An Overview of the Interactive Player's Choice System & My-Play Evaluation in the Province of Nova Scotia

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INTRODUCTION

The Gambling Awareness Foundation of Nova Scotia (formerly Nova Scotia Gaming Foundation and hereafter GANS) is a not-for-profit arms-length government organization that encourages and supports an independent response to gambling harm in Nova Scotia.

In 2009, GANS commissioned the *Phase 1 Evaluation of The "My-Play" card-based player tracking system* (hereafter "My-Play study") to inform debate concerning the potential impacts and benefits of pre-commitment card use on video lottery players. The Nova Scotia Gaming Corporation (NSGC), which manages and oversees the business of gaming in the province, considers the system a "*preventative measure*" that will assist no and low risk players to make informed choices and gamble responsibly" (Nova Scotia Gaming Corporation 2009 nd. *emphasis original)*. It further asserts that based on "many research studies, the "Problem Gambler category would not be positively impacted . . . as they have reached a point that the only form of intervention such as treatment or recovery model will be relevant" (Nova Scotia Gaming Corporation 2009). However, this position is inconsistent with evidence from trials used to assess the system (Omnifacts Bristol Research 2005, 2007). Methodological issues and very small sub-samples hindered interpretation with these studies, but the point is that *it appeared* that "My-Play" could benefit all VLT players, particularly if the system was mandatory.

Specifically, during the Phase One trial where the system was *voluntary:*

- no significant differences existed by PGSI category in encouraging responsible play and using the card features;
- 44% of the players bypassed the system once they had reached their limits and most were in the problem or moderate risk category (Omnifacts Bristol Research 2005: 37).

During the Phase Three trial, when the card was *mandatory:*

- The no and low risk players "who were in the target market" increased their expenditures more than problem or moderate risk players (Omnifacts Bristol Research 2007:24);
- problem gamblers and moderate risk players decreased their frequency of play. There were no significant differences by risk category among those who increased their play (p. 24);

- most importantly, *all of the problem gamblers and almost 1 in 5 moderate risk gamblers reported either considering, planning, or actively seeking treatment, help, or other resources because of monitoring their VLT behaviour* (p. 39).

In 2009, the opportunity existed to obtain data to compare player attitudes and behaviour before and after voluntary and then mandatory system implementation. Accordingly, GANS commissioned Focal Research Consultants Limited to undertake a multi-phased study to determine the impacts of the "My-Play" system on all video lottery players. In 2010, Focal Research completed a benchmark study of attitudes and pre-trial behaviours among a panel of 500 regular video lottery players. Three anonymous international experts provided very positive peer reviews and considered the study to have strong potential to inform public policy (peer reviews available on request from Gambling Awareness Nova Scotia).

The "My-Play" study indicates moderate risk and problem VLT gamblers may benefit from a card based tracking system more than no/low risk players. However, the findings must be confirmed by a planned Phase 2 study, which will examine post-trial attitudes and behaviors of the original panel and a random control group of VLT players. Nevertheless, the "My-Play study" should be placed in the context of other available information from Nova Scotia regarding pre-commitment systems designed to minimize or reduce harm from VLTs.

VIDEO LOTTERY GAMING IN NOVA SCOTIA

All gaming in Canada falls under the Criminal Code of Canada, and Provinces have the exception to manage and conduct 'lottery schemes', which include mechanical and electronic forms of gaming.

Nova Scotia legalized video lottery gambling in 1991 and situated the machines in ambient settings such as convenience stores. Within a year, VLTs had become controversial, which led to three public inquiries and relocation of VLTs to liquor licensed age-restricted premises by 1993, a moratorium on the number of VLTs in 1998, and a socioeconomic impact study in 1999. Following recommendation by the regulator, the NSGC launched the first responsible gambling (RG) features on VLTs in North America in 2001, which comprised a clock and cash wager display, and voluntary time-out feature; the NSGC simultaneously introduced note acceptors. The RG features were determined ineffective (Schellinck, Schrans & Focal Research Consultants Limited 2002), and wagers increased 33%. In 2003, the NSGC announced it was seeking stakeholder input into VLT gaming, and the government presented the first provincial gaming strategy in 2005. As part of the strategy, the NSGC reduced the number of VLTs and trading hours, and made minor alterations to the machine structural characteristics. These changes led to a decrease in play and expenditures; 1 in 3 VLT players decreased their spending, which seemingly benefited moderate risk and problem VLT players the most: 43% of moderate risk and 57% of problem gamblers self-reported decreased expenditures compared with 13% no risk and 25% low risk gamblers (Corporate Research Associates 2006: 5).

