Abstract: There is strong evidence that problem gambling is a localised behaviour, and that one in seven regulars at poker machine venues are having problems with their gambling. Collectively, these regulars are contributing 40 per cent of the entire revenue from poker machines in Australia. They are losing more money than they can afford, and the community loses too. These losses have an impact on the strength of community wellbeing, beyond the devastations experienced by the individuals.

How does a community cope with the introduction of poker machines? As local government social and health planners, we ask ourselves this question when a gaming application appears and the social impact assessment takes place. The City of Whittlesea has some of the highest poker machine losses in Victoria, but successfully limiting the number of poker machines as a harm minimisation measure is difficult to achieve. When a unique opportunity presented itself, Whittlesea Council partnered with Federation University to undertake ‘pre and post’ surveys of local residents to see if the impact could be measured. This study analyses data collected on community wellbeing before and after the introduction of poker machines in a locality.

Reporting on preliminary findings, there was a noticeable decline in sense of community measured by sense of safety and sense of belonging. The responses from the pre survey accurately predicted the impact on wellbeing reported in the post survey. There was little change detected in gambling behaviours and risk of problem gambling. Community attitudes toward gambling had remained stable. Quantifying these aspects of community strength and studying the impacts will contribute to local government social and health planning. The research will help establish useful indicators for assessing measurable impacts of poker machines on communities, particularly in the vicinity of new housing developments.

Introduction
Gambling is a popular activity in Australia, judging by the magnitude of expenditure on this form of entertainment. Australians lose more on regulated gambling than any other nation in the world (The Economist, 2014). In 2012-13, Australians lost $1,167 per capita on gambling, with $611 of that lost on poker machines, compared to $202 at casinos, $156 on racing, $108 on lotto, and $27 on sports betting (Queensland Government Statistician, 2014). However, gambling is not a harmless recreation. The Productivity Commission (2010) found that 40 per cent of all losses on poker machines are from problem gamblers and a further 20 per cent are from people at moderate risk of developing problems. Problem gambling has been linked to social harms such as crime, suicide, increased debt and relationship breakdown (Productivity Commission, 1999). These harms are not confined to individuals, with five to ten other people negatively affected by each person having problems with gambling (Productivity Commission, 1999).

With gambling increasingly offered in local pubs and clubs, it is also becoming normalised as a form of recreation or entertainment (Thomas & Lewis, 2012). It has been shown too, that relative socio-economic disadvantage in communities is predictive of higher losses on poker machines (Rintoul, Livingstone, Mellor & Jolley, 2013). However, living in an area that is disadvantaged is not the only risk factor for problematic spending on poker machines. In areas where measures of disadvantage are relatively healthy, the introduction of poker machines may be impacting the strength of community wellbeing. Research has shown strong associations between gambling behaviour and neighbourhood access to gambling venues (NZ Ministry of Health, 2008; Pearce, Mason, Hiscock & Day, 2007; Young, Markham & Doran, 2012). Furthermore, a meta-analysis of problem gambling surveys in Australia and New Zealand found that prevalence of problem gambling increases with increased per capita density of poker machines (Barratt, Livingston, Matthews, & Clemens, 2014). Other harms to communities include crime (Wheeler, Round & Wilson, 2010), reduced social cohesion and volunteering (Wall, Peter, You, Mavoa & Witten, 2010), and family violence (Suomi, et al, 2013).

Poker machines and local government
Local communities are increasingly exposed to gambling, with a diminishing number of pubs and clubs that are ‘pokie-free’. Under Victorian law, applying for poker machines takes place through two separate processes, a land use planning application to the local authority, and a gaming licence
application to the Victorian Commission for Gambling and Liquor Regulation. Although local authorities have some power over planning applications, most gaming licence applications are granted, even though many of them are opposed by the local Council. Decisions to refuse poker machine applications in Victoria are rare, but community opposition has won in a few landmark cases at the Supreme Court of Victoria and the Victorian Commission for Gambling and Liquor Regulation. Community aversion to poker machines was taken into account in the Supreme Court of Victoria decision on the Romsey Hotel case: ‘if approval is likely to cause unhappiness or discontent in that community...that consequence is a social impact of approval which will be detrimental to the wellbeing of the community (2008). In another case, the decision of the Beach Hotel Jan Juc v Surf Coast Shire hearing of the VCGR (2010), stated ‘the Commission is satisfied if the application were granted it would result in a sense of discontent or unhappiness in a significant part of the Jan Juc community and would be detrimental to its sense of wellbeing’.

