Contra Costa County

Casino San Pablo Public Health & EMS Impact Study

August 1, 2005

Prepared by
The Abaris Group
Walnut Creek, CA

Table of Contents

Executive Summary

The Abaris Group was asked by the Contra Costa County EMS Agency to conduct an analysis of the public health and EMS impact of a Las Vegas style casino proposed to be established at the existing Casino San Pablo.

To conduct the study, The Abaris Group interviewed several people involved with the public health and emergency medical services (EMS) aspects of casinos in their local communities, conducted an extensive literature search, attended several meetings, and met with Contra Costa Health Services staff about the expected impact of the proposed Casino San Pablo on the county.

Much of the research available on the public health impact of casinos focuses on problem and pathological gambling and the negative impacts that result from this issue. Gambling behavior lies on a continuum from occasional gambling, regular gambling (once or twice a week) to problem and pathological gambling. Problem gambling usually refers to gambling that the gambler themselves find problematic, whereas pathological gambling usually refers to those who fulfill DSM (Diagnostic & Statistical Manual of Mental Disorders) criteria.[1] However, from a public health perspective, individuals who experience gambling-related difficulties but would not meet a psychiatric diagnosis for pathological gambling are of as much concern as pathological gamblers because they represent much larger proportion of the population.[2] According to a study published in late 2004, the prevalence of problem and pathological gambling doubled in communities within a 10-mile radius of a casino.

Gambling has an impact on other social issues as well. Some of these include increases in crime, bankruptcy and second hand smoke. Smoking is a particularly significant issue for California because anti-smoking laws do not pertain to tribal casinos.

The impact of the Casino San Pablo on the EMS system was also considered. The Abaris Group expects about three EMS responses to the casino daily. Also, The Abaris Group anticipates that traffic crashes as a result of the increased number of vehicles in the San Pablo area will generate one additional crash per day, which will probably result in a need for an additional ambulance.

One methodology for quantifying the impact of the proposed Casino San Pablo on Contra Costa County is to establish a surveillance program that would allow for comparison of data in a before and after format, which would allow for a more fair and neutral mitigation of the impacts.

In the absence of a surveillance program, The Abaris Group estimated the costs to mitigate the public health and EMS impact of the proposed Casino San Pablo on Contra Costa County. The Abaris Group estimates that it will cost approximately $4 million for the added mental health, child welfare, child abuse and indigent emergency department cases, $500,000 for a problem and pathological gambling prevention program, and $490,000 for a new ambulance.

[1] Griffiths, M, 2004. Betting your life on it. *BMJ* 2004;329:1055-6.
[2] Abbot M, Volberg R, Bellringer M, Reith G (2004). A review of research on aspects of problem gambling, final report. Executive Summary. Auckland University of Technology, Gambling Research Centre; Prepared for Responsibility in Gambling Trust; October 2004; p. 16

Overview

The amount of casino gambling in the US has been steadily on the rise. Almost 400 commercial casinos and 248 tribal casinos have been added in the US over the last 25 years. Casino gambling in California is also on the rise. In 2004 there were 53 casinos operating over 53,000 slot machines in California. Another 26 casinos are proposed.

There are no tribal casinos located in any California urban areas; they are all located in rural areas. This may change. There are three tribal casinos proposed for Contra Costa County: Scotts Valley Band of the Pomo Indians in unincorporated North Richmond, Guidiville Band of the Pomo Indians at Point Molate also in Richmond, and the Lytton Band of the Pomo Indians in San Pablo. Establishing a casino in a densely populated area like the San Francisco Bay Area may have far reaching effects on traffic, the economy, public health issues, societal costs, delivery of emergency medical services (EMS), and a wide host of other issues.

The Abaris Group was asked by the Contra Costa County EMS Agency to conduct an analysis of the public health and EMS impact of a Las Vegas style casino proposed to be established at the existing Casino San Pablo.

Background

The Lytton Band of the Pomo Indians is a tribe of about 200 members from Sonoma County. They were granted a reservation in the City of San Pablo by Congressional enactment in 2000. The reservation is the Casino San Pablo – a card room that was established in December 1995. The Congressional enactment creating the Lytton Band reservation departed from the typical procedure of petitioning the Bureau of Indian Affairs (BIA) to have ancestral land designated as a reservation.

Initially, the Lytton Band's proposed expansion called for adding 500,000 to 650,000 square feet to the Casino San Pablo. The casino was projected to be six to eight stories high and was going to house between 2,500 and 5,000 slot machines (depending on the terms of the State Tribal Compact) along with other gaming activities. When the compact was negotiated with Governor Schwarzenegger, the Lytton Band agreed to install 2,500 slot machines initially with an option to add an additional 2,500 slot machines in the future. To put this in perspective, if Casino San Pablo achieves its desire to become a Las Vegas style gaming facility (offering Class III gaming devices) with 2,500 slot machines, Contra Costa County would rank third in the State with the largest number of slot machines (ranking first and second are Riverside with 12,440 slots and San Diego with 8,380 slots, respectively).

The compact has not been ratified by the California State Legislature. There has been reluctance on behalf of the Legislature to ratify the compact due to the debate between people who are for the casino, those against it, and policy makers unsure of its short and long-term impacts on the San Francisco Bay Area. Senator Diane Feinstein is pursuing legislation to overturn the Congressional enactment and require the Lytton Band to go through the BIA process.

Due to the controversy surrounding the expanded casino project the Lytton Band publicly withdrew its application for Class III gaming slot machines and has opted to install Class II gaming machines (essentially electronic bingo machines) which do not require any oversight by the State. However, the Lytton Band may try to expand the casino to include Class III gaming machines at a later date.

California American Indian Casinos by County

California Indian Casinos by County							
County	Proposed	Existing	Slots	County	Proposed	Existing	Slots
Alameda	1	-	-	Orange	-	-	-
Alpine	-	1	2,000	Placer	-	1	1,906
Amador	2	1	-	Plumas	1	-	-
Butte	1	2	1,900	Riverside	1	9	12,440
Calaveras	1	-	-	Sacramento	-	-	-
Colusa	-	1	777	San Benito	-	-	-
Contra Costa	3	-	-	San Bernardino	1	2	2,220
Del Norte	1	1	575	San Diego	3	8	8,380
El Dorado	1	-	1,500	San Francisco	-	-	-
Fresno	-	2	2,329	San Joaquin	-	-	-
Glenn	1	-	-	San Luis Obispo	-	-	-
Humboldt	2	3	769	San Mateo	-	-	-
Imperial	-	1	-	Santa Barbara	-	1	2,000
Inyo	1	1	300	Santa Clara	-	-	248
Kern	-	-	-	Santa Cruz	-	-	-
Kings	-	1	2,000	Shasta	-	2	851
Lake	-	3	1,730	Sierra	-	-	-
Lassen	-	1	150	Siskiyou	1	-	-
Los Angeles	-	-	2,000	Solano	-	-	-
Madera	-	1	1,800	Sonoma	2	2	1,600
Marin	1	-	-	Stanislaus	-	-	
Mariposa	-	-	-	Sutter	-	-	
Mendocino	1	3	1,796	Tehama	-	1	650
Merced	-	-	-	Trinity	-	-	
Modoc	-	1	90	Tulare	-	1	750
Mono	-	-	-	Tuolumne	-	2	854
Monterey	-	-	-	Ventura	-	-	
Napa	-	-	-	Yolo	-	1	2,020
Nevada	-	-	-	Yuba	1	-	
				Total	26	53	53,635

Source: Map of Existing & Proposed Indian Casinos, June 2003; CA Gambling Control Commission, 2004; CA State University, Sacramento, 2004; and The Abaris Group

Methodology

For this study, The Abaris Group conducted 39 telephone and one-on-one interviews with various organizations to collect data and information on the impact of Native American gaming venues on communities. The Internet was used to identify studies and articles and a detailed literature search was conducted (see the Appendix for the list of people/organizations interviewed, a bibliography of the articles, and a chart comparing various casino data). The Abaris Group also attended various meetings on the proposed Casino San Pablo including the January 22, 2005 San Pablo Town Hall on this issue.

