



REVIEW

Smoke free environments in Latin America: on the road to real change? ☆

Ernesto M. Sebríe^{a,c,*}, Verónica Schoj^{b,c}, Stanton A. Glantz^a

^a Center for Tobacco Control Research and Education, Cardiovascular Research Institute, Department of Medicine (Cardiology), University of California, San Francisco, United States

^b Servicio de Medicina Familiar, Grupo Anti Tabaco Hospital Italiano (GRANTAH), Buenos Aires, Argentina

^c Regional Consultant Tobacco Control Initiatives, InterAmerican Heart Foundation (IAHF), 7272 Greenville Avenue, Dallas, Texas 75231-4596, USA

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Summary Latin American countries are experiencing an increasing burden of tobacco-related diseases. Smoke free policies are cost-effective interventions to control both exposure of non-smokers to the toxic chemicals in secondhand tobacco smoke and to reduce the prevalence of smoking and its consequent morbidity and mortality. The World Health Organization Framework Convention on Tobacco Control has created momentum in Latin America to implement meaningful tobacco control policies. As of August 2007, Uruguay, two provinces and three cities in Argentina, and one state in Venezuela, had passed, regulated, and enforced 100% smoke free legislation. The tobacco industry, working through local subsidiaries, has been the strongest obstacle in achieving this goal and has prevented progress elsewhere in the region. During the 1990s, transnational tobacco companies Philip Morris International and British American Tobacco developed voluntary initiatives (“Courtesy of Choice” and “Environmental Tobacco Smoke Consultancy” programs) to prevent effective smoke free policies. Another important barrier in the region has often been a weak and fragmented local civil society. Opportunities in the region that should be taken into account are a high public support for smoke free environments and increasing capacity building available from international collaboration on tobacco control. Policymakers and tobacco control advocates should prioritize the implementation of smoke

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* Corresponding author. Present address: Roswell Park Transdisciplinary Tobacco Use Research Center, Roswell Park Cancer Institute, Buffalo, NY, United States. Tel.: +1 716 845 3038.

E-mail address: ernesto.sebríe@roswellpark.org (E.M. Sebríe).

free policies in Latin America to protect non-smokers, reduce smoking prevalence with its economic and disease burden in the region.
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Introduction

Similar to the rest of the world, Latin America is making progress in adopting new tobacco control policies prompted by the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) [1]. The treaty entered into force in 2005, and as of August 2007, 12 countries in Latin America had become Parties to it. Even before the FCTC, Brazil was the first country in the region to develop strong tobacco control policies, beginning in 1987 when it developed its national tobacco control program, and during the 1990s tobacco control became part of the health agenda in all Brazilian states. By the beginning of the 21st century, Brazil had become a world leader in tobacco control, restricting tobacco product advertising to the point of sale, and placing strong pictorial-based health warning labels on cigarette packages [2]. In 2006, Uruguay became the first 100% smoke free country in the region. Despite these examples of progress, as a general rule, Latin America is at the very beginning of the process of controlling the tobacco epidemic. In many countries, tobacco advertising and promotion are still allowed, tobacco taxes and prices are low, health warning labels are weak, small and text-only, and 100% smoke free environments are scarce.

In addition to protecting the health of non-smokers from the toxic effects of tobacco smoke, smoke free workplaces reduce cigarette consumption among smokers by about 30% [3] and reduce youth initiation [3] by creating an environment that supports adult decisions to reduce or stop smoking. Despite the strong scientific evidence that secondhand tobacco smoke (SHS) causes cardiovascular disease, lung cancer, breast cancer, and other serious diseases [4,5], in Latin America most existing legislation that nominally restricts smoking allows for smoking areas, effectively writing the tobacco industry's "Courtesy of Choice" program [6,7] into law. Smoking areas do not effectively protect non-smokers [5] and also do not "denormalize" tobacco use in society. Smoking areas also have a much smaller effect on cigarette consumption than 100% smoke free policies [3]. The tobacco industry's ties with Latin American governments are still very strong, and civil society infrastructure has often not been strong enough to pressure decision makers to pass and totally implement smoke free legislation. As evidenced by progress in Uruguay and in some other cities and provinces in other countries, this situation is beginning to change in Latin America. The fact that the tobacco industry uses the same strategies to block these public health policies in Latin America as in the United States (US) and

elsewhere, allows public health advocates to anticipate industry actions and effectively counter them.

Methodology

We reviewed information in PATIOS database from the Pan American Health Organization (PAHO), on smoke free environment legislation provided by national governments from most of the countries in the region and we contacted PAHO staff responsible for updating the database to obtain additional information. We contacted investigators, government officials, and activists identified as key referents from the region to obtain complete legislative texts. We also used the Global Smoke free Partnership website (<http://www.globalsmokefreepartnership.com>), which has a world report about national smoke free regulations. We conducted electronic searches on Medline, LILACS, and COCHRANE in December 2006 (updated April 30 2007). No substantial additional information was obtained from these electronic sources about smoke free environment legislation, civil society actions or opinion polls in Latin American countries.