Under the Gambling Regulation Act 2003, Victorian councils have the right to submit a social and economic assessment if they assess the application as having a negative impact on the community. The application must meet a test of no net detriment, in which any harms are offset by social or economic benefits. For local government social and health planners assessing the social and economic impacts of new poker machines on community wellbeing, there is research evidence of specific types of harms and the ripple effect of these harms, but to date, no research has attempted to measure actual differences in community wellbeing before and after the introduction of poker machines.

The effect of harms from gambling on community wellbeing

The Australian Ministerial Council on Gambling defines problem gambling as follows: Problem gambling is characterised by difficulties in limiting money and/or time spend on the gambling which lead to adverse consequences for the gambler, others or for the community.

The ripple effect of problem gambling means significantly more people are affected than the individual. In a Tasmanian prevalence study, 50 per cent of people said they personally knew of someone who was having serious problems with gambling, and for 12.8 per cent of those, that person was a family member (SA Centre for Economic Studies, 2008). Communities are also affected by the adverse impacts on individuals. While the initial impact on a gambler having problems is almost always financial, this leads to further problems that impact communities via indirect and direct routes. A report to the New Zealand Ministry of Health describes direct and indirect pathways where exposure to gambling opportunities in the community affects community wellbeing via prevalence of problem gambling. The direct route leads from problem gambling to crime including fraud and domestic violence, whereas the indirect route leads to financial, emotional and social stress, to debt, transience, or poor parenting, leading to serious debt, school turnover, or lack of attachment. Both routes impact on sense of community through lack of involvement by those affected by problem gambling, which in turn, weaken social capital (Wall, et al, 2010).

Accessibility and prevalence of problem gambling

The prevalence rate of problem gambling in Victoria is 0.7 per cent, or 30,000 Victorians. A further 2.36% per cent of Victorian adults (105,000 people) are at moderate risk of developing problems (Hare, 2009). This study also found that 21 per cent of adult Victorians gamble on poker machines.

Availability of poker machines is strongly associated with gambling expenditure, and gambling expenditure is strongly associated with problem gambling. Pearce et al (2008) found that a higher density of gambling opportunities within a five kilometre radius of a neighbourhood was associated with a higher probability of gambling. Other studies have found that accessibility of poker machines in communities can increase harms. Young et al (2012) found that geographically accessible locations for venues such as shopping centres were associated with higher levels of problem gambling. Storer et al (2009) found strong evidence that the prevalence of problem gambling increases with the increasing density of poker machines at a rate of eight problem gamblers for every ten additional machines. This finding was supported by Barratt et al (2014) who used help-seeking as a proxy for problem gambling to find a strong correlation between gaming machine density and rates of counselling for problem gambling.

Public health approach

In the past, gambling has been considered an individual responsibility, but with increasing availability, can now be seen as a public health issue with outcomes that affect communities. Prevention or minimisation of harm from gambling using a public health perspective includes understanding the
environmental determinants which include the accessibility and location of machines, and social aspects of a community that might encourage risky behaviour with poker machines, or protect against excessive use. The Productivity Commission (2010) put it this way:

Problems experienced by gamblers are as much a consequence of the technology of the games, their accessibility and the nature and conduct of venues, as they are a consequence of the traits of the gamblers themselves.

Using a public health approach makes sense for local governments weighing up the benefits and costs of poker machines. Using ‘upstream’ strategies to prevent harm before it occurs reduces the risk. This concept applies equally to other government-regulated risky consumptions, such as alcohol and tobacco.

Study methodology
This research project to test the effects of the introduction of poker machines on community wellbeing was designed as part of a research partnership between Federation University and the City of Whittlesea, and funded by an Australian Research Council Linkage grant number LP0989647, with contributions from the Victorian Local Governance Association and 29 local councils. The findings from the research undertaken through this project have challenged the dominant conceptions of gambling as an individual pathology, and ‘advanced our knowledge of the multiple, interconnected, direct and indirect and often hidden ways that poker machines are affecting the health and wellbeing of communities’ (McDonald et al, 2014).