Problem and Pathological Gambling

There are many perceived public-health issues surrounding casino gambling. Some of these include suicide, domestic violence, alcohol abuse, divorce, bankruptcy, drug abuse, criminal activity, and truancy. Over the last several years many studies have been conducted to better understand the effects of gambling. Problem and pathological gambling is one of the most studied gaming impact topics.

Gambling behavior lies on a continuum from occasional gambling, regular gambling (once or twice a week) through to problem and pathological gambling. Problem gambling usually refers to gambling that the gambler themselves find problematic, whereas pathological gambling usually refers to those who fulfill DSM (Diagnostic & Statistical Manual of Mental Disorders) criteria.[3]

There were three studies conducted in 1999 reviewing the issue of problem and pathological gambling: the National Gambling Impact Study Commission (NGISC)[4], the National Research Council (NRC)[5], and the National Opinion Research Center (NORC).[6] While these three studies do not conclusively arrive at a definitive link between problem and pathological gambling and casinos, they all imply evidence of a strong connection between the two. The following excerpts are from the NGISC report.

- As the opportunities for gambling become more commonplace, it is likely that the number of people who will develop gambling problems will increase.[7]

- As with other addictive disorders, those who suffer from problem or pathological gambling engage in behavior that is destructive to themselves, their families, their work, and even their communities. This includes depression, abuse, divorce, homelessness, and suicide.[8]

- The NGISC was unanimous in its belief that the incidence of problem and pathological gambling is of sufficient severity to warrant immediate and enhanced attention on the part of public officials and others in the private and non-private sectors. The NGISC strongly urged those in positions of responsibility to move aggressively to reduce the occurrence of this malady in the general population and to alleviate the suffering of those afflicted.[9]

---

[3] Griffiths, M, 2004. Betting your life on it. *BMJ* 2004;329:1055-6.

[4] National Gambling Impact Study Commission Report. Prepared for: President of the US, Congress, Governors and Tribal Leaders. June 1999. Prepared by: National Gambling Impact Study Commission.

[5] Pathological Gambling: A Critical Review. National Research Council, Committee on the Social and Economic Impact of Pathological Gambling. 1999.

[6] Gambling Impact and Behavior Study. Prepared for: National Gambling Impact Study Commission. April 1, 1999. Prepared by: NORC at the University of Chicago, Gemini Research, The Lewin Group and Christiansen/Cummings Associates.

[7] National Gambling Impact Study Commission Report. Prepared for: President of the US, Congress, Governors and Tribal Leaders. June 1999. Prepared by: National Gambling Impact Study Commission, p. 4-19.

[8] Ibid., p. 7.18

[9] Ibid., p. 4.3

The following are excerpts from the NRC and NORC reports pertaining to problem and pathological gambling[10]:

- NRC concluded that pathological gambling is found proportionately more often among the young, less educated, and poor.
- The NRC and NORC studies found that men are more likely to be pathological, problem, or at-risk gamblers than women.
- Both studies found that pathological, problem, and at-risk gambling was proportionally higher among African Americans than other ethnic groups.
- NORC reported that pathological gambling occurs less frequently among individuals over age 65, among college graduates, and in households with incomes over $100,000 per year.
- Researchers have discovered high levels of other addictive behavior among problem and pathological gamblers, especially regarding drugs and alcohol. For example, estimates of the incidence of substance abuse among pathological gamblers ranges from 25 to 63 percent. Individuals admitted to chemical dependence treatment programs are three to six times more likely to be problem gamblers than are people from the general population.
- In its survey, NORC found that "respondents reporting at-risk, problem, and pathological gambling are more likely than low-risk or non-gamblers to have ever been alcohol or drug-dependent and to have used illicit drugs in the past 12 months."

More recently, there have been studies that show a positive correlation between casinos in a community and an increase in the number of persons suffering from problem and pathological gambling. Two of these include studies published by John Welte, Ph.D. in the *Journal of Gambling Studies* and a study published in October 2004 for the Responsibility in Gambling Trust (RIGT) called *A Review of Research on Aspects of Problem Gambling*.

Dr. Welte's 2002 study showed that the prevalence of problem gambling declined significantly as socioeconomic status increased.[11] His study also revealed that African Americans, Hispanics and Asians were more likely to be problem gamblers than whites.[12] His 2004 study examined the effect of community disadvantages and gambling availability on gambling participation and pathology. The significant finding of this study is that the presence of a casino within ten miles of a respondent's home was positively related to problem and pathological gambling. Specifically, respondents to the survey who lived within ten miles of a casino had double the rate of problem and pathological gambling compared to those who did not (7.2 percent and 3.1 percent, respectively).[13]

[10] National Gambling Impact Study Commission Report. Prepared for: President of the US, Congress, Governors and Tribal Leaders. June 1999. Prepared by: National Gambling Impact Study Commission, p 4-11.
[11] Welte JW, Wieczorek WF, Tidwell MC, Parker J (2002). Gambling participation in the U.S. – results from a national survey. *Journal of Gambling Studies*; 18(4) Winter 2002, p. 325.
[12] Ibid., p. 325.
[13] Welte JW, Wieczorek WF, Barnes GM, Tidwell MC, Hoffman JH (2004). The relationship of ecological and geographic factors to gambling behavior and pathology. *Journal of Gambling Studies*; 20(4) Winter 2004: 405-23.

The 2004 study conducted by the RIGT found "...it can be anticipated that legislation and policies that significantly enhance access to electronic gaming machines, casino table games and other continuous gambling forms will generate increases in problem gambling and related flow-on costs to families and communities. Risk profiles are also likely to change, with disproportionate increases among women and some other population sectors including ethnic and new migrant minorities. Problem gambling may also move 'up market', becoming somewhat more evenly distributed throughout socioeconomic strata and age groups."[16]

While the NORC found that pathological gambling occurs less frequently among persons over age 65, a January 19, 2005 article in USA Today showed that nearly 11 percent of a study's participating senior citizens fit the researchers' criteria of "at-risk" gamblers – reporting that they placed more than $100 on a bet, gambled more than they could afford to lose, or both.[17]

The NORC and the NRC studies provided a 1999 estimate on the percent of adult problem and pathological gamblers in the U.S. The "lifetime" rate for problem and pathological gambling and the "past year" problem and pathological gambling rates were summed to obtain a total for each source (NORC total estimate was 4 percent of the adult population and the NRC total estimate was 6.5 percent).