Smoking and the prevalence of secondhand smoking

The prevalence of smoking ranges widely throughout the Latin American region. Among adults, the highest prevalence rates are observed in the Southern Cone, e.g., Argentina [8], Chile, and Uruguay, and Cuba, where they reach about 35% [9]. Gender differences also vary by countries with a significantly higher prevalence in men than women in most countries [9].

Among youth (aged 13–15) the highest smoking prevalence rates are also observed in countries of the Southern Cone (32.4% in Chile; 27% in Argentina; and 25.6% in Uruguay), and the lowest rates are found in countries of the Latin Caribbean, e.g., Dominican Republic at 6.6% [10]. As of 2004, tobacco consumption among girls was increasing and girls smoked more than boys in the Southern Cone countries [9]. Similarly to adult and youth smoking prevalence rates, the highest exposure to SHS at home and in public places among students 13–15 years old, was found in the Southern Cone (86.7% in public places, Buenos Aires 2000) and Cuba (68.9% at home, Havana 2001) [11].

In 2003, a multi-country study assessed airborne nicotine concentrations in public places in the capital cities of Argentina, Brazil, Chile, Costa Rica,

Paraguay, Peru, and Uruguay. Argentina and Uruguay had the highest levels in hospitals, secondary schools, city government buildings and airports. Nicotine concentrations in restaurants and bars were relatively high in all seven countries [12]. Based on experience elsewhere [13,14], it is likely that this situation has changed in Buenos Aires and Montevideo after the implementation of smoke free policies.

Based on experience in the US, one can estimate that SHS kills about one non-smoker for every 8 smokers killed by active smoking [4], or about 19,000 people every year in Latin America.

Smoke free policies in Latin America: an effective intervention to protect public health

The importance of smoke free policies: health and economic impact

The benefits of smoke free environments begin to accrue soon after they are implemented. Studies conducted in California [15] and Scotland [16] showed an improvement in pulmonary function after ending smoking in bars. Others studies showed a rapid drop in hospital admissions for acute myocardial infarction in the US [17–19] and Italy, [20] averaging about 27% [21].

A review of the economic effects of becoming smoke free in workplaces in Australia, Europe and Canada found reduced costs of sick leave, fires (frequently caused by cigarettes), equipment maintenance and cleaning costs, and insurance [22]. Contrary to propaganda spread by the tobacco industry [6,23,24], smoke free environments not only protect workers but also represent an economic benefit for employers. In particular, in the hospital-ity industry, the international experience shows that smoke free restaurants and bars have no effect or a positive effect [25], including increased profits for restaurants [26] and no change in profits for bars [27]. The only studies claiming that smoke free bars and restaurants showed an economic loss were sponsored by the tobacco industry. They were also of lower scientific quality than the studies showing no effect or a positive effect [25].

Smoke free policies in the region in the mid-2000s

Except for Uruguay, which in March 2006, implemented a 100% smoke free policy without exception, national legislation in Latin America regarding smoking in public places and workplaces

