, 2008; Haney, 2009; Singer-Vine, 2011). This event was won by an amateur player named Chris Moneymaker who qualified for the tournament by winning at an online card room (Poker Stars, n.d). The "Moneymaker Effect" is part of the vernacular of the poker playing community (Cadwell, 2008). The

WSOP has continued to gain popularity as seen in the increasing number of players at the Main Event Championship (World Series of Poker, n.d.a). For example, there were 512 entrants in 2000. By 2004, there were 2,576 entrants. Most recently, in 2011, there were 6,865 entrants. More generally, the number of Americans who are estimated to have played poker online for money varies widely. In *Casinos, Gaming, and Wagering 2011* (Miller & Washington, 2011), estimates are reported that range from 2.5 million (based on 2010 article in *Forbes*) to 10 million (based on information from the Poker Players Alliance). The Poker Player Alliance, a nonprofit advocacy group for both online and offline poker, reported that its membership had reached 1 million members in 2008.

Poker on Television. One factor in the public's increased exposure to poker, especially high-stakes poker, seems to be televised coverage of poker games and tournaments. A search for "poker" on the *TV Guide* website (TV Guide, n.d.a) yielded several poker-related shows (e.g., "Poker After Dark," "High Stakes Poker,") carried on a variety of networks (e.g., ESPN, ESPN2, NBC, GSN). In July 2011, the WSOP started its 10^{th} season of television coverage (TV Guide, n.d.b) with 32 episodes scheduled during a season that lasts less than 5 months (World Series of Poker, n.d.b). In July 2011, prime time coverage of the WSOP Main Event (finale) had a viewing audience of 650,000 (ESPN, 2011). Two years earlier, the WSOP finale had 2.1 million viewers (ESPN, 2009).

Factors Affecting Internet Poker Initiation. Peer influence and television exposure were the two most commonly mentioned reasons for playing Internet poker in a study of university students in the United Kingdom (Wood, Griffiths, & Park, 2007). Slightly less than two-thirds (62%) of those students who played Internet poker said they started

playing it because their friends were doing so. Nearly one-fourth (23%) said they started playing online poker after watching poker on television.

Internet Poker: Empirical Studies

Gambling Online for Money. The most common venue for playing poker is private locations with family and friends, with about three-fourths of poker players reporting they had played with family and friends during the past 12 months, as compared to about one-fourth having played at casinos or in tournaments and one-tenth having played online for money (American Gaming Association, 2006). Aside from playing for money, 29% of poker players said they had played online poker during the past 12 months "just for fun" (American Gaming Association, 2006). The majority of Internet gamblers said they played skill games online (60% among Internet gamblers in Canada, 64% among Internet gamblers worldwide) and these games were predominately poker (Wood & Williams, 2009). Thus, online poker was the most frequently played form of Internet gambling in this study of Internet gamblers in Canada and around the world (Wood & Williams, 2009).

Wagering Patterns. A large scale, longitudinal study of Internet poker players was conducted by LaPlante and her colleagues (2009). The study was based on data of actual Internet poker behaviors of about 3,500 gamblers during a two year time period. About 95% of the poker players in the study were men, but the gambling patterns between men and women were highly similar. LaPlante and her colleagues stated that most of those observed in the study could be described as "exhibiting 'rational' betting behavior" (p. 715). However, they noted there was a subset of the sample (about 5%) who could be characterized as the "most involved poker players." This subset of Internet

poker players stayed enrolled with the betting service for a longer duration, played games more frequently, and wagered significantly larger amounts of money than the majority of players. The study did not include the necessary information to provide estimates of gambling pathology. In another study based on a longitudinal analysis of actual Internet sporting and live-action bets, "The findings reported here do not support the speculation that Internet gambling has an inherent propensity to encourage excessive gambling among a large proportion of players" (LaBrie, LaPlante, Nelson, Schumann, & Shaffer, 2007, p. 358).

Gambling Pathology and Internet Poker. A study of Internet poker playing among 400 university students in the United Kingdom (UK) used self-report data including pathological gambling screening questions (Wood, Griffiths, & Parke, 2007). Using a DSM-based screening instrument, 18% of this non-random sample of university students who played Internet poker was classified as probable pathological gamblers. Regardless of whether or not they had a problem with gambling, the most common reasons given for playing Internet poker were for the excitement and to win money. However, those who were classified as probable pathological gamblers were more likely than other Internet gamblers to say they gambled to escape problems or because they were feeling "lucky" (Wood, Griffiths, & Parke, 2007).