Using the 1999[18] rates estimated by NORC and NRC and using California Department of Finance population projections for 2005 by age, the number of adult problem and pathological gamblers (persons aged 20 and over) in California would range from 1 million to 1.7 million adults, depending on which source is used. The same calculation for Contra Costa County results in a range of 29,700 to 48,200, depending on which source is used. This accounts for 3 percent to 5 percent of the total population in Contra Costa County (depending on the source).

According to the California Council on Problem Gambling, a non-profit organization dedicated to helping problem gamblers, 3,400 Californians called the organization's gambling help line in 2004, which represented a 21 percent increase from 2003. Callers were nearly evenly split between male (52.7 percent) and female (47.3 percent) and the majority of callers were between the ages of 26 to 55 years of age.

Another indication of the importance of understanding the prevalence of problem and pathological gambling in California is a large study being conducted by the State of California's Office of Problem Gambling. The goal of the study is to understand and quantify the gambling impact on California. The budget for the study is $2 million and is expected to be completed in 2007.

[16] Abbot M, Volberg R, Bellringer M, Reith G (2004). A review of research on aspects of problem gambling, final report. Executive Summary. Auckland University of Technology, Gambling Research Centre; Prepared for Responsibility in Gambling Trust; October 2004; p. 50-51

[17] Associated Press. *USA Today*. Study: Many elderly gamblers bet more than they should. January 19, 2005.

[18] 1999 data was the most current empirical data identified by The Abaris Group to estimate the number of problem and pathological gambling. Ideally, a more current percentage would be used to calculate the estimated 2005 impact.

[21] Griffiths, M, 2004. Betting your life on it. *BMJ* 2004;329:1055-6.

Other Social Impacts

Empirical research on various social impacts of gambling have been ongoing since gambling became legalized, but even more studies are being conducted given the growth in the gambling industry. There has also been a significant rise in the number of organizations dedicated to understanding the affects of gambling on society. The majority of research focuses on the many issues surrounding problem and pathological gambling. While many studies show a correlation between gambling and a rise in social problems, other studies are inconclusive or show little or no correlation. There have also been some economically-based studies highlighting a direct impact between a studied issue (i.e., crime, bankruptcy, etc.) and gambling without addressing problem and pathological gambling. The Abaris Group addresses some of these issues in its analysis.

There are several societal issues that are believed to be affected by gambling.

- Alcohol & other drugs
- Bankruptcy
- Child abuse & neglect
- Crime
- Divorce
- Domestic violence
- Mental health
- Smoking
- Suicide
- Truancy

A recent article published in the *British Medical Journal* demonstrates that problem gambling has clear health related consequences.[21] The article describes studies that show evidence of problem gambling and societal consequences. For example, in 2003 the National Coalition Against Legalized Gambling reported that, with the opening of casinos in South Dakota, child abuse and domestic assaults rose by 42 percent and 80 percent, respectively. This was attributed to the increase in casino gambling.[22]

One study published in 2002 showed that in metropolitan areas where a casino exists there is a modest elevation in suicide rates. This same study also analyzed the data using a different methodology and concluded that there were no changes in suicide rates in metropolitan areas with or without casinos. However, the authors write that the finding of the moderate increase in suicide rates should not be summarily dismissed.[23]

The affects of smoking and second-hand smoke have been shown to have very high societal costs and implications. The following quote from a study published in 2003 about second hand smoke states "[The study] findings demonstrate that exposure of nonsmokers to environmental tobacco smoke (ETS) in a commercial setting results in uptake of tobacco-specific lung carcinogen."[24]

Crime and bankruptcy are two other societal issues affected by gambling. A study published in the December 2004 issue of *Psychological Reports* ("Legalized Gambling and Crime in Canada" by F.

[22] Ibid., p. 1055

[23] McCleary R, Chew KSY, Merrill V, Napolitano C, 2002. Does legalized gambling elevate the risk of suicide? an analysis of U.S. counties and metropolitan areas. *Suicide and Life-Threatening Behavior*; 32(2), Summer 2002, p. 209-221.

[24] Anderson KE, Kliris J, Murphy L, Carmella SG, Han S, Link C, Bliss RL, Puumala S, Murphy SE, Hecht SS, 2003. Metabolites of a tobacco-specific lung carcinogen in nonsmoking casino patrons. *Cancer Epidemiology, Biomarkers & Prevention*; Vol. 12, December 2003, p. 1544-1546.

Stephen Bridges, Ph.D.) states that there were positive associations for robbery with casinos and slot machines, etc. The relationship between an increase in crime and having a casino in a community continues to be studied.

Gambling clearly increases individual bankruptcies as demonstrated by several studies. The Institute for the Study of Gambling and Commercial Gaming published an article entitled "Casino Gambling and Bankruptcy in New U.S. Casino Jurisdictions." The article states, "The results indicate that casino gambling is associated with an increase in personal bankruptcy in seven of eight communities. In five of the seven communities the increase is statistically significant."[25]

A paper released in March 2004 by Ernie Gross, Ph.D., Visiting Scholar at the Congressional Business Office (CBO)[26] showed that during the 1990s, counties with legalized casino gambling experienced a cumulative growth rate in individual bankruptcies that was more than double the growth rate for corresponding non-casino counties. The study also showed a decline in the number of business bankruptcies compared to the counties without a casino.

Another study conducted by Barron, Staten and Wilshusen (2002) also concluded that casinos have had a positive and statistically significant impact on personal bankruptcy rates in the casino county and its geographic neighbors.[27]

California American Indian Casino Impact

Focusing solely on California and the impact of gambling on its counties, two economists from California State University, Sacramento conducted a study in 2004 on the impact of Native American casinos on California counties.[28] In conducting this cross-sectional analysis of California counties in 2000, the study found that those counties with a greater casino presence (more slot machines and/or more gaming tables) had somewhat higher crime rates. Aggravated assaults and violent crime were two categories of crime that were strongly related to casino presence. With respect to bankruptcy filing rates, those counties with a greater casino presence were associated with higher bankruptcy filing rates, especially for individual filings. On the other hand, the study also found that counties with a greater casino presence had modestly lower unemployment rates (primarily in those counties with gaming tables because they require more labor than slot machines) and modestly higher tax revenues (particularly in two major categories closely related to casinos and tourism – hotel occupancy taxes and tobacco taxes).

While this is a working paper, the authors note that their findings seem to run parallel to another study that was conducted by the National Bureau of Economic Research (NBER) released in September 2002. This study analyzed data throughout the U.S. comparing counties with tribal casinos and counties without tribal casinos. "Four years after a casino opens, bankruptcy rates, violent crime, auto thefts and larceny are up 10 percent in counties with a casino."[29] On the other hand, the positive impacts showed that counties with or near a casino the number of employed increased and mortality declined.

---

[25] www.unr.edu/gaming/papers.asp, as of May 10, 2005.