Table 1 National smokefree policies in Latin America

Country	Government offices	Private offices	Restaurants	Pubs and Bars	Public transportation Includes: buses, taxis, trains, domestic flights (DF), international flights, domestic water transportation (DWT)	Health care (HCF) and education facilities (EF)	Casinos
Argentina \$ £, ¥	Smoking areas Res. #729/2004 Ministry Economy (Res. # 855/2005 Ministry Health.)	No restriction	No restriction	No restriction	Complete smoke free: DF, trains and DWT Disposition # 60/1998. Boletín Oficial No restriction: buses, Taxis	Smoking areas HCF: <i>Res. ución N° 717/1997. Boletín Oficial</i>	No restriction
Bolivia ¥	Complete smoke free Supreme Dec. # 24176 art. 57/1995	Smoking areas Ministry Res. # 0389 /1991	Smoking areas Supreme Dec. # 24176 art. 58 1995	No restriction	Complete smoke free Health Code art.5 1978 Supreme Dec. # 24176 art. 57/1995	Complete smoke free Supreme Dec. # 24176 art. 57 1995	No restriction
Brazil £, ¥	Smoking areas Law # 9294 071596 Dec. 2018 /1996	Smoking areas Law # 9294 071596 Dec. 2018 /1996	Smoking areas Law # 9294 071596 Dec. 2018 /1996	No restriction	Complete smoke free Law N° 10.167/2000	Smoking areas Law # 9294 071596 Dec. 2018/1996	Not applicable
Chile ¥	Smoking areas (no restriction for individual offices) Law # 20.105/2006	No restriction Law # 20.105/2006	Smoking areas for places bigger than 100 m ² . Places smaller than 100 m ² could choice Law # 20.105/2006	Smoking areas for places bigger than 100 m ² ,. Places smaller than 100 m ² couldchoice. Law # 20.105/2006	Complete smoke free: Law # 20.105/2006	Complete smoke free HCF and Smoking areas EF Law # 20.105/2006	Smoking areas for places bigger than 100 m ² , Law # 20.105/2006
Colombia ¥	No restriction	No restriction	No restriction	No restriction	No restriction	No restriction	No restriction
Costa Rica ¥	Smoking areas Law # 7510/1995 Executive Dec. 25462-S/1996	Smoking areas Law # 7510/1995 Executive Dec. 25462-S/1996	Smoking areas Law # 7510/1995 Executive Dec. 25462-S/1996	No restriction	Complete smoke free Law # 7510/1995 Executive Dec. 25462-S 1996 Smoking areas DWT: Law # 7510/1995 Executive Dec. 25462-S /1996	Smoking areas Law # 7510/1995 Executive Dec. 25462-S/1996	No restriction
Dominican Republic ¥	Smoking areas Law 48/2000	Smoking areas Law 48/2000	Smoking areas Law 48/2000	Smoking areas Law 48/2000	Complete smoke free Law 48/2000	Complete smoke free EFRes. Secretaría de Estado de Educación 2005 Smoking areas HCF Law 48/2000	Smoking areas Law 48/2000
Ecuador ¥	Complete smoke free Executive Dec. # 1314 art 54 0/2001 Reformed by Executive Dec. #	No restriction	Smoking areas Executive Dec. # 1314/2001 Reformed by Executive Dec. # 1555 art 4/2001	No restriction	Complete smoke free Executive Dec. # 1314/2001 Reformed by Executive Dec. # 1555 art 4/2001	Smoking areas Executive Dec. # 1314/2001 Reformed by Executive Dec. # 1555 art 4/2001	No restriction

El Salvador ¥	No restriction	No restriction	No restriction	No restriction	No restriction	No restriction	Complete smoke free HCF Ministerial Res. # 1303 /2005 No restriction in EF	No restriction
Guatemala ¥	Complete Smoke free Dec. # 90-97 art. 51/1997 Reformed by Dec. # 50/2000	Smoking areas Dec. # 90-97 art. 51/1997 Reformed by Dec. # 50/2000	Smoking areas Dec. # 90-97 art. 51/1997 Reformed by Dec. # 50/2000	No restriction	Complete smoke free Dec. # 90-97 art. 51/1997 Reformed by Dec. # 50/2000 No restriction: DF and DWT	Complete smoke free HCF Smoking areas in EF Dec. # 90-97 art. 51/1997 Reformed by Dec. 50/2000	No restriction	
Honduras ¥	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	Smoking areas Agreement 2213 art 36 IHADFA/1991	
Mexico	Smoking areas Dec./2000 (that modify art 9 and 10 from the National Health Law)	No restriction	No restriction	No restriction	No restriction	Smoking areas Dec. year 2000 (that modify the National Health Law) Art 9 and 10 "Ley General de Salud"	No restriction	
Nicaragua ¥	Smoking areas Lay 224 art 4/1996	Smoking areas Lay 224 art 4/1996 Dec. 29/2000 art 17	Smoking areas Lay 224 art 4/1996	Smoking areas Lay 224 art 4/1996	Complete smoke free Lay 224 art 4/1996 Smoking areas DF and DWT Dec. 29/2000 art 10	Complete smoke free HCF Law 224 art 4f 12/18/1996 Smoking areas EF Law 224 art 4c 1996 Dec. 29/2000 art 9	Smoking areas Lay 224 art 4 c 1996	
Panama ¥	Complete smoke free Executive Dec. # 17 art 1/2005	Smoking areas Executive Dec. # 17 art 4/2005	Smoking areas Executive Dec. # 17 art 4/2005 Res. 471 art 1.1/2005	Smoking areas Executive Dec. # 17 art 4/2005 Res. 471 art 1.3 /2005	Complete smoke free Executive Dec. # 17 art 3/2005	Complete smoke free HCF and smoking areas EF Executive Dec. # 17 art 3/2005	Smoking areas Executive Dec. # 17 art 3 03/11/2005 Res. 471 art 1.2/2005	
Paraguay £	Smoking areas (no restriction for individual offices) Law #825/1996	Smoking areas Law #825/1996	Smoking areas Law #825/1996	Smoking areas Law #825/1996	Smoking areas Law # 825/1996	Smoking areas Lay 825/1996	Smoking areas Lay 825/1996	
Peru ¥	Complete smoke free Law # 28705 art 3/2006	Smoking areas for places bigger than 100 m ² Law # 28705 art 3/2006	Smoking areas for places bigger than 100 m ² Law # 28705 art 3/2006	Smoking areas for places bigger than 100 m ² Law # 28705 art 3/2006	Complete smoke free Law # 28705 art 3/2006	Complete smoke free Law # 28705 art 3/2006	Smoking areas for places bigger than 100 m ² Law # 28705 art 3/2006	