Between 2005 and 2007, the NSGC began looking at the possibility of implementing a card-based RG system to help VLT players gamble responsibly. In 2005 - 2006, the *Video Lottery Informed Player Choice* (IPCS) system was field tested and following expert reviews, the system was determined effective in helping "certain categories" of players to manage their play (Nova Scotia Gaming

Corporation 2009). In 2010, the IPCS renamed "My-Play" was implemented on *all* 2,818 VLTs in Nova Scotia including First Nations reservations[1]. Total costs for development, installation, integration, hardware, and maintenance is expected at $20-$25 million over five years (Personal contact Kerry Chambers – Robyn McIsaac, VP Prevention, Programming and Public Affairs, March 16, 2011).

THE MY-PLAY SYSTEM

The NSGC intends the "My-Play" system to help players monitor and manage their video lottery gambling and accessing the system is separate from the features. Both the system and features are currently *voluntary* with five tools players can utilize:

- Access to historical information on expenditures of time and money by day, week, month and year;
- Access to in-progress play activity including cash-in and cash-out during the play session;
- Ability to set spending limits per day, week, month and year;
- Ability to set time limits per day, week, month and year;
- Ability to immediately stop play for 24, 48, or 72 hours.

Obtaining a card for the "My-Play" system is simple and straightforward. Players ask staff for a My-Play card at a sign-up booth and swipe the card through a reader followed by their Nova Scotia driver's license or Nova Scotia Identification Card. The player then confirms their information, enters a 4-digit PIN, and selects "finish". Once created, the computer wipes the personal information from the system providing complete anonymity. It takes less than a minute from start to finish. Players without a Nova Scotia driver's license or identification card can show two pieces of identification to bar staff who will assist in creating an account. If a player loses their card or forget their PIN, they swipe their original identification used to create the card through the reader, which initiates an algorithm that recognizes the unique account. The player can retrieve all the card features including historical play information, limits set and so forth, while obtaining a new card or resetting the PIN.

It is important to note that while the "My-Play" system is voluntary players can bypass the system and override the features. For example, a player can sign up for a card, set time and expenditure limits and self-exclude for paydays. However, they can forgo the protective features at any time by signing out and playing *the same machine* without the card. Notice that this affects the player's ability to track accurately their time and monetary expenditures, which would prove problematic if they rely on the data to monitor their video lottery play. It would also invalidate system data useful for host venues to

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[1] In his testimony to the Joint Select Committee on Gambling Reform, Mr. Ian Horne, General Manager, Australian Hotels Association; and Chief Executive Officer, Australian Hotels Association (South Australia), made the erroneous assertion that gaming on First Nations reserves in Nova Scotia have "no restrictions" and is "not regulated." (Commonwealth of Australia, Joint Select Committee on Gambling Reform, February 15, 2010: Mr. Ian Horne GR 7 – GR 10). In fact, all gaming in Nova Scotia is subject to Criminal Code of Canada provisions and VLTs are subject to provincial regulatory control; site conditions are not. Indeed, the NSGC has implemented the "My-Play" system on *all* video lottery terminals including First Nations reserves. Mr. Horne also implied easy access to VLTs on First Nations; in fact, most First Nations reserves are situated outside urban areas and are not "across the road" from other VLT sites as Mr. Horne claimed.

track problem and suspicious play (e.g. money laundering) and for policy makers who wish to examine trends to consider changes to the structural characteristics of egms or other forms of gambling that utilize a pre-commitment system.

Even if the "My-Play" system becomes mandatory, players can still override time and monetary limits, self-exclusion and so forth as long as there is no ***enforcement***. There would need to be a mechanism that would ensure players could not ignore previous commitments for the period they have set or one mandated by policy makers.

RESEARCH EVALUATION OF THE IPCS "MY-PLAY" SYSTEM

The NSGC undertook four phases of research to assess the impact of the IPCS "My-Play" system. The first phase began with field trials in a small market approximately 60 kilometres from Halifax and was meant to test the effectiveness of the device, evaluate players' responses, and track behavioural changes resulting from use (Nova Scotia Gaming Corporation n.d.).