[26] Goss E, Economics Professor, Visiting Scholar, Congressional Budget Office, Morse E, Law Professor, Creighton University, March 12, 2004. The impact of casino gambling on bankruptcy rates: a county level analysis.

[27] Barron JM, Staten ME, Wishusen SM, 2002. The impact of casino gambling on personal bankruptcy filing rates,. *Contemporary Economic Policy*. Oxford University Press, vol. 20(4), p. 440-455.

[28] Ortiz JL, Corcoran SP, California's gaming propositions: how has the expansion of gaming rights affected local communities. October 2004. The study is pending publication. Cited here with permission from the authors.

[29] Evans WN, Topoleski JH, 2002. The social and economic impact of native american casinos. National Bureau of Economic Research, September 2002.

Impact of Gaming in Contra Costa County

The Contra Costa Health Services Community Wellness & Prevention Program (CW&PP) believes that the negative effects on public health of the proposed casinos would be significant, particularly in terms of tobacco use and asthma. In addition, these negative effects would be concentrated in San Pablo, Richmond and North Richmond, communities already burdened with severe environmental hazards. Negative affects from casinos would conflict with Contra Costa's Environmental Justice Policy which seeks to ensure that new projects and developments do not increase the environmental burden that low-income communities already face. Presented below are CW&PP's key concerns regarding these threats to the public's health.

Tobacco Use

The Casino San Pablo currently allows smoking. Because Indian tribes are sovereign nations, they are not subject to California's smoke-free workplace laws or to local smoking ordinances. The only way they can become smoke-free is through a compact with the state or local government, or through voluntarily action by the tribal owners.

Adult Smoking Rates. At 16.2 percent, California's adult smoking rate is the second lowest in the nation (*California Adult Tobacco Survey,* 2003*).* Contra Costa's adult smoking rate is 13.7 percent, down from 19.4 percent in 1990 (*California Tobacco Survey,* 1990, 2002*)*. This decrease of almost 30 percent in the adult smoking rate demonstrates how community norms regarding tobacco use have changed over the past two decades.

Smoking in the San Pablo Casino, and in the two proposed casinos, presents a challenge to the norms California has worked hard to establish for its residents. According to Professor William Thompson of the University of Nevada, excluding Las Vegas, most casino patrons are local residents *(Urban Casinos: A Town Hall Meeting,* January 2005*)*.

Local Contra Costa residents, whose smoking rates are low, will be exposed to pro-tobacco and pro-smoking behaviors. This, in turn, is likely to lead to an increase in smoking rates among casino patrons and, in turn, the County adult smoking rate. An increase in the smoking rate translates into increased healthcare costs to the County. It is known that the economic burden of smoking in California was $15.8 billion dollars in 1999. That translated into $228 million in direct medical costs for Contra Costa, $459 per County resident.[30] This cost is likely to increase if smoking rates in the county increase.

Exposure to Second-hand Smoke. Second-hand smoke contains a mixture of more than 4,000 chemicals, including more than 50 carcinogens. It is associated with an increased risk for lung cancer and coronary heart disease in non-smoking adults, and it is responsible for 38,000 deaths from these diseases each year.[31]

While no specific employment numbers have been provided, Casino San Pablo developers have suggested that thousands of jobs may be created at the proposed casinos in Contra Costa County. The promise of job creation is one of the most compelling arguments made for casinos in the county. These jobs, however, will come at a high cost to casino workers and to the county. The Contra Costa County Tobacco Prevention Project has received complaints from workers at the Casino San Pablo

[30] Max W., Rice D.P., Zhang X., Sung H.-Y., Miller L., *The Cost of Smoking in California,* 1999. California State Department of Health Services, 2002.

[31] Centers for Disease Control, Second-hand Smoke Fact Sheet, 2004.

who have developed respiratory illnesses since the casino became a tribal facility and smoking was allowed. These workers are worried about their health and their jobs and they have also complained that they believe calling in sick, makes them vulnerable to being fired.

The following are some published facts about second-hand smoke in casinos:

- Smoky casinos contain up to 50 times more cancer-causing airborne particles than highways and city streets clogged with diesel trucks at rush hour. Cancer-causing particulates are virtually eliminated when indoor smoking bans are instituted.[32]

- Regular exposure at work to second-hand smoke can cause a 91 percent increase in coronary heart disease.[33]

Ventilation. Ventilation does not fully address the problems associated with exposure to second-hand smoke. There are no ventilation standards or technology that can remove the carcinogens from second-hand smoke. At best, ventilation systems can address odor and haze. A number of scientific studies show that:

- Casino workers in a "well ventilated" casino had cotinine levels (metabolized nicotine) 300-600 percent higher than in other working workplaces during a work shift.[34]

- "Designated 'no smoking areas' in Australian gaming clubs were found typically to provide a 50 percent reduction in exposure to second-hand smoke. The protection afforded is not comparable with that provided by prohibiting smoking on the premises."[35]

Smoke-free Casinos. There is support for smoke-free tribal casinos in California. The California Department of Health Services reports that 91 percent of Californians surveyed said they would be more likely to visit American Indian casinos or would not change patronage if smoking were prohibited in casinos. Similarly, the American Indian Tobacco Education Partnership surveyed over 300 casino guests and workers around the state and found that over 80 percent prefer to work or play in a smoke-free environment.

Asthma

Asthma is a chronic illness that can have serious health consequences for patients and their families. People with asthma have more frequent symptoms and asthma "attacks" if they are exposed to certain environmental "triggers." The establishment or expansion of casinos in West Contra Costa County will increase the amount of two primary environmental asthma triggers for both casino patrons and local residents: environmental tobacco smoke (ETS) and particulate matter (PM).

Asthma and Tobacco Smoke. One of the primary environmental triggers for asthma is tobacco smoke. Tobacco smoke is known to cause asthma in otherwise healthy individuals. Conversely, reducing exposure to environmental tobacco smoke can also reduce asthma attacks. New asthma cases and asthma attacks requiring emergency medical care can be anticipated should new tribal casinos allowing indoor smoking be established. This increased medical care will, in turn, result in an increase in county costs to treat asthma patients.

[32] Repace J, *Journal of Occupational and Environmental Medicine*, September, 2004
[33] Repace J, Smoke-Free Casino Advocacy Guide, American Indian Tobacco Education Partnership, April 2004
[34] D. Trout, J. Decker, et al., *Journal of Occupational and Environmental Medicine*, March 1998
[35] Cains T, Cannata S, Poulos R, et al., *Tobacco Control Journal,* 2004

Asthma and Traffic. According to the American Lung Association, air pollution is known to have serious health impacts including reductions in lung function, lung tissue damage, and aggravation of lung diseases such as emphysema, bronchitis and asthma. Emissions from motor vehicles, including particulate matter, contribute to poor air quality. High levels of particulate matter are known to increase asthma attacks and symptoms in both children and adults, and may be a contributing factor causing asthma in otherwise healthy individuals. Elevated levels of particulate matter also have been linked to lung cancer. In addition, they recently have been found to contribute to 6,500 premature deaths, and 350,000 asthma attacks, annually in California.