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Table 1 (continued)

Country	Government offices	Private offices	Restaurants	Pubs and Bars	Public transportation Includes: buses, taxis, trains, domestic flights (DF), international flights, domestic water transportation (DWT)	Health care (HCF) and education facilities (EF)	Casinos
Uruguay †	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005	Complete smoke free Dec. 214/05 07/05/2005
Venezuela †	No restriction	No restriction	No restriction	No restriction	Complete smoke free Dec. 1535 art 74 26/2001 and Resolución Gaceta oficial No. 34.844/1991	Smoking areas EF Res. Ministerio de Salud y Educación. Gaceta Oficial 34106/1988 Complete Smoke free HCF Res. 243 Ministerio de Salud 19/06/000	No restriction

Sources:

† PAHO Pan American Tobacco Information Online System (PATIOS).

§ Molinari M. (Ministerio de Salud de la Nación) and Perazzo D. (UATA) Digesto de Legislación de Control del Tabaco (2007).

£ Molinari M. Ministerio de Salud de la Nación. Estudio Multicentrico de Legislación de Control de Tabaco comparada en los países de MERCOSUR y Estados Asociados (2005).

Notes:

Complete law text could be obtained from: Argentina, Brazil, Chile, Costa Rica, Mexico, Panama, Paraguay, Peru and Uruguay.

Information was not available for Cuba.

Complete smoke free: All indoor public environments are smoke free.

Smoking areas: Smoking restrictions in some indoors areas, with other indoor areas where smoking is allowed. These "smoking areas" vary among the different countries laws and also among the different facilities: in some countries, like Chile (2006), Peru (2006), Panama (2005) and Mexico (2000), "smoking areas" are defined by location, size, some kind of separation from non-smoking areas and ventilation system requirements and represents clear examples of the tobacco industry's Courtesy of Choice Program. In other countries like Brazil (1996), Costa Rica (1995), and Paraguay (1995), the "smoking areas" are vaguely defined with no other specification than "separated area".

No restriction: Smoking is allowed everywhere indoors.

is mostly limited to separate smoking and non-smoking sections [9,28,29]. (Table 1). In some countries, e.g., Chile, Peru, Panama, Costa Rica, Mexico and Brazil, national laws establish that indoor smoking areas must have specific characteristics regarding size, location, and ventilation, in accordance with the ineffective accommodation strategy that the tobacco industry itself recommends. In other countries, the indoor smoking areas are even less clearly defined, and people can smoke everywhere except in a few specific places, such as classrooms, public areas in governmental offices, or exhibition rooms in cinemas and theatres (Table 1). These limited restrictions do not generally bring total exposure to SHS down to "safe" levels [5] and have little effect on cigarette consumption [3].

Governmental voluntary self-regulation of smoke free workplaces

Voluntary self-regulation of smoking in workplaces promoted by government, has been implemented in Brazil, Argentina and Costa Rica. In Argentina, for example, the Ministry of Health launched the Registro Nacional de Empresas e Instituciones Libres de Humo de Tabaco (National Certification Program on Smoke free Companies and Institutions) in September 2004. Since then, more than 700 workplaces have completed the web application form and more than 300 have completed the certification process. The certification is achieved after a series of pre-established steps and requirements, which imply that all the enclosed areas within a company or institution are 100% smoke free, including the vehicles and the events organized by the entity. Official inspectors monitor the institution before certification is obtained. This voluntary initiative, similar to what was happening in the US in the 1970s before the development of the extensive scientific case on the danger of SHS, is useful as a promotional and educational strategy for the community, but it does not guarantee broad protection for the general population. In addition, the tobacco industry promotes voluntary self-regulation because it has little impact on cigarette consumption. The only way to ensure meaningful protection of the population from the toxic chemicals in SHS is to pass, implement and enforce legislation.

Progress in strong regulation and legislation in Latin America

Uruguay, at the national level and Argentina and Venezuela, at the provincial/state and local levels

provide examples of progress in the region. In July 2005, President of Uruguay Dr. Tabaré Vázquez, an oncologist and a tobacco control advocate, signed Decree 214/05, which went into force in March 2006, to implement 100% smoke free environments in all indoor public places and workplaces throughout the country. Shortly before its implementation, a national campaign was launched jointly by the government and the civil society to support the smoke free legislation. The campaign, called "Un Millón de Gracias" (A Million Thanks), was intended to educate and raise public awareness about the importance of implementing such public policy. Tobacco control advocates collected signatures (with the goal of 1 million) through the Internet (www.unmillondegracias.com.uy) and flyers. [30] By August 2007, the Uruguayan Lower House had passed a bill, which then was forwarded to the Senate, to turn the presidential decree into a national law, which would guarantee permanence.