Phase One

Card use was *voluntary* during Phase One, and just under half of the panel of 121 players used it. There was no detectable difference in trial by level of risk for gambling problems initially or at the end of the Phase One period (Omnifacts Bristol Research 2005: 23). A strong majority of panel players supported mandatory use of the pre-commitment card leading Omnifacts Bristol Research to comment that "[t]his provides solid support for the next planned research stage. . .whereby player cards will be mandatory (p. 40)."

Phase Two

The NSGC evaluated the results and arranged for refinements to the RGD (Nova Scotia Gaming Corporation n.d.).

Phase Three

Card use in Phase Three was *mandatory*, which led to methodological challenges for the study, including resistance to participation out of privacy concerns, panellists playing outside the test area, and card sharing.

During the Phase Three trial, 37% of the players reported having borrowed or lent their card to someone else (Omnifacts Bristol Research 2007: 17). *Nevertheless, site holders were providing 'shared community cards' along with a pin, which they viewed as a "customer service to players (p. 18)." In fact, further analysis of the behavioural data by Focal Research indicated that 94% of card sharing occurred "rarely" or "occasionally" which primarily occurred among bar staff and involved a total of 1.7% of play transactions* (Schellinck, Schrans, & Focal Research Consultants Limited 2007: 6). In their review of the literature on cashless and pre-commitment gaming systems, Parke, Rigbye and Parke (2008) also comment that, "The key issue seems to be whether problem or 'at-risk' gamblers would be willing to regularly share cards with others *[sic]* players if it implied that they would be restricted or unable to gamble themselves as a consequence. In many respects, this claim seems counterintuitive (p. 68)."

In Phase Three, 3% of players reported the system encouraged them to spend higher amounts and 11% - mostly problem and moderate risk players – stated they chased losses or spent more time and money than intended (Omnifacts Bristol Research 2007: 34). Nevertheless, 39% of panellists reported *not* chasing losses while using the RGD and approximately half to two-thirds of players indicated they had reduced their time and monetary expenditures, were more aware of their play behaviour, and felt they were playing more responsibly; *few differences existed across risk categories* (p. 35).

As in Phase One, a majority of panel players (≈74%) advocated mandatory use of the card (p. 39) *and* 65% wanted mandatory spending limits with strict measures to stop card sharing (p. 38). In addition, 65% of the public in the market area also supported mandatory usage.

Following the Omfinfacts Bristol Research fieldwork, the NSGC retained Focal Research Consultants Limited to analyze behavioural data sourced from the system. Keeping in mind that the data came from players who complied with a mandatory card system, Focal Research found a high uptake of RG features that continued over time and led to increased play with increased winnings (i.e. no change to out of pocket expenses) through enhanced play strategies and control (Schellinck, Schrans & Focal Research Consultants Limited 2007: 97).

The Focal Research study concluded that the panel players readily accepted the card based system, that it provided significant ongoing benefits for the majority, and that it was associated with positive changes in play for no risk to moderate risk players and no negative impacts for problem gamblers (p. 99 – 100). Focal Research recommended making "My-Play" mandatory primarily to provide players with the capacity to accurately monitor and manage their play and provide gaming venue hosts with the ability to provide an 'airbag' feature for players at risk. That is, when players reach pre-determined levels of risk, player tracking could trigger system alerts to the player and/or venue staff; depending on the policy, players could be left to adopt control features, the venue could intervene, or both. However, access to system data would be inaccurate under a voluntary scheme unless players continuously used the system, and their aggregate play could provide the wrong messages to the players and venues interested in monitoring play behaviour. Finally, the researchers at Focal argued the player data-base represents the most accurate form of VLT data available (p. 94). Player tracking moves beyond the benefit it provides for players to monitor and manage their behaviour; it allows operators and regulators to consistently monitor gaming activity over time to assist host venues provide duty of care and it generates effective information for ongoing policy decisions (Schellinck, Schrans, & Focal Research Consultants Limited 2010).

In 2009, the NSGC announced it would implement the "My-Play" system as a tool to inform no/low risk VLT gamblers and assist them in playing responsibly. The intent was to make the system voluntary for one year to provide transition and the card would then become mandatory with voluntary features (Personal contact Kerry Chambers – Robyn McIsaac, VP Prevention, Programming and Public Affairs, March 16, 2011). The NSGC completed province-wide installation of the "My-Play" system in August 2010.