According to the Transportation and Land Use Coalition's 2004 Report, *Cleaning the Air, Growing Smarter,* air pollution problems hit disadvantaged Contra Costa communities the hardest. That report studied eleven low-income and minority communities in the County for air pollution levels and associated health impacts. Three of these communities are precisely those in which the proposed new or expanded tribal-run casinos would be located: Richmond, San Pablo, and North Richmond.

These communities bear a double burden of air pollution from a combination of both elevated industrial and transportation-related pollution. Not surprisingly, these communities have higher asthma hospitalization rates than the County average. In Richmond, for example, asthma hospitalization rates are two and half times higher than the rest of the County.

Emergency Care Impact

The increase in temporary population caused by casino visitors, staff and increased traffic will lead to a growth in medical care needs (e.g. first aid), EMS ambulance responses, and visits to emergency departments (EDs). Every community interviewed with Native American gaming casinos described an increase in volume of first aid, EMS and ED visits. For example, Riverside County reported that they average three to four ambulance responses daily to each of the four major casinos in their county.[36] The volume was so high at one casino that the casino purchased an ambulance for the ambulance provider in that county and also provides additional dollars for staffing the ambulance and to the EMS Agency for surveillance and protocol coordination. It was noted in one interview that 58 percent of the ED visits to a particular hospital were generated by the local casino's employees. This was reinforced by other health care providers interviewed.[37]

There are several sources that provide EMS incident rates for group gatherings. One source suggests a patient presentation of .992 per 1,000 population and an EMS transport to the hospital rate of.027 per 1,000 population.[38] The Abaris Group was unable to obtain an estimate for the expected number of visitors to the proposed Casino San Pablo and thus, estimated it using the following methodology. The Abaris Group obtained visitor data from a casino that has 2,200 slot machines, Cache Creek Casino in Yolo County, California. They estimated that they have on average 8,500 visitors per day. Cache Creek Casino is in a rural area and to account for the urban location of Casino San Pablo, The Abaris Group estimated an average of 11,000 visitors per day or 4 million visitors per year. This would generate a patient presentation rate of 10.9 events per day with an ambulance transport rate of .30 per day.

Contra Costa County Estimated EMS Impact from Casino San Pablo

Contra Costa County - Estimated EMS Impact from Casino San Pablo	
Estimated Casino Visitors[1]	4,000,000
Patient Presentation Utilization Rate[2]	0.992
Annual Patient Presentations	3,968
Daily Patient Presentations	10.9
EMS Transport Utilization Rate[2]	0.027
Annual EMS Transports	108
Daily EMS Transports	0.30

[1] The Abaris Group

[2] Mass gathering medicine: a predictive model for patient presentation and transport rates. *Prehospital Disaster Medicine*. 2001 Jul-Sep; 16(3), p. 150-158.

[36] Personal communication with Michael Osur, Assistant Public Health Director, County of Riverside.

[37] Personal communication with Mark Santamaria, VP William Backus Hospital (Norwich, CT) and Steve Engeldow, EMS Division Chief, Joliet Fire Department (Joliet, IL).

[38] Arbon P, Bridgewater FH, Smith C, 2001. Mass gathering medicine: a predictive model for patent presentation and transport rates. *Prehospital Disaster Medicine*. 2001 Jul-Sep; 16(3) p. 150-158.

Depending on the amount of medical care capability available at the casino (e.g. first aid clinic, occupational health clinic, paramedic staffing, etc.), it is estimated that the EMS delivery system would need to respond to the casino an average of 3 times per day.

Ambulance Transport Impact

The average time from dispatch to scene and return to service in Contra Costa County is 20 minutes and for transports it is 45 minutes. The EMS ambulance provider would likely require approximately 1.5 unit hours of work but a total of 3.9 units hours to assure performance.[39] A unit hour is an hour of scheduled coverage by an ambulance. Thus, the EMS ambulance provider would need to add a minimum of 9 unit hours of additional ambulance coverage per day to meet this demand and not affect other ambulance performance. Current unit-hour costs are running approximately $150 per unit hour or approximately an annual cost of $490,000 per year.

Preliminary estimates indicate that Casino San Pablo would add an additional 34,000 traveling vehicles per day on I-80 which is on top of the existing 80,000 vehicle traffic on that portion of the freeway.[40] There is also an estimated 10,000 new cars for San Pablo Dam Road bringing the total to 44,000 new vehicles per day. Assuming an average twenty-mile round trip drive for casino employees and casino patrons and using the injury crash rate per 100,000 miles driven for Contra Costa County of .1 this would produce 1 new vehicle injury crash per day.

Contra Costa County Estimated New Vehicle Crashes

Contra Costa County Daily Vehicle Miles Traveled Injury Rate, 2000	
Avg. Daily Motor Vehicle Miles Traveled, 2000	17,584,500
Avg. Daily Persons Killed & Injured, 2000	17.3
Injury Crash Rate per 100,000 Miles Driven	0.1

Source: CA Highway Patrol 2000 SWITRS Report & Metropolitan Transportation Commission 2000.

Contra Costa County Estimated Annual Injury/Fatal Crashes	
New Vehicles	44,000
Average Miles Driven	20
Injury Crash Rate per 100,000 Miles Driven	0.1
Estimated Daily Inury/Fatal Crashes	1
Estimated Annual Injury/Fatal Crash	316

Source: CA Highway Patrol 2000 SWITRS Report, Metropolitan Transportation Commission 2000 & The Abaris Group.

[39] Industry standards require ambulance providers to use a .40 unit hour of utilization to assure sufficient ambulance resources are available to meet response times.

[40] Urban Casinos: A Town Hall Meeting. January 22, 2005. Statistics provided in presentation given by Arnold Torma of Katz, Okitsu & Associates.

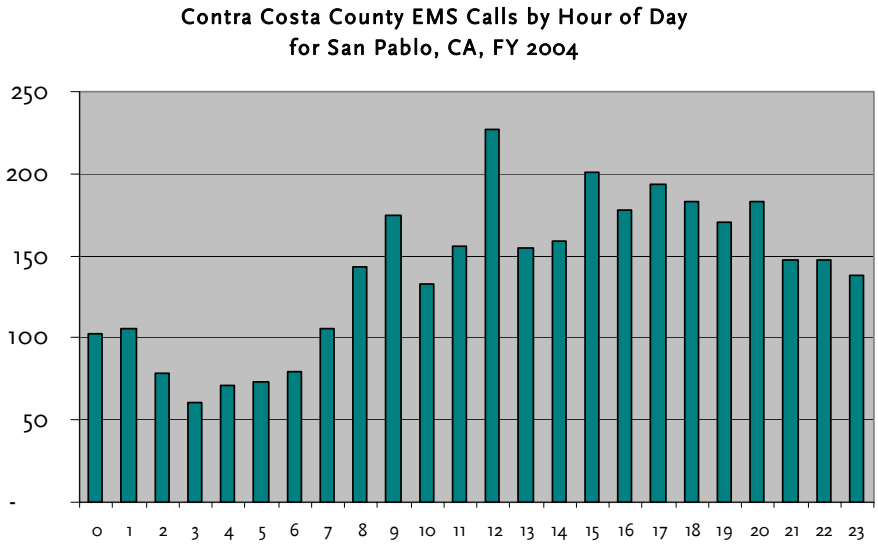
It must be noted for all vehicle crashes and most medical responses to a casino, there is a current countywide EMS policy that these responses have fire first response to those calls as well. Depending on the location of the freeway crash, there may also need to be dual fire response (e.g. one engine northbound and one engine southbound) to assure access to a compacted freeway caused by rush-hour traffic or the collision itself.