As in the US and elsewhere [31], in Argentina and Venezuela public health advocates have found it easier and more effective to pursue local rather than national legislation to achieve smoke free environments. In 2005, two provinces in Argentina (Santa Fe and Tucumán) passed 100% smoke free legislation, which began to be implemented and enforced in 2006. This success was achieved as a consequence of strong political will by the provincial authorities (Governors, Ministers of Health, and legislators), and the fact that the tobacco industry has been less influential at the provincial than the national level. In addition, since 2006, several cities in Argentina have approved 100% smoke free ordinances, e.g., Corrientes, Ushuaia, and Bahía Blanca. In 2003, the State of Monagas in Venezuela, passed a 100% smoke free law that includes enclosed public places, public transportation and workplaces [32]. Uruguay, Argentina and Venezuela seem to be moving forward in adopting strong smoke free policies. It is important that public health officials and advocates ensure compliance and consolidation of the laws through appropriate enforcement strategies.

Barriers to achieving smoke free policies

The one business that smoke free environment laws hurt is the tobacco business, based on the fact that smoke free workplaces make it easier for smokers to cut down or quit [3]. Not surprisingly, the tobacco industry works worldwide, often through "third parties" designed to hide its involvement, to oppose smoke free policies [33–36]. As in many other places in the world, poorly organized, cautious and

fragmented civil society is another barrier to effective smoke free policies in Latin America.

The tobacco industry

The tobacco industry has been using strategies to undermine meaningful smoke free policies in Latin America similar to the ones already used in the US and other places (Table 2). During the 1990s, the transnational tobacco companies that share the cigarette market in the region, British American Tobacco (BAT) and Philip Morris International (PMI), developed a regional program to prevent implementation of smoke free environments in Latin America. This program, called International Environmental Tobacco Smoke Consultancy Program, consisted of secretly hiring and training

well-known local scientists to create ‘‘controversy’’ about the SHS issue [33–36]. These ‘‘independent experts’’ conducted research, made statements to scientific bodies and the press, and lobbied on behalf of the tobacco industry without publicly disclosing the fact that their efforts were being managed by a law firm based in Washington, DC. One of the most important results was the veto of a national law in 1992 in Argentina, which would have effectively restricted smoking in public places [37,38].

Since the mid-1990s, tobacco companies have implemented a regional voluntary initiative to block meaningful smoke free policies. The ‘‘Courtesy of Choice’’ program, known in Spanish as ‘‘Cortes a de Elegir’’ or ‘‘Convivencia en Armon a’’, was officially launched worldwide in 1994 in

Table 2 Tobacco industry and/or pro-tobacco strategies to block meaningful smoke free policies in Latin America

Tobacco industry strategy	Country (year)	Example	Outcome
Avoid the need for a law	Costa Rica (1998)	A bill was introduced in the Congress to end smoking in public places including hospitality venues	The Congress rejected the bill based on the fact that the ‘‘Courtesy of Choice’’ program had been voluntarily introduced in the hospitality industry
Weaken the approval of a law	Chile (2006)	BAT representatives lobbied the policymakers to introduce smoking areas in public places	Accommodation language was introduced in the law (smoking areas in all public places; workplaces can chose their own policies)
Defeat a law after approval	Argentina (1992)	A law banning smoking in most public places passed in the National Congress	The President vetoed the law 10 days after approval
Weaken the implementation of a law	Peru (2006)	The Congress passed a national law that allows for isolated smoking areas in public places with an independent ventilation System	Tobacco industry representatives were appointed part of a board with the Minister of Health to implement the law
Modify a strong legislation	Uruguay (2006/2007)	An aggressive public relations campaign was launched to pass a national law, which would modify the presidential decree allowing smoking bars	Failed as of August 2007
Legislation	Mexico (2004)	A chain of restaurants filed a lawsuit against a law in Mexico City	The judge ruled that the law had to be kept
	Argentina (2006/2007)	A bar owner filed a lawsuit against the law of the Province of Santa Fe Ten bars, bingos, and restaurants filed lawsuits against the law in the city of Buenos Aires	Failed as of August 2007 Failed as of August 2007
Preemption	Argentina (2006/2007)	Two provinces passed and regulated 100% smoke free legislation. A weak national law supported by the industry, which would preempt the strong provincial laws, was introduced in the National Congress	Failed as of August 2007

alliance with the International Hotel and Restaurant Association to prevent governmental smoking restrictions inside hotels, bars, restaurants and other places within the hospitality industry. The program was also expanded from the hospitality industry to workplaces and airports in Latin America.