Perceived Advantages and Disadvantages of Internet Poker. It is uncertain to what extent legally available Internet poker might (a) facilitate or act as a catalyst for increased gambling among social gamblers who currently gamble without any problem gambling symptomology, or (b) serve as an entry point into playing poker for money among those who do not currently play poker offline. In one study of poker players in

the United States, the two most commonly mentioned reasons for why these poker players did not gamble online were security concerns and legitimacy (Ipsos Reid, 2005, as cited in Wood & Williams, 2007). A qualitative study by Corney and Davis (2010) suggests that some women do not feel "comfortable" playing live poker, but they find gambling on the Internet to be "less intimidating."

Self-Exclusion Participants. If Internet poker were to become a legal and regulated gambling opportunity for adult Iowans, it is unclear what effect (if any) this might have on individuals currently participating in a lifetime voluntary self-exclusion program. In Iowa, this type of program restricts access on many casino properties and prohibits gambling at state-regulated casinos.

Studies of the Societal Impacts of Gambling

Challenges to Estimating Social Impacts. Many policymakers would like to have estimates of the social costs that would be incurred in the future from a policy change made in the present. However, such estimates are heavily influenced by the assumptions and models researchers use in extrapolating figures. These figures are affected by the criteria used for selecting historical data and by the analytic approaches used to isolate or predict individual effects within a multivariate context. Walker (2007) discussed several of the challenges researchers face when attempting to quantify the social costs of gambling. One of the issues is how to (a) approach the question or define social costs (e.g., cost of illness, economic, or public health perspectives), (b) best estimate these costs within the context of the limitations of the data available, and (c) make decisions about the assumptions of the counterfactual scenario (i.e., what would the social costs be

if the status quo had been maintained) (Walker, 2007). "Given that many pathological gamblers exhibit other disorders, it is difficult if not impossible to accurately estimate the social costs attributable specifically to pathological gambling" (Walker, 2007, p. 3). Because of the high level of comorbidity of pathological gambling with other mental health problems and disorders (Lorains, Cowlishaw, & Thomas, 2011), it is difficult to disentangle the social costs directly attributable to the pathological gambling behaviors separate from those costs that could be attributed to gamblers' other complicating life experiences. The task is even more difficult to accurately quantify the social costs that can be directly and solely attributable to any single form of gambling activity (e.g., Internet poker) in a manner where one can be sufficiently confident in the veracity of the conclusions.

Limited Research on Social Impacts of Internet Gambling. As previously mentioned, Internet gambling is an emerging topic of scholarly study, but the size of the scientific knowledge base is still quite limited in comparison to the amount of literature on gambling in general. Put plainly, the literature about the societal impacts of Internet gambling is very small. For instance, of the hundreds of studies on the societal and economic impacts of gambling that Williams, Rehm, and Stevens (2011) examined, they identified only four articles specifically pertaining to the impacts of Internet gambling. These four studies are summarized hereafter.

In the first of these four studies of the social impacts of Internet gambling, the Allen Consulting Group (ACG; 2003) conducted the Internet Gambling Survey of Australian adults for the Department of Communications, Information Technology and the Arts. The sample size was about 2,000 respondents, of which approximately 100 were

Internet gamblers. The data were collected in the spring of 2003. Only 1% of adult Australians were estimated to have participated in "interactive gambling" during the past 12 months and most of these were gambling activities related to races or sports betting. Among those who gambled on the Internet, about 8% said they were using "poker machines" (ACG, 2003). Overall, the 2003 survey showed a decrease in the prevalence of online poker from the 1999 study. As part of the telephone interview using the South Oaks Gambling Screen (SOGS; Stinchfield, 2002) the proportion of Internet gamblers who were at risk of being problem gamblers was estimated to be 9.6% (ACG, 2003). Their analysis, however, did not suggest that those who gambled online were significantly more likely to be at risk for gambling problems than offline gamblers. Due to the small number of Internet gamblers in the sample, ACG warns that these findings should be considered with some caution when generalizing the results.