The need for EMS and ED services will spike during the peak casino hours which are predicted to be during the weekends and afternoon and early evening hours. This also corresponds to the peak period for non casino EMS call requests and thus the total EMS and ED resources will likely need adjusting upwards to meet these peak needs. For fiscal year 2004, the number of EMS calls in San Pablo peaked at noon and then peaked again at 1500 with the busiest period from 1500 to 2000.

Contra Costa County EMS Calls by Hour of Day for San Pablo, CA, FY 2004

Contra Costa County EMS Calls by Hour of Day for San Pablo, CA, FY 2004		
Hour	Frequency	Percent of Total
0	103	3%
1	106	3%
2	78	2%
3	61	2%
4	71	2%
5	73	2%
6	80	2%
7	106	3%
8	143	4%
9	175	5%
10	133	4%
11	156	5%
12	227	7%
13	155	5%
14	159	5%
15	201	6%
16	178	5%
17	193	6%
18	183	5%
19	170	5%
20	183	5%
21	147	4%
22	147	4%
23	138	4%
Total	3,366	100%

Source: Contra Costa County EMS Agency, FY 2003-2004

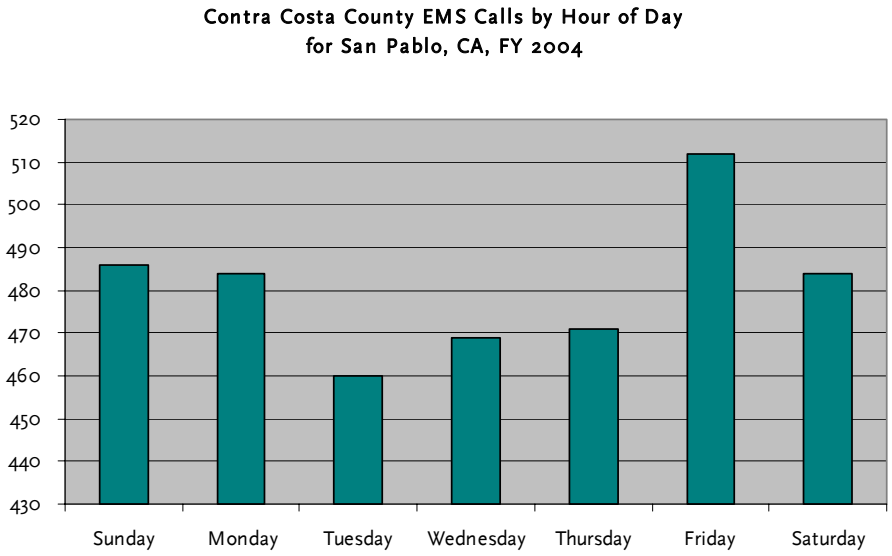


The peak day for EMS calls in San Pablo during fiscal year 2003 – 2004 was Fridays (512), followed by Sundays (486) and then Saturdays (484). These are expected to be the busiest days at the casino.

Contra Costa County EMS Calls by Day for San Pablo, CA

Contra Costa County EMS Calls by Day for San Pablo, CA FY 2004		
Day of Week	Frequency	Percent of Total
Sunday	486	14.4%
Monday	484	14.4%
Tuesday	460	13.7%
Wednesday	469	13.9%
Thursday	471	14.0%
Friday	512	15.2%
Saturday	484	14.4%
Total	3,366	100%

Source: Contra Costa County EMS Agency, FY 2003-2004



EMS Interview Findings

As mentioned, The Abaris Group interviewed several entities on the EMS impact of a casino in a community. Below are some of the highlights.

- The Abaris Group learned from Joliet Fire Department that when a casino holds a special event, traffic congestion, EMS calls, and patient presentations to EDs all increase because the volume of visitors to the casino swells to even greater numbers. This is especially true when a casino is giving away a free gift.

- As previously mentioned, William Backus Hospital in Norwich, CT said that their ED treated a large number of casino employees and that one issue facing the ED staff was finding translators for the various languages spoken by casino employees.

- Riverside County EMS Agency said that the new casinos (8 casinos in Riverside County) did not appear to increase the number of traffic crashes because the majority of patrons arrived at the casinos via bus. However, the patrons who do need medical care are typically dehydrated, had not eaten, and had not taken their necessary medications. One casino had such a large number of patrons requiring EMS response that the tribe purchased an ambulance for the transport provider and fully funds the staffing of the ambulance.

- One significant health benefit of Riverside County casinos was that the defibrillators located in casinos were saving lives.

Finally, in theory, all EMS and ED visits are avoidable and may be partially prevented through prevention and education activities. The EMS and ED needs should be included in any surveillance program with a view towards identifying behaviors and variables that would reduce their occurrences.

Surveillance Program

While there are numerous studies that show a strong link between casinos and several social issues, a concrete methodology for understanding the impact of a casino in a community is to establish a surveillance system that would track the various data.

Dr. Rachel Volberg is considered an expert in problem and pathological gambling and was one of the lead authors of the NORC report. Dr. Volberg suggests the following when considering such a program:

- Establish the tracking system before the casino is introduced to the community
- Capture baseline data for comparison purposes
- Maintain an integrated data base by a neutral party
- Contain a funding mechanism
- Be flexible
- Incorporate a process for disseminating the information
- Contain a research component

Dr. Volberg said that if a tracking mechanism is created she would be interested in collaborating with Contra Costa County. To her knowledge there are tracking mechanisms, but they are located outside of the US (New Zealand and Australia).

Proposed Mitigation Needs

As part of The Abaris Group's research, several governmental entities were contacted to identify their efforts to mitigate the negative affects of gambling in their community. The County of San Diego had completed an in-depth analysis of the expected impact of the Santa Ysabel Casino project and County staff shared the background and results of their study. The County of San Diego's experience most closely matched Contra Costa County's in terms of a baseline study, desire to see mitigation occur and the desire to reduce the public health impact. The Abaris Group based the following analysis on the County of San Diego's analysis.

To determine the cost of the increased efforts needed to treat/prevent problem gambling resulting from a Las Vegas style casino being established in Contra Costa County, The Abaris Group used the following assumptions:

- The Abaris Group assumed the issues of problem and pathological gambling would be county-wide due to the relatively small geographic size of the county, the lack of other nearby casinos, and the expected heavy marketing that will occur with the proposed Casino San Pablo.

- The Abaris Group estimates a county-wide problem and pathological gambling incidence rate of 5.25 percent (this is the average of the NORC and NRC 1999 problem and pathological gambling estimate presented earlier in this report) due to casino gambling. This equates to approximately 39,000 adults living in Contra Costa County.