The tobacco industry has also been active in promoting ineffective policies by promoting legislation that essentially codifies the voluntary practices that the industry promotes through its "Courtesy of Choice" programs [6]. Costa Rica, for example, passed a national law in 1995 that established smoking and non-smoking areas in hospitality venues (bars, restaurants, and hotels) [39]. Chile (Party of the FCTC since June 2005) approved a national law [40] in April 2006 that keeps smoking areas in almost all public places after a strong lobby by British American Tobacco Chile to the Chilean Congress. Despite the international commitment that comes with ratification of the FCTC, Chile has not fully complied with the provisions of the treaty. Peru (Party of the FCTC since November 2004) is a similar case to Chile. The 2006 Peruvian tobacco control law allows smoking areas in bars and restaurants if "completely isolated and with independent ventilation systems" [41]. These ineffective laws, which are often represented as being much stronger than they are, allow politicians to claim that they have addressed the problem of exposure to SHS without taking meaningful action that would harm the tobacco industry. Other places where the industry was successful in introducing "accommodation language" include Mexico City (2004), Buenos Aires City (2005), and Panama (2005) [7]. The enactment of weak legislation that allows or requires smoking designated areas, is dangerous not only because it does not solve the SHS problem, but also because it can be taken as a "model to follow". When capital cities like Mexico City, Buenos Aires, or Caracas (2005) enact such ineffective laws other smaller cities are likely to emulate them.

A strategy that the tobacco industry has used in the US and may begin to use in Latin American countries is *preemption* [42,43], which consists of passing a weak national law that prohibits the passage of stronger laws at the provincial and municipal levels. For example, during 2006, BAT and PMI affiliates strongly lobbied federal Representatives and Senators in Argentina to pass a national bill that would allow for smoking areas in almost all public places and workplaces after strong provincial laws and local ordinances had started to be passed and enforced. This strategy would have turned back these laws and ordinances. As of Au-

gust 2007, this effort has not succeeded, and the strong local laws remain in force.

The first time a law is approved with a strong political commitment for effective implementation in a given jurisdiction, i.e., the first law in a country or province, the tobacco industry often works with a "third party," such as a bar or restaurant, to sue in order to delay implementation or overturn the law. Extensively described in the US [43], Mexico City is an example in Latin America where a well-known chain of restaurants in 2004 filed a lawsuit against the local government to stop a municipal law that had created smoking and non-smoking areas in public places and workplaces. As in the US, the restaurants lost. In October 2006, lawsuits were filed in Argentina against local laws in place in the Province of Santa Fe and the city of Buenos Aires (in effect since September and October 2006, respectively). As had become common in the US, bar and restaurant owners filed lawsuits claiming unconstitutionality of the laws based on discrimination of smokers, and economic loss, both standard tobacco industry arguments. Again, as in the US [44,45], at the same time, some bars, restaurants and bingo halls started a strong public relations campaign to create controversy, claiming that the law was difficult to enforce and would result in a big economic loss (on average 30%). As of August 2007, none of these legal challenges have been successful. The likelihood that the tobacco industry acting through "concerned citizens" will sue should not deter effective legislation; it should be expected as a normal part of the process. Public health advocates and government officials need to anticipate these lawsuits and be ready to defend the law.

Finally, as in the US [45,46], the tobacco industry often seeks to amend smoke free laws already in effect in order to weaken them. In the Province of Santa Fe, Argentina, for example, a group of legislators from different political parties introduced a bill in the Provincial Legislature to modify the law reintroducing smoking areas in public places and workplaces [47]. As of August 2007, no action has been taken on this law.

Civil society

As previously described in the US, the role of advocates is a key factor in the development and defense of smoke free policies and other tobacco control regulations [48,49]. Civil society can push the legislative and regulatory process by highlighting scientific evidence, exposing the tobacco industry's activities and responding to non-scientific claims, e.g. negative economic

impact. Advocates can educate policy makers on research findings, engage scientific experts to give public lectures, and promote relevant local research to answer the typical tobacco industry arguments designed to avoid effective legislation. More importantly, civil society can *stop* ineffective policies advocated by the tobacco companies. Since the tobacco industry uses the same general strategies and arguments everywhere, Latin American countries can learn from experiences in other countries where these activities have been going on for over 20 years.

In most of Latin America, civil society is in the early stages of engaging tobacco control as a major public health problem. Generally, it is not well trained and often lacks the will to implement strong political strategies to counteract the tobacco industry. An exception to this general rule is in Uruguay, where local civil society overcame fragmentation and in 2000 successfully organized itself under the National Alliance for Tobacco Control, whose leadership was critical in pushing national authorities to pass and enforce the 100% smoke free legislation [50]. The success in Uruguay points to the importance of developing a strong civil society presence that is willing to mobilize public support to press government for strong public health action.