HIGHLIGHTS OF THE PHASE 1 EVALUATION OF THE "MY-PLAY"STUDY

It is important again to observe that the Phase 1 Evaluation of the "My-Play" system study was 'pre-trial;' a majority of the players had not had the opportunity to interact with the system. Nevertheless, the pre-trial findings *suggests* that moderate risk and problem players may benefit more from "My-Play" and its features than no/low risk players. The results further indicate that a mandatory "My-Play" system might maximize benefits to all VLT gamblers through harm minimization for no/low risk players and harm reduction for moderate risk and problem VLT players. Finally, it appears that the primary barriers to use of "My-Play" are privacy concerns, a lack of understanding of how the program works, and perceptions among many regular players that they do not need it.

Effectiveness of "My-Play" by 'at risk category'

In the "My-Play study" Focal Research used a new risk assessment measure along with the Problem Gambling Severity Index to assess both risk and problem gambling categories. The Focal Adult Gambling Screen (*FLAGS*) was designed to specifically measure levels of risk from VLTs and slot machines *before* players begin to experience harm (Schellinck, Schrans, Bliemel & Schellinck 2010, *in* press). *FLAGS* also enables the identification of not only who is at risk but *why.*

Schellinck and Schrans argue in the "My-Play study" that the factors most likely to obstruct the effectiveness of "My-Play" are *preoccupation with play, risky cognitions*, and *impaired control*. Not surprisingly, compared with the other players, problem gamblers scored highest across all of these domains (Schellinck, Schrans, & Focal Research Consultants Limited 2010: 23); however, only a slight majority triggered for *preoccupation: obsession and desire* (55.9%), and *risky cognitions: beliefs* (54.2%) (p. 23). Accordingly, it is plausible that only players who experience these conditions might seek ways to "get around the features" (e.g. using someone else's card upon reaching their limits) (p. 24)." Schellinck and Schrans additionally maintain that those most likely to benefit from a pre-commitment system that offers a feature to stop playing or self-exclude are those who suffer impaired control while playing or cannot resist urges to start. Almost all problem gamblers exhibited signs of impaired control as did a sizeable minority of those at moderate risk. Although few no/low risk players had difficulty controlling initiation of play, 11% of low risk gamblers did report impaired control for stopping play, and 15% of these players also demonstrated *risky cognitions: beliefs* (p. 24-25).

Accordingly, the "My-Play" system should benefit problem gamblers who are preoccupied and obsessed with play by setting conditions where they can prevent themselves from doing so in advance; they might self-exclude as part of treatment or carefully controlled and managed play. Those who do not experience obsessive preoccupation but experience impaired control starting or stopping play, may benefit by setting time and expenditure limits, using the stop play feature or self-excluding for longer periods. Conversely, low risk players with impaired control, and who hold risky cognitions, may benefit from the other features. The Phase One and Phase Three trials also indicate that all groups could use "My-Play's" historical play features to learn to manage their behaviour before experiencing harm or to reduce harm from their VLT gambling. In fact, this is one of the most consistent findings from the Phase One and Phase Three trials and 2007 Focal Research study: that

simply becoming aware and knowledgeable of one's play history can have a significant positive effect on VLT player's management of ongoing play.

Real and perceived need and planned use of the "My-Play" system

It is clear that from a harm reduction perspective that those most in need of tools to monitor and manage their VLT play are in the problem gambler and moderate risk category:

- a majority of problem gamblers lost track of time and money spent playing VLTs, spent more time and money playing than intended, spent all money they brought to the location, chased losses, used their bank card to obtain additional funds, played their winnings and 1 in 5 borrowed money to keep playing (Schellinck, Schrans & Focal Research Consultants Limited 2010: 58 – 59). No/low risk gamblers rarely exhibited these behaviours.
- A majority of problem gamblers set budgets (71%) but at much higher limits and were more likely to report exceeding their budget, although 26% of moderate risk and 15% of low risk players also spent beyond their budget over 50% of the time (p. 33).
- Problem and moderate risk VLT players were significantly more predisposed than no and low risk players to have tried to cut back play. Thirty-one percent had attempted to stop playing altogether.
- Eighty-three percent of problem gamblers were concerned about their VLT play, compared with 26% of those at moderate risk, 6% at low risk and 2% who were not at risk for gambling-related-harm.