Study location
In the City of Whittlesea, poker machines have been part of the entertainment offering for more than 20 years. In 1992, there were 105 machines located in the municipality, and losses for the 1992/3 financial year reached $1.7 million. By 2014, the number of machines had grown to 660 and losses for the 2013/14 financial year were $96.2 million (VCGLR, 2015). Annual poker machine expenditure in the Whittlesea municipality is among the highest per capita in Victoria; even though the density of machines is lower than average. In 2014 the ‘per adult’ expenditure was well above average at $692, compared to the metropolitan average of $574. Poker machine density in Whittlesea was lower than average at 4.9 machines per 1,000 adults, compared to the metropolitan average of 5.5.

The study location was given the pseudonym of Greenridge, which comprises a designated growth area, with the population currently at about half its planned capacity. In 2001 the population of the area was 6,571. In the ten years to 2011, the population grew to 38,321 (ABS, 2012). By 2015, the estimated population was 57,788 (id 2014). Future development of remaining greenfield development sites will see the population grow to 73,000 by 2021. The area is especially appealing to young families buying their first home because new homes are relatively affordable in a housing market that is difficult to buy into.

As a newly developing area on the urban fringe, the kind of infrastructure that fosters community participation is developing at a slower rate than housing. The historic hotel on the main intersection of Greenridge was purchased during the early stage of housing development, and despite Council opposition was granted a licence for 40 poker machines. The hotel, given the pseudonym of ‘Bounty Hotel’, closed in June 2012 for renovations and reopened in December 2013, extensively enlarged with a new gaming room holding 40 poker machines. It is the only hotel in the area, and the residential areas surrounding the hotel became the site for measuring the impact of poker machines on a community that did not previously have immediate access to them.

Research design
A pre-post survey design was used to measure aspects of community wellbeing and attitudes and behaviours toward gambling on poker machines. The questions were mostly drawn from large Australian population studies. The questionnaire was randomly distributed to the community in November 2013 while the hotel was closed for renovations, and again in June 2015, eighteen months after it had re-opened with 40 poker machines in place. Both surveys were posted to 2,000 addresses, and there was an option to provide responses online.

Preliminary Findings
The pre survey of residents in the vicinity of the Bounty Hotel taken in late 2013 obtained 257 respondents. The post survey took place in the same location eighteen months later. During this time, the survey site experienced one of the largest population growth rates in Victoria of 8.3 per cent
between 2013 and 2014 (ABS, 2015). The results reported in this paper are based on the early responses to the post survey of 135 respondents. Despite the difference in sample sizes, the demographics of the respondents are quite similar, and there has been little change in attitudes toward gambling. The respondent characteristics are compared in the table below.

Table 1. Respondent characteristics

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Number</td>
<td>257</td>
<td>135</td>
</tr>
<tr>
<td>Age range (years)</td>
<td>18 – 81</td>
<td>20 – 84</td>
</tr>
<tr>
<td>Gender proportion</td>
<td>37% / 63%</td>
<td>40% / 60%</td>
</tr>
<tr>
<td>Male/Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play poker machines</td>
<td>35%</td>
<td>31.5%</td>
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Community wellbeing
Sense of community was measured using a modified version of the Sense of Community Index from the Australian Living Standards Study (Weston, 1993). Initial findings suggested a moderately positive sense that the locality was a safe place with potential for neighbourliness, but the sense of neighbourhood belonging was not as strong as the sense of safety. In 2013, 73% of respondents thought it was safe to walk around their neighbourhood at night and 74% thought it was safe for children to walk around during the day. In 2015, 64% thought it was safe at night and 68% thought children were safe to walk around during the day.

Respondents rated on a five point rating scale (from 1 ‘strongly disagree’ to 5 ‘strongly agree’) a series of statements looking at the extent to which they experienced a sense of safety and belonging about their neighbourhood. The table below lists the average sense of community scores before and after poker machines were installed at the Bounty Hotel.

Table 2. Sense of community in relation to neighbourhood: mean scores before and after the introduction of poker machines

<table>
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<tr>
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<tbody>
<tr>
<td>Sense of safety</td>
<td>3.86</td>
<td>3.64</td>
</tr>
<tr>
<td>Sense of belonging</td>
<td>3.54</td>
<td>3.44</td>
</tr>
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</table>

In both pre and post situations, the means were above the neutral mid-point of 3, suggesting a reasonable but not strong sense of community in relation to the neighbourhood. There was a slight reduction in mean scores on both indexes in the post results.