Opportunities and assets in achieving smoke free policies

Strong public support

Sufficient evidence has shown that the Latin American population strongly supports the adoption of smoke free environments. For instance, the Global Youth Tobacco Survey carried out in 19 countries of the region between 1999 and 2005 showed that more than 75% of students (13–15 years old) supported smoke free public places [11]. A survey [51] of 1258 employees from diverse public and private institutions in the capital cities of Argentina, Chile, Costa Rica, Honduras, Mexico, Panama, Peru, Uruguay and in Rio de Janeiro City in Brazil showed that 70% of workers supported smoke free environments and 74% supported the idea that their own institution would be smoke free. In addition, up to 74% of the workers reported that a smoke free policy would improve work performance and the public image of their organizations.

Public opinion polls conducted in Argentina, Brazil, Uruguay, and Mexico in 2006–2007 demonstrated strong and increasing public support for

smoke free environments across the region (Table 3). In Argentina, for instance, a national poll showed very high levels, about 90%, of support among non-smokers and smokers for the two 100% smoke free provincial laws. Significantly, support for smoke free environments was highest among people living in the two smoke free provinces (95% in Tucum n, and 82% in Rosario, main city of Santa Fe), demonstrating that once these laws go into effect, support for them grows [52]. This result is similar to results found in California [53]. A survey in Sao Paulo, Brazil, also showed a strong public support for smoke free environments, with 85% of the people supporting smoke free public places and 83% smoke free restaurants [54]. In Uruguay, a poll conducted in urban areas showed that 98% of the population reported knowing the new decree that established Uruguay as the first 100% smoke free country of the region. Eighty percent of Uruguayans agreed with the governmental measure. Almost 90% of the people surveyed considered enforcement as high or very high [55]. Both surveys conducted in Argentina and in Uruguay included a question on protection from SHS as a human rights issue (Table 3). There was a practically unanimous agreement with the statement “Every worker has the right to work in a smoke free environment.” This perspective should be taken into account in future public health advocacy efforts.

In Mexico, a national survey finished in January 2007 including 7 main cities of the country, showed that 81% of non-smokers prefer smoke free environments and more than 75% of smokers support smoke free environments in hospitals, public transportation, museums, cinemas and theatres [56].

These polls show a strong substrate of public opinion supporting 100% smoke free environments across Latin America and they indicate a great opportunity to enact and enforce such policies successfully in Latin America.

International momentum

As mentioned earlier, the FCTC has raised momentum in Latin America as in other parts of the world. Parties are committed to implement the treaty, which in Article 8, calls for the implementation of smoke free indoor environments [1]. As discussed above, despite this situation, full implementation of tobacco control policies has been a challenge both for governments and civil society, since the tobacco industry is actively working to co-opt the process and use it to pass ineffective legislation.

Table 3 Public opinion surveys about smoke free environments in Argentina, Brazil, Mexico and Uruguay (2006–2007)

Country (date)	Location (source)	Agree with: "Secondhand smoke is dangerous for non-smokers health"	Agree with: "Every worker has the right to work in a SFE"	Support SFE in government, private offices, banks & shopping malls	Support SFE in bars and restaurants	Support SFE in health care and education facilities	Methodology (sample size)
Argentina (2006) (1)	National population Centro de Estudios de Opinión Pública (CEOP)	92.9%	96.8%	93.4%	76.5%	96.7%	Telephone Survey Probabilistic. Error sample $\pm 3.16\%$ (CI: 95.5) (1000 subjects older than 18 years old)
Brazil (2006) (2)	City of Sao Paulo (Aliança de Controle do Tabagismo – ACT Data Folha)	(Not asked)	(Not asked)	85% (covered public places in general)	Restaurants 83% Luncheonettes 79% Bingos 67% Bars 63% Night clubs 62%	–(not asked)	Coincidental personal sample, Error sample $\pm 4\%$ (CI: 95) (567 subjects older than 18 years old)
Mexico (December 2006 to January 2007) (3)	7 main cities: Ciudad de México, Guadalajara, Hermosillo, Mérida, Monterrey, Tijuana y Veracruz. De la Riva Investigación Estratégica, S.C and sponsored by Pfizer Mexico De la Riva Investigación Estratégica, S.C and sponsored by Pfizer Mexico	84% (only smokers)	(Not asked)	81% of non-smokers preferred smoke free environment (including every type of facilities) More than 75% of smokers support smoke free hospitals, public transportation, museums, cinemas and theatres, 65% of the non-smokers had a negative perception when entering a place where it is allowed to smoke: either annoyance, anger or disgust			Telephone Survey (Simple Probabilistic sample) (1323 subjects older than 18 years old) 908 smokers (CI:95) error sample $\pm 3.5\%$ 415 non-smokers (CI 95) error sample $\pm 5\%$
URUGUAY (2006) (4)	Urban areas of the whole country (Equipos Mori Consultores Asociados)	92%	95%	General agreement with the 100% smokefree country (including every type of facilities) Agree 80% Indifferent 8% Disagree 11%			Home probabilistic sample Error sample $\pm 3.7\%$ (CI: 95) (695 subjects older than 18 years old)

SFE: smoke free environment.