In the second study, LaPlante and colleagues (2008) followed the Internet gambling behaviors of more than 42,000 people who subscribed to an Internet betting service in 2005, and who made at least one wager on sports during an 18 month field period. The betting service involved making real-money wagers with the gamblers' money. The results of this study of actual sports gambling behavior showed that there was a short-term increase in wagering activity within the first eight days of joining the service followed by a rapid decrease in activity (LaPlante et al., 2008). However, the most involved bettors or the top 1% of the sample did not show the same general pattern of decreased activity following the initial enrollment period. LaPlante and colleagues (2008) concluded that those engaging in Internet sports gambling did not evidence

"excessive patterns of gambling," but "there might still be cause for concern" for the most involved bettors participating in Internet gambling (p. 2412).

In the third study, higher rates of problem gambling were observed among those who engaged in Internet gambling compared to those who gambled offline (Griffiths et al., 2009). They contended that some aspects of the Internet gambling experience may contribute to an increased likelihood of experiencing problem gambling behaviors. Griffiths and colleagues concluded, "The rise of Internet gambling and its consequent challenges cannot be seen in isolation, particularly because there is ever-increasing multimedia integration between the Internet, mobile phones, and interactive television. Furthermore, young people appear to be very proficient in using and accessing these media and are likely to be increasingly exposed to remote gambling opportunities. These young people will therefore require targeted education and guidance to enable them to cope with the challenges of convenience gambling in all its guises" (p. 201).

In the fourth study, Wood and Williams (2009) found that the prevalence of problem gambling, as measured with the Canadian Problem Gambling Index (CPGI; Ferris & Wynne, 2001), was four times higher among those who had used the Internet to gamble than among those who did not gamble using the Internet (17.1% vs. 4.1%, respectively). The majority of moderate and severe problem gamblers in this Canadian sample identified a single type of gambling activity that caused them the most problems. Among Internet problem gamblers, poker was the gambling activity they thought contributed the most to their problems (Wood & Williams, 2009). Among non-Internet problem gamblers, slot machines was the gambling activity respondents thought contributed the most to their problems. It is important to note, however, that the survey

question did not differentiate between online and offline poker playing. Therefore, one cannot state with certainty that it was Internet poker, per se, that these problem gamblers believed was contributing the most to their gambling problem. Yet, Wood and Williams noted that Internet poker playing likely contributed to their gambling problems, to some extent, given that about one-half of their online gambling was on games of skill (mostly poker). In their section on policy implications and options, Wood and Williams (2009) stated "Although the present study suggests that Internet gambling is an exacerbating rather than a causal factor for most problem gamblers who gamble on the Internet, the nature of online gambling still makes it inherently more problematic than most other forms of gambling" (p. 95)

Prevalence and Consequences of Pathological and Problem Gambling

Lifetime Prevalence. The most recent prevalence estimate of lifetime probable pathological gambling among adult Iowans was 0.6% (95% confidence interval of 0.22% to 1.42%) (Lutz & Gonnerman, 2011). This recent finding for Iowa is consistent with other national studies wherein the lifetime prevalence of pathological gambling is often approximately 1%, with two large scale studies finding lifetime prevalence rates of pathological gambling of 0.4% using data from the National Epidemiological Survey on Alcohol and Related Conditions (NESARC; Petry, Stinson, and Grant, 2005) and 0.6% using data from the US National Comorbidity Survey Replication (NCS-R; Kessler et al., 2008).

Past 12 Months Prevalence. The most recent prevalence estimate of probable pathological gambling when limited to symptoms experienced during the past 12 months

was 0.3% among adult Iowans (95% confidence interval of 0.04% to 1.59%) (Lutz & Gonnerman, 2011). Iowa's rate is within the range of the 12-month prevalence rate reported nationally 0.3% (with confidence intervals between 0.2% and 0.4%) (Kessler et al., 2008).

Experiencing Symptoms of Problem Gambling. Although the rates of probable pathological gamblers is low and represents a small percentage of adult Iowans, the number of Iowans who are experiencing at least some symptoms of problem gambling is considerably higher. About 13% of adult Iowans reported that they have experienced one or more symptoms of problem or pathological gambling at least sometime during the past 12 months (Lutz & Gonnerman, 2011). The most commonly mentioned symptoms they experienced were (a) feeling guilty about the way they gambled or what happened when they gambled and (b) betting more money than they could afford to lose.