Problem gamblers and moderate risk gamblers displayed the highest support for "My-Play" (68% and 59% respectively compared with 41% no risk and 48% low risk players) and expressed the greatest willingness to try the system. Ninety-seven percent of problem gamblers and 80% of moderate risk players stated they ***needed*** pre-commitment *but* only 47% of problem gamblers and 32% of moderate risk players planned to ***use*** it; in other words, ***under half of those at moderate risk or with problems would benefit from the system if pre-commitment remains voluntary, and it is unknown how many would override the features if they are not enforced in some fashion.***

Since players can move quickly from no risk to moderate risk or problem play, from a harm minimization perspective, the no and low risk players also need to embrace the "My-Play" system. In fact, ***the 'target audience' in Nova Scotia is "[n]o-risk to low-risk players who still have the capability and willingness to change their behaviour (Nova Scotia Gaming Corporation 2009);" yet, just 25% - 29% of these players planned to use a card.***

These findings suggest that voluntary pre-commitment may not provide adequate harm reduction to help those most in need nor a high level of harm minimization as a tool to inform players to gamble responsibly. Indeed, player uptake of the voluntary system in Nova Scotia six months after

implementation, when we might expect high trial, is approximately 7%[2]. Low player uptake will provide poor ROI (return on investment) of the pre-commitment system.

The "My-Play study" did not examine the issue of mandatory system usage since the intent was for eventual mandatory usage with voluntary RG features. If use of the "My-Play" system was made mandatory, most moderate risk (61%) and problem VLT gamblers (66%) felt they would decrease their play whereas lower risk players (62%-66%) were more inclined to think it would remain unchanged, approximately one-third claimed they would also reduce their play; half of these were recreational playing once per month or less.

In terms of the RG features, 78% and 81% of players in the "My-Play study" wanted the *option* to set their money and time limits, respectively. However, 54% and 65% overall stated they were *not at all likely* to set these limits if they used the system, again suggesting a low ROI. Problem gamblers and moderate risk VLT players were considerably more likely to endorse these options: approximately 59% of problem/moderate risk players versus 46% no/low risk claimed they would use the spending limit features and 54% problem/moderate risk players versus 32% no/low risk stated they would use the time limit option. If the system were mandatory, it would be possible to isolate individuals who continuously exceed the bulk of players in terms of time and monetary expenditures (e.g. above a specific threshold identified as problematic behaviour) for potential warnings or individual intervention, which could be part of voluntary duty of care per host venue or mandated as a policy. In either case, those who did not exhibit problem behaviours would not be impacted by warnings or direct intervention.

However, again, the system must have a built in enforcement mechanism that players can set for a specific time frame or is embedded; regardless of harm minimization or harm reduction, the intent of the system will be lost without it since many will simply override the voluntary features while they are heavily involved in play.

Rationale for not obtaining a card

Approximately one-quarter of players who stated they would not obtain a card were concerned about their personal privacy. Privacy and a lack of knowledge was the biggest issue for problem players. These were also issues among the other players, but the major reasons for not planning to enter the system were perceptions that they did not need it.

Interestingly, just 2% - 3% of no risk to moderate risk players stated they would quit playing VLTs if they were forced to use the card compared with 10% of the problem players.

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[2] Interestingly, the 'My-Play' study indicated that 8% of the regular VLT panel had obtained a card before the system was widely implemented. The Phase Two study will show whether the percentage of players in the panel is higher than the general population and who among the panel has a card.

CONCLUSIONS

The research conducted on the IPCS "My-Play" system throughout 2005 – 2007 provided fairly consistent results showing that a majority of players were interested in using a pre-commitment system and that it would provide value in harm-minimization and harm reduction. The findings also suggest that the members of the VLT *research panels* and public in the test area supported a mandatory *system* although support may be influenced by card usage, social, and cultural factors.

In the 2010 "My-Play study" report, Schellinck and Schrans advocate mandatory *system* use and voluntary *feature* use. Player tracking offers the ability for individuals to monitor and manage their play and provide gaming providers with player data about time and monetary expenditures, which players and host venues can use for risk assessment and identification of potentially harmful behaviour (Schellinck, Schrans & Focal Research Consultants Limited 2007). Indeed, during the voluntary and mandatory trials used to assess the IPCS ("My-Play") system, the bulk of players across all risk categories found the features helped them learn about and control their play. In addition, further analysis of player system data proved invaluable in identifying *objective* player statistics that would assist players in managing their play and ensure host venues could provide duty of care to players who require assistance. This system data would be of little to no value collected under a voluntary system, since it would not accurately track player expenditures in time, money, setting limits, self-exclusion and so on.