- The Abaris Group estimated a 5 percent increase in the caseloads of additional mental health, child welfare, child abuse and indigent ED visits, due to problem and pathological gambling. The following estimates and costs are based on other reported study incident rates and estimated costs provided from the Contra Costa Health Services or estimates from The Abaris Group.

  Contra Costa County Estimate of New Cases and ED Visits

Contra Costa County - Estimated New Cases and ED Visits			
Type of Case	Cases	Per Case Cost	Estimated Cost
Mental Health	741	$ 2,000	$ 1,482,000
Child Welfare	293	$ 2,600	$ 760,500
Abused/Neglected Children	371	$ 3,000	$ 1,111,500
ED Visits	546	$ 1,100	$ 600,600
Total Cases	1,950	-	$ 3,954,600

Source: The Abaris Group and San Diego County Analysis.

- To avoid significant impacts to families and children who depend on child support payments, Casino San Pablo should prohibit cashing of child support checks within the casino. In addition, Casino San Pablo should cooperate fully with enforcement of court orders for child support payments by their employees.

- A true mitigation program would include a prevention program to stop people from becoming problem and pathological gamblers before it becomes a problem. Raising public awareness of the risks of excessive gambling, expanding services for problem gamblers and strengthening regulatory, industry and public health harm reduction measures can counteract some adverse effects from increased availability.[41]

  From a public health perspective, individuals who experience gambling-related difficulties but would not meet a psychiatric diagnosis for pathological gambling are of as much concern as pathological gamblers because they represent a much larger proportion of the population. There is a possibility that their gambling-related difficulties may become more severe over time and there is also the likelihood that their gambling can be more easily influenced by changes in social attitudes and public awareness.[42]

  A unique approach to helping mitigate problem and pathological gambling is to station a problem gambling information kiosk within the casino. This is an innovative approach being explored in the United Kingdom. It represents a significant partnership between practitioners and gaming operators and dramatically increases the likelihood of practitioner contact with individuals experiencing gambling problems in situ.[43]

[41] Abbot M, Volberg R, Bellringer M, Reith G (2004). A review of research on aspects of problem gambling, final report. Executive Summary. Auckland University of Technology, Gambling Research Centre; Prepared for Responsibility in Gambling Trust; October 2004; p. 10
[42] Ibid., p. 16
[43] Ibid., p. 18

The problem and pathological gambling prevention program would include a public-health education community outreach program with staff, kiosk, and outreach programs.

Contra Costa County – Problem and Pathological Gambling Prevention Program: Year One Costs

Contra Costa County - Problem and Pathological Gambling Prevention Program: Year One Costs			
Line Item	Unit	Cost	Total
Health Educator	2	$ 45,000	$ 90,000
Administrative Assitant	1	$ 30,000	$ 30,000
Benefits	-	25%	$ 30,000
Office Space	-	$ 48,000	$ 48,000
Supplies & Equipment	-	$ 20,000	$ 20,000
Advertising	-	$ 150,000	$ 150,000
Web Site	-	$ 20,000	$ 20,000
Kisok in Casino	-	$ 15,000	$ 15,000
Problem and Pathological Gambling Materials	-	$ 100,000	$ 100,000
Total			$ 503,000

Source: The Abaris Group and San Diego County Analysis.

Appendix

Interviews

The following is a list of the individuals interviewed for this study.

Contra Costa County - Public Health and EMS Casino Study Interview List		
Name	**Title**	**Organization**
Dr. Wendell Brunner	Director of Public Health	Contra Costa County
Haven Fearn	Director of AOD	Contra Costa County
Victor Kogler	Data Consultant to AOD	Contra Costa County
Donna Wigand	Director of Mental Health	Contra Costa County
Steve Hahn-Smith	Mental Health Data Analyst	Contra Costa County
Art Lathrop	EMS Administrator	Contra Costa County
Sara Hoffman	Assistant CAO	Contra Costa County
Pat Godley	Contra Costa County Health Services CFO	Contra Costa County
Wendy Wright	Health Services Planner & Evaluator, Community Health	Contra Costa County
Donna Jackson	Community Education Coordinator, Child Abuse Prevention	Contra Costa County
Steve Engledow	EMS Division Chief	Joliet Fire Department
Dan Temprile	Commissioner of Social Services for Brantford	Brant, Ontario, Canada
Lisa Nocerini	Assistant to CAO, Office of the Mayor, City of Detroit	Detroit, MI
Terence Brewer	Fire Fighter/Administrative Office of Tyrone Scott	Detroit, MI
Jennifer Alston-Lafata	Director, Center for Health Services Research Henry Ford	Detroit, MI
Rory Chetlet	EMS Administrator	Clark County Health District (Las Vegas, NV)
Johanna Tregs, PhD.	Director	Southern Nevada Adult Mental Health Services
Judy Cornelius	Associate Director	Institute for the Study of Gaming
Sherry Ellis	Director	CA Office of Problem Gambling
Melody Lucas	Executive Assistant to Anna Carr, Deputy Director of	CA Gambling Control Commission
Kelly Martell	Section Manager, Division of Accounting & Reporting	CA State Controller's Office
Dr. Rachel Volberg	Lead Investigator	Gemini Research
Rhonda King	Deputy County Executive Officer	Riverside County, CA
Michael Osur	EMS Administrator/Assistant Public Health Administrator	Riverside County EMS
Charles "Point" Blank	EMS Executive Assistant	Riverside County EMS
Nick Mullane	First Selectman	Town of North Stonington, CT
Dr. Jim Oday	Vice President, Mental Health Services	Backus Hospital, Norwich, CT
Mark Santamaria	Vice President	Backus Hospital, Norwich, CT
Kristin Cass	City Manager's Assistant	Maricopa County, AZ - Epidemiology Dept.
Brent Stockwell	City Manager's Assistant	City of Scottsdale
Gloria	City Manager's Assistant	City of Tucson
Dorothy Moore	City Manager's Assistant	Milwaukee County, WI
Terri Daly	Director, IHSS	Amador County, CA
Neil Martin	Asst. County Admin. Officer	Mendocino County, CA
Kathy Altermatt	Administrative Assistant County Admin. Officer	Shasta County, CA
David Shoemaker	Intergovernmental Relations	Yolo County, CA
John Snyder	Director of Public Works	San Diego County, CA
Akan Smith	Epidemiologist	San Diego County EMS Agency
Jayne Becker	Assistant to City Administrator	City of Oakland

Bibliography

USA Today published an article on January 19, 2005 about the increase in elderly gamblers "...many of them don't have a lot of money and spending on gambling could mean that they won't have anything left to buy medicines."

Griffiths MD, Betting your life on it: Problem gambling has clear health related consequences. *BMJ* 2004; 329:1005-6.

Stitt BG, Giacopassi D, Nichols M, Gambling among older adults: a comparative analysis. *Experimental Aging Research*, 2003 29:189-203.

Welte JW, Barnes GM, Wieczorek WF, Tidwell MC, Parker J, Gambling participation in the US: results from a national survey. *J of Gambling Studies* 2002 18(4):313-37.