Causes and Consequences of Problem Gambling. Shaffer and Martin (2011) provide a summary of research on problem gambling and a discussion of clinical implications and explanatory models. Some earlier research by Shaffer, LaBrie, LaPlante, and Kidman (2002) examined fluctuations in crisis calls to the Iowa Gambling Treatment Program and possible relationships to exposure to gambling opportunities and casino revenues. The development of gambling problems and the decision to seek help are both complexly determined and influence by internal and external factors.

Numerous studies have shown associations between problem gambling and a variety of adverse consequences or comorbid conditions including substance use and abuse, emotional and mental health problems, physical health problems, relationship difficulties, criminal behavior, financial problems, and loss of productivity (see Shaffer &

Korn, 2002, for a discussion on the public health implications and interpretation of these findings). As with many other conditions, the adverse consequences associated with problem gambling behaviors affect not only the gambler but also the gamblers' social groups such as family, friends, coworkers, and community members. In a recent survey, 22% of adult Iowans said they have been negatively affected by the gambling behavior of a family member, friend, or someone else they know (Lutz & Gonnerman, 2011).

Studies Related to Internet Gambling and Problem Gambling

Although there is some evidence of higher rates of problem gambling among Internet gamblers, there is a general lack of research showing a direct causal relationship between gambling online and the development of a problem gambling condition. In Iowa, approximately 3% of gamblers admitted for problem gambling treatment services report having gambled on the Internet during the past 30 days and approximately 9% report having gambled using video poker, video keno, and video blackjack during the past 6 months (Lutz, Gonnerman, Park, & Muilenburg, 2011). A study based on data from the 2007 British Gambling Prevalence Survey yielded a problem gambling prevalence of 5% among Internet gamblers. This was significantly higher than the problem gambling prevalence among non-Internet gamblers (Griffiths, Wardle, Orford, Sproston, & Erens, 2009; McBride & Derevensky, 2009). In a study of nearly 400 patients receiving reduced-cost or free health or dental care at university clinics in the US, 8.1% of respondents said they had ever gambled on the Internet (Ladd & Petry, 2002). Those who engaged in Internet gambling had significantly higher SOGS scores than those who had never gambled on the Internet; however, this does not necessarily mean that Internet

gambling caused their gambling problems. In another study of 1,400 patients at medical and dental clinics, 6.9% of the respondents said they had ever gambled on the Internet (Petry, 2006). Internet gambling was associated with lower self-reported physical and mental health status. In addition, approximately one-half of these Internet gamblers were classified as probable pathological gamblers using the SOGS. "These data may suggest that either Internet gambling leads to problem gambling behaviors or individuals who gamble problematically are prone to gamble on the Internet" (Petry, 2006, p. 4). In summary, the higher proportions of problem gambling among Internet gamblers may indicate that persons with gambling problems are disproportionately drawn to this type of gambling activity and medium (Derevensky & Gupta, 2007; McBride & Derevensky, 2009).

Summary

The purpose of this paper is to provide a concise overview of several issues and considerations related to legalizing Internet poker in Iowa. Specifically, the emphasis of this paper on describing the potential personal and public health impacts of Internet poker. The purpose of this paper is not to advocate in support of or in opposition to any particular legislative proposals related to Internet poker in Iowa. Regardless of whether or not there are legislative changes affecting the legality of placing and receiving wagers for Internet poker games, the fact remains that some Iowans currently are, and likely will continue to be, engaging in real-money poker games online. Therefore, the public health community should continue its education and intervention efforts designed to discourage young people from engaging in illegal gambling activities and to reduce the prevalence of problem gambling among all Iowans. Griffiths (2003) noted that restricting access to

Internet gambling is much more difficult than restricting access to regulated offline gambling activities. This reality underscores the importance of having proper regulatory measures in place to protect the health and well-being of members of social groups that are particularly vulnerable (e.g., adolescents) or susceptible (e.g., problem gamblers) to experiencing adverse consequences associated with online gambling in general or Internet poker specifically.