The pre survey asked about anticipated impact of the poker machines on levels of wellbeing living in the community. Nineteen per cent of respondents said their wellbeing would decrease when the Bounty Hotel re-opened with the new poker machines, 53% felt there would be no change to their personal sense of wellbeing, and 19% were unsure. The post survey asked if wellbeing was affected when the poker machines were in place. Eighteen per cent felt their wellbeing was negatively affected, 68.5% said there was no change, and 14% were unsure. The impact on the community was seen as negative in both surveys, with 55% predicting a negative impact before the machines were in place, and 53.5% reporting a negative impact after the machines were in place. In general, people said the impacts would be felt more negatively in the community at large, than by themselves personally.

Poker machine gambling among residents
In both the pre and post surveys, two-thirds of respondents did not gamble on poker machines, and the remaining third had gambled on poker machines. This is higher than the Victorian average of 21 per cent of adults who use poker machines (Hare, 2009). The pre survey asked about intentions to gamble on poker machines when the Bounty Hotel re-opened. Twenty-five per cent of respondents who planned to visit the venue, intended to gamble on the machines at least once. This was a smaller proportion than the proportion of respondents who identified as having gambled on poker machines in the previous six months. In the post survey, 55 of the 135 respondents had visited the Bounty Hotel
and 27% of those had gambled on the poker machines at least once, with the majority saying they gambled sometimes but not every time they visited.

To detect problem gambling behaviours among respondents, the nine-item Canadian Problem Gambling Severity Index was included in both surveys, to be answered only by those who had gambled on poker machines (Ferris & Wynne, 2001). Risk of problem gambling of varying severity was present among both sets of respondents, and in similar proportions. The rates are compared below with the Victorian population average from the Victorian population gambling prevalence study (Hare, 2009).

Table 3. Prevalence of problem gambling in both samples

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>% Gamblers (n=84)</td>
<td>% Respondents (n=257)</td>
<td>% Gamblers (n=33)</td>
<td>% Respondents (n=15,000)</td>
</tr>
<tr>
<td>Low level of problems with few or no identified negative consequences</td>
<td>13.1</td>
<td>4.3</td>
<td>12.1</td>
</tr>
<tr>
<td>Moderate level of problems leading to some negative consequences</td>
<td>7.1</td>
<td>2.3</td>
<td>6.1</td>
</tr>
<tr>
<td>Problem gambling with negative consequences and a possible loss of control</td>
<td>3.6</td>
<td>1.2</td>
<td>3.0</td>
</tr>
</tbody>
</table>

Numerous studies have found that the incidence of problem gambling increases with increased accessibility to poker machines (Pearce 2008, Young 2012, Storer 2009, Barratt 2014). It was expected that the incidence of problem gambling would increase with the introduction of poker machines into the community. The results presented here do not reflect this, and there are a number of possible explanations, with the most likely being the small sample size. Stigmatisation could also lead to reluctance to report problems. The poker machines have been present in the community for a relatively short time, and it has been shown that longer exposure is associated with more problem gambling (Hing & Nisbett, 2009). When compared to the Victorian population prevalence rates of problem gambling of 0.7 per cent and moderate risk gambling at 2.36 per cent, the data for the pre survey had a higher rate of problem gambling rate at 1.2 per cent of the sample, and a similar rate of moderate risk jugglers at 2.3 per cent. The data for the post survey had the same rate of problem gambling among the sample, as the Victorian average at 0.7 per cent, and a lower rate of moderate risk gambling at 1.5 per cent.

The Problem Gambling Severity screen gave an opportunity for respondents to report on their own poker machine playing, but because the number of respondents who actually gambled on poker machines was relatively small, the opportunity to report on knowledge of the others in the community having problems was included in the post survey. The post survey asked a new set of questions adapted from the Queensland Household Gambling Survey (Department of Justice and Attorney General, 2012). Six respondents (4.4%) knew of someone in the local area who had a problem with poker machine gambling before 2014. Seven respondents (5.2%) reported they knew someone in the local area who had developed a problem with poker machine gambling in the past 18 months. Two of those respondents were actually living with the person who had recently developed a problem. These percentages were low compared to Tasmanian and Queensland prevalence studies which asked similar questions. In a Tasmanian survey, 50 per cent of people said they personally knew someone
who was experiencing serious problems, and 13 per cent identified an immediate family member with a serious problem (SA Centre for Economic Studies, 2008). The Queensland Household Gambling Survey found 14 per cent of respondents had a family member who had experienced problems. The present survey was interested in the impacts on the local community, and on poker machines specifically. Therefore, while potentially every second person knows of someone who has had problems with gambling, one in twenty of these respondents knew of someone in the local area who had developed problems with gambling on poker machines in the last eighteen months.