Implementation of the "My-Play" system began in August 2010 with the intended target of no risk and low risk players. The "My-Play study" *suggests* that problem gamblers and moderate risk players will benefit most from the system *if they use it*; they have the highest need and have indicated the highest level of support and intended usage for the system.

It is plausible that all players will decrease their VLT expenditures but we speculate this would reduce gambling-related-harm among moderate risk and problem gamblers. When analyzing the system data from the Phase Three trial in Nova Scotia, Schellinck, Schrans & Focal Research Consultants Limited (2007) found that use of the responsible gambling features was significantly correlated with a decrease of per session 'out of pocket' losses (p. vi), which should assist those who overspend. In addition, *since problem players provide the bulk of revenues, a decline in play among problem players will produce the largest drop in revenues, but this would benefit the problem player and others adversely affected by their excessive expenditures of time and money*.

In testimony to the Parliamentary Joint Select Committee on Gambling Reform, Dr. Alex Blaszczynski stated that, "[m]y concern essentially is that after initial experiences they [problem gamblers] are going to set limits which are in excess of what they can really afford and that may lead to some negative consequences where, having set higher limits, they are more likely to gamble to those limits (Commonwealth of Australia, Joint Select Committee on Gambling Reform, February 4, 2010, Dr. Alex Blaszczynski, GR37)". Dr. Blaszczynski is an internationally renowned expert with extensive experience studying problem gamblers but this statement is speculative.

Players who choose to set no limits or excessively high limits on a pre-commitment system may not benefit, but *without a system,* they have only sheer willpower to set and play within their limits. With

voluntary pre-commitment players can bypass the system once they have reached their limits. In addition, research to date indicates that players can benefit from simply monitoring their play behaviour since it can inform their level of personal risk and harm, and mandatory player tracking can objectively alert venue staff to high-risk customers so that host responsibility measures can be undertaken (Schellinck, Schrans & Focal Research Consultants Limited 2007). However, without a mandatory system, the information available to players, venue hosts, and policy makers will be inaccurate unless all players continuously use the system without bypassing it.

The "My-Play study" also indicates that problem gamblers are not a homogeneous group, and that numerous problem players suffer impaired control but are not *preoccupied or obsessed* with their play; these problem players may very well stick to set limits and those that are obsessed might self-exclude. The point is that while we can speculate that problem gamblers will set limits disproportionate to what they can spend under a voluntary or mandatory system, we can also speculate that many will not, thereby benefiting from their choice. A mandatory system should ensure moderate risk and problem gamblers consider pre-commitment to set time and monetary expenditures before beginning play. Some form of enforcement would be required to ensure they stay within their limits, perhaps for a period of their choosing.

The "My-Play study" could not examine issues surrounding card-sharing since a majority of players had no opportunity for trial, but given the earlier research, this is seemingly not an issue provided host venues are responsible and take precautions, such as not providing 'customer cards' for those who claim to have forgotten theirs. Indeed, the "My-Play" system is set up so that players can easily replace lost cards or reset their pins *without altering their original settings*.

One final issue hinted at by the IPCS and other Nova Scotian research concerns migration of gamblers from one type of venue or gaming to another. The evidence from Nova Scotia indicates that altering a venue's structure or characteristics of a form of gaming will lead some to migrate to another form and others to quit play. The "My-Play study" did not address this issue among VLT players who patronize slots at urban casinos, and it will be taken up in Phase 2. However, VLT players tend to go to the same venues out of familiarity, and in the "My-Play study", just 3% of recreational gamblers and 10% of problem gamblers stated they would *quit* playing VLTs if forced to use pre-commitment; this does not, however, account for migration. Nevertheless, the average age of VLT players is approximately 40 years and, while speculation, migration is most likely to occur among younger players who already engage in online gaming. It is also worth noting that the observation that slot machine players migrated to online gaming as a result of a temporary slot machine ban in Norway may be due to a misinterpretation of the evidence (personal contact: Kerry Chambers & Anita Oren SINTEF Technology & Society, March 15, 2011). Finally, Norway and Sweden have both implemented pre-commitment systems for online games (Responsible Gambling Council 2009:16).

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