The public health community should also continue to provide gambling treatment services so that individuals with gambling problems can receive the counseling and support services to assist them in quitting, reducing, or controlling their gambling. Because of the high comorbidity of problem gambling with other mental health conditions, people experiencing symptoms of problem gambling are also likely to receive or be in need of other types of health care services within the public health system. From a public health perspective, a systematic means of collecting data to monitor observed changes in health conditions and behaviors (including the prevalence of gambling and Internet gambling) over time is an important component to be able to determine the potential effects of policy changes on the public's health and well-being (see Gambino, 2009, for a discussion on this topic).

Internet gambling is one of the least commonly reported types of gambling activities engaged in by adult Iowans. About 5% of adult Iowans report having ever gambled online and 2% said they have done so during the past 12 months (Lutz & Gonnerman, 2011). In terms of Internet gambling among Iowa's youth, an estimated 4% of Iowa's youth in 6th, 8th, and 11th grade said they have "bet or gambled for money or possessions" on the Internet during the past 12 months (Iowa Consortium for Substance

Abuse Research and Evaluation, 2011). Data from other studies reviewed in this paper suggested that Internet poker is the most common form of Internet gambling among those who use the Internet to gamble.

Several studies reviewed in this paper found higher levels of problem and pathological gambling among those who engage in Internet gambling compared to non-Internet gamblers. However, the general conclusion from these researchers and the experts in the field is that presently there is not sufficient data to substantiate a *causal relationship* between engaging in Internet gambling and developing a gambling problem. Internet gamblers have been shown to engage in more types of gambling activities than non-Internet gamblers. There is a plausible alternative hypothesis that persons with gambling problems are disproportionally drawn to participating in Internet gambling. In reality, both contentions may be true to varying degrees.

Internet gamblers tend to participate in multiple gambling activities. Moreover, people with gambling problems generally participate in multiple gambling activities. As Shaffer and Martin (2011) noted, the scientific literature has not demonstrated that Internet gambling leads to increases in gambling intensity or excessive wagering (e.g., LaBrie, LaPlante, Nelson, Schumann, & Shaffer, 2007). Although people with gambling problems are disproportionately represented among Internet gamblers, the scientific literature has not clearly established a causal relationship between gambling online and developing a gambling problem. In fact, Shaffer and Martin (2011) asserted that during the past 35 years while the availability of gambling opportunities has increased dramatically, the prevalence of problem gambling has been largely unchanged.

Within the context of the available literature, some logical speculations can be made about the potential impact of making Internet poker a legal and regulated gambling activity in Iowa. First, if Internet poker were to become legally available in Iowa, the number of Iowans who play Internet poker might increase, at least for a short period of time when the new gambling opportunity is novel. Some of the more commonly cited concerns about Internet gambling are about the trustworthiness and fairness of the websites, illegality, and security of financial transactions. To the extent that a legal and regulated Internet poker option became available, one can logically speculate that some Iowans who had never gambled online previously would start wagering on Internet poker games (at least on a trial basis). Because those who gamble on the Internet also tend to gamble offline, more Internet gamblers would not necessarily mean an increase in the number of Iowans who gamble.

Second, if Internet poker were to become legally available in Iowa, an unknown number of Iowans who currently have gambling problems would likely make use of the Internet poker gambling opportunity. Given the ease, convenience, and constant availability of online gambling opportunities, a logical speculation is that legal Internet gambling could exacerbate problems for at least some people who are currently (a) considered problem or pathological gamblers and (b) at risk for becoming problem or pathological gamblers. It is unclear how many of these people would be new initiates to Internet poker versus shifting their wagering from current websites to those sites legally operated within Iowa. At present, the literature cannot support a claim that Internet poker *will cause* people to become problem or pathological gamblers; however, researchers have asserted that Internet gambling has the potential to contribute to problem gambling.

Internet gambling is a relatively new phenomenon. Although the scientific literature base on this topic is growing, the number of empirical studies is still relatively small. The number of empirical studies assessing the social impacts of Internet gambling is even more limited. Currently, there is very little data available that are specifically about the gambling behaviors of Internet poker players in Iowa**.** In conclusion, making an exact determination about the size and scope of potential social and public health impacts exclusively attributable to Internet poker in Iowa is not currently possible.

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