**Community attitudes toward gambling**

General beliefs about gambling were measured using a modified version of the ‘Attitudes toward Gambling Scale’ (McAllister, 2013; Orford, Griffiths, Wardle, Sproston & Erens, 2009). Findings in both surveys were similar and suggest community beliefs that there are adverse consequences from gambling, but the beliefs are not strong. Respondents rated on a five point scale their opinion on a series of statements concerning the nature and consequences of gambling. The statements were scored from 1 ‘strongly disagree’ to 5 ‘strongly disagree’, with 3 ‘neither agree nor disagree’. Scores above 3 indicate favourable attitudes toward gambling and below 3 are unfavourable toward gambling. The mean attitude toward gambling score was 2.39 in the ‘pre’ survey and 2.35 in the ‘post’ survey.

An open-ended question was asked, ‘Is there anything else you would like to say about the effect of pokies on community wellbeing?’ Most responses expressed strong negative opinions; a few felt that problems with gambling were an individual and not a community issue, and some were positive.

**Comments on the effect of poker machines on community wellbeing (Pre poker machines 2013)**

*I do not believe they are necessary and I think community hotels would be a much better, family friendly space without them.*

*I would've much preferred the (Bounty) Hotel had not installed them and kept this hotel as the charming country, community pub that it was before it was renovated.*

*Yes it is a very fearful feeling when you have a gambler in the home and a pokies venue sign is reminding the person about gambling.*

*This is a very bad thing for the community, as those that have an addiction to this will destroy their families.*

*Too much money is lost to the pokies.*

*Anti-social - because it is just you and the machine.*

*As the area is full of first home owners/younger people, the pokies could cripple a lot of households’ cash flow & relationships.*

*I hope that my kids don’t go there in years to come.*

**Comments on the effect of poker machines on community wellbeing (Post poker machines 2015)**

*It is disturbing and immoral to make it so easy for problem gamblers and so easy for hotels like (Bounty Hotel) to profit off the community this way.*

*More chance of crime and theft in the suburbs.*

*Gambling at (Bounty Hotel) has increased the crime and drug activity in the area. There have been several thefts of vehicles and from vehicles from around there and at the car park.*

*Distress; fear; lying; depression; social isolation; loss of financial resources. Relative who had a gambling addiction.*

*Increase in gambling avenues, increases more people to gambling.*
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It's personal choice. *(Bounty Hotel)* is a great place to eat, meet friends and family, listen to music and at times watch footy and pay $20 in pokies.

**Conclusion**

This study is still underway as part of a master by research project, and the results presented are preliminary findings. Both surveys had a low response rate, and the post survey response rate was much lower than that of the pre survey. This could be indicative of low social connectedness and community engagement. A renewed effort to obtain more responses to the post survey is currently underway.

Based on the current analysis, the measure of community wellbeing showed a small but noticeable decline between the two surveys. This is consistent with the effect predicted by respondents to the pre survey. Community attitudes toward gambling had not changed much, and were mostly negative toward gambling. The respondents whose problem gambling index scores put them in the ‘problem gambler’ category were slightly fewer in post survey compared to the pre survey. There are several possible explanations for this, including that the number of people who fall into the ‘problem gambler’ category is a small proportion of the population in general. The prevalence of problem gambling in the post sample was the same as for the general population, but lower than population prevalence in the pre sample. Prevalence of problem gambling would be a very simple impact measure in communities; however the impact on community resilience is not purely through problem gambling. The qualitative data indicates that the mere presence of poker machines has an impact. Respondents felt that community wellbeing was impacted, and the number of respondents who knew of somebody local who had recently developed a gambling problem far exceeded the number of respondents who indicated gambling problems themselves. Further investigation is needed to explore these impacts, whether it is the potential for harm, the reduced options to choose venues that do not have gambling, or the disempowerment of having little or no say about the granting of gaming licences.

Further data from the surveys is still to be analysed in the next few months. Although there did not seem to be strong social connections within the community, there was still a prevailing view that poker machines were not in the best interests of community wellbeing.

*People within the community talk about the impact of pokies in this community, and it is very negative. It brings down wellbeing by talking about it.*

The impact on community is important as a whole – that is, the greater proportion of the community who do not play poker machines and may not feel personally impacted; still seem to feel a collective a sense of community detriment. There is scope for further research to explore this concept further.

**Acknowledgements**

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State of Australian Cities Conference 2015

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