Welte JW, Wieczorek WF, Barnes GM, Tidwell MC, Hoffman JH (2004). The relationship of ecological and geographic factors to gambling behavior and pathology. *Journal of Gambling Studies*; 20(4) Winter 2004: 405-23

Giacopassi D, Stitt BG, Vandiver M, An analysis of the relationship of alcohol to casino gambling among college students. *J of Gambling Studies* 1998 14(2):135-49.

Stitt BG, Nichols M, Giacopassi D, Perceptions of the extent of problem gambling within new casino communities. *J of Gambling Studies* 2000 16(4):433-51.

McCleary R, Chew KSY, Merrill V, Napolitano C, Does legalized gambling elevate the risk of suicide? An analysis of US counties and metropolitan areas. *Suicide and Life-Threatening Behavior*, 2002 32(2):209-21.

Jacques C, Ladouceur R, Ferland F, Impact of availability on gambling: a longitudinal study. *Canadian J of Psychiatry*, 11/2000 Vol. 45:810-15.

Nichols M, Stitt BG, Giacopassi D, Changes in suicide and divorce in new casino jurisdictions. *J of Gambling Studies* 2004 20(4):391-404.

Barron JM, Staten ME, Wishusen SM, 2002. The impact of casino gambling on personal bankruptcy filing rates,. *Contemporary Economic Policy*. Oxford University Press, vol. 20(4), p. 440-455.

Ortiz JL, Corcoran SP, California's gaming propositions: how has the expansion of gaming rights affected local communities. October 2004. The study is pending publication.

Anderson KE, Kliris J, Murphy L, et al, Metabolites of a tobacco-specific lung carcinogen in nonsmoking casino patrons. *Cancer Epidemiology, Biomarkers & Prevention*, 12/2003:1544-6.

Toneatto T, Ferguson D, Brennan J, Effect of a new casino on problem gambling in treatment-seeking substance abusers. *Canadian J of Psychiatry* 2/2003 48(1):40-4.

Giacopassi D, Vandiver M, Stitt BG, College student perceptions of crime and casino gambling: a preliminary investigation. *J of Gambling Studies* 1997 13(4):353-61.

Shaffer HJ, Hall MN, The natural history of gambling and drinking problems among casino employees. *J of Social Psychology*, 2002 142(4):405-24.

Arbon P, Bridgewater FH, Smith C, Mass gathering medicine: a predictive model for patient presentation and transports rates. *Prehospital Disaster Medicine*, 2001 Jul-Sep; 16(3):150-8.

Gordon D, Who treats the fans? EMS at football stadiums. *EMS Today*, 10/1987;70-3.

Drick J, Riverboat EMS: never a game of chance. Emergency Medical Services, 3/1998;43-7.

Max W., Rice D.P., Zhang X., Sung H.-Y., Miller L., *The Cost of Smoking in California,* 1999. California State Department of Health Services, 2002.

Abbot M, Volberg R, Bellringer M, Reith G (2004). A review of research on aspects of problem gambling, final report. Executive Summary. Auckland University of Technology, Gambling Research Centre; Prepared for Responsibility in Gambling Trust; October 2004.

Charity Casino Impact Study, Report of the Pre-Opening Phase in Brant County. Prepared for: Ontario Substance Abuse Bureau, Ministry of Health & Long-Term Care. January 21, 2000. Prepared by: Robert Hann & Associates Limited

Brantford Charity Casino Community Impact Study. Prepared for: City of Brantford, Ontario, Canada. August 2004. Prepared by Shercon Associates Inc.

National Gambling Impact Study Commission Report. Prepared for: President of the US, Congress, Governors and Tribal Leaders. June 1999. Prepared by: National Gambling Impact Study Commission.

Gambling Impact and Behavior Study. Prepared for: National Gambling Impact Study Commission. April 1, 1999. Prepared by: NORC at the University of Chicago, Gemini Research, The Lewin Group and Christiansen/Cummings Associates.

Pathological Gambling: A Critical Review. National Research Council, Committee on the Social and Economic Impact of Pathological Gambling. 1999

The Social and Economic Impact of Native American Casinos. September 2002. Prepared for: National Bureau of Economic Research. Prepared by: William Evans and Julie Topoleski, Department of Economics, University of Maryland

The Impact of Casino Gambling on Bankruptcy Rates: A County Level Analysis. March 2004. Prepared by: Ernie Goss, Professor of Economics, Visiting Scholar, Congressional Budget Office and Edward Morse, Professor of Law, Creighton University

Comparison of Various Casino Statistics

California Casinos - Comparative Statistics						
Casino	**Location**	**Tribe**	**Square Feet[1]**	**Employees**	**Slots**	**Visitors**
Agua Caliente Casino	Rancho Mirage, CA	Agua Caliente Band of Cahuilla Indians	45,000	-	1,000	-
Black Oak Casino	Tuolume, CA	Tuolume Band of Me-Wuk Indians	164,770	300	600	3,200/day
Cache Creek Casino	Brooks, CA	Rumsey Band of Wintun Indians	74,720	2,000+	2,254	8,500/day
Casino San Pablo - Card Room	San Pablo, CA	Lytton Band of the Pomo Indians	71,000	400	40 (cards)	-
Casino San Pablo (Proposed)	San Pablo, CA	Lytton Band of the Pomo Indians	500,000-600,000	1,500-2,000	2,500	-
Colusa Indian Casino & Bingo	Colusa, CA	Colusa Indian Community	-	-	777	-
Coyote Valley Shodakai Casino	Redwood Valley, CA	Coyote Valley Band of Pomo Indians	-	-	400	-
Feather Falls Casino	Oroville, CA	Concow-Maidu of Mooretown Rancheria	100,000	450	1,000	-
Gold Country Casino	Oroville, CA	Berry Creek Rancheria	-	-	750	-
Jackson Rancheria Casino	Jackson, CA	Band of Miwuk Indians	-	-	1,500	-
Pechanga Resort and Casino	Temecula, CA	Pechanga Band of Luiseño Indians	88,000	4,500	2,200	-
Thunder Valley Casino	Lincoln, CA	United Auburn Indian Community	-	-	2,700	-
Viejas Casino	Alpine, CA	Viejas Band of Kumeyaay	210,000		2,240	
Win-River Casino	Redding, CA	Redding Rancheria	-	-	950	-
Casinos Outside California						
Casino	**Location**	**Tribe**	**Square Feet[1]**	**Employees**	**Slots**	**Visitors**
Argosy's Empress Casino	Joliet, IL	None	50,000	-	1,110	-
Foxwoods Resort and Casino	Connecticut	Mashantucket Pequot Tribal Nation	315,000	11,500	6,400	40,000/day
Greektown Casino	Detroit, MI	Sault Ste. Marie Tribe of Chippewa Indians	75,000	-	2,552	-
Harrah's Joliet Casino	Joliet, IL	None	-	-	-	-
Canadian Casinos						
Casino	**Location**	**Tribe**	**Square Feet[1]**	**Employees**	**Slots**	**Visitors**
Brantford Charity Casino	Brantford, Ontario	None	30,000	-	450	-

[1] Square footage of gaming space

Source: Personal communication with each casino.