Sources:

(1) Schoj V, Sebrí E, Bianco E, Perazzo D, Selin H, Glantz S, et al. Public opinion about secondhand smoke and smoke free environments in Argentina. In: Oral presentation at the first national conference tobacco or Health, Argentina (November 2006).

(2) Fumantes em locais fechados. Aliança de Controle do Tabagismo (ACT). Data Folha, Instituto de Pesquisas (October 2006).

(3) Tabacometro Mexico: National Survey from 7 main cities. De la Riva Investigación Estratégica, S.C. sponsored by Pfizer Diciembre 2006- enero 2007.

(4) Estudio de Conocimiento y actitudes hacia el Decreto 288/005, Uruguay. Pan American Health Organization, Equipos Mori (November 2006).

Capacity building development and partnership

The Pan American Health Organization (PAHO), the WHO's regional office for the Americas, launched its Smoke Free Americas' Initiative [57] in 2001 to help countries in the region achieve smoke free environments by focusing on capacity building. Activities included information dissemination, public education, training tools, policy-relevant research sponsorship, and seed grants to support smoke free campaigns. In addition, PAHO organized intensive workshops in some countries of the region to train local tobacco control advocates and decision makers who had a key role in the process of implementing smoke free environments in their countries. Between 2003 and 2006, workshops were held in Uruguay, Honduras, Argentina, Costa Rica, Panama, Guatemala, Peru and El Salvador.

Some institutions and agencies based in the United States and other countries, have provided training opportunities to individual researchers from Latin America (Table 4). Since 2003, the International Tobacco and Health Research and Capacity Building Program of the Fogarty International Center of US National Institutes of Health, through grants awarded to the Johns Hopkins University and the University of California at San Francisco (UCSF), has provided fellowships to health professionals from Argentina, Brazil, and Mexico. The Center for Tobacco Control Research and Education at UCSF, for example, has provided critical information about tobacco industry strategies to block meaningful tobacco control legislation in the region through the tobacco industry documents archive library (<http://legacy.library.ucsf.edu> and <http://bat.library.ucsf.edu>).

Since 2004, the Canadian International Development Research Center has been supporting the ratification, implementation and enforcement of the FCTC in the region through small grants. The American Cancer Society and the International Union Against Cancer also provide international support. Americans for Non-smokers' Rights, a non-profit organization based in California, has played an important role in providing advice and resources on how to advocate for and implement a smoke free policy in a specific community. The InterAmerican Heart Foundation and the Framework Convention Alliance, international NGOs, have helped promote the FCTC in Latin America and have developed a capacity building strategy to train tobacco control advocates and to disseminate research in the region.

Conclusions and recommendations

Movement towards creation of 100% smoke free environments in the Latin American region was well under way by the end of 2006. The tobacco industry recognizes that, as people come to appreciate these successes, smoke free environments could spread rapidly, and so was working aggressively to stop or roll back these successes. The vulnerability of these successful laws underscores the need for a consolidation process through a civil society strategy to protect and strengthen them in the medium and long-term. Civil society and Latin American governments need to strengthen their responses to counteract tobacco industry efforts and need to build a local and regional capacity for the future. Policymakers and national authorities, as well as public health professionals and tobacco control advocates, need to be aware and understand how the industry behaves so as to act accordingly. Given that the industry replicates its strategies all over the world, efforts to undermine smoke free policies can be anticipated and an adequate response can be prepared in advance.

Both policymakers and advocates should promote 100% smoke free legislation at the municipal and provincial levels, which has been proven to be much more effective in terms of feasibility and sustainability than at the national level where the tobacco lobby is much stronger. Tobacco control advocates are more likely to succeed at the local level, and after a period of consolidation of a strong smoke free policy in a city or a province, other places are likely to copy this success through a positive domino effect. At the local level, it is easier to get civil society involved, educate the community, pass and implement a smoke free measure, and counteract tobacco industry strategies and misinformation.

At the same time, the approval of weak and potentially preemptive national or provincial laws needs to be avoided. Finally, it is important to promote and fund local research related to smoke free environments through grants to evaluate implementation, health and environmental impacts, and the tobacco industry's evolving strategies to fight and undermine these policies, including through use of "third parties."

Implementation of 100% smoke free environments is one of the most cost-effective strategies to reduce the burden of disease and death attributable to tobacco use [58,59]. Smoke free environments act like "an effective vaccine" protecting non-smokers from the toxins of SHS, helping

Table 4 Some capacity building resources from the United States, Canada and Switzerland for research, education and advocacy on tobacco control in Latin America

Institutions and agencies	Country-based	Resources and websites links (Available as of August 2007)
Pan American Health Organization (PAHO)	United States	America Libre de Humo (smoke free Americas) initiative: http://www.smokefreeamericas.org/main_e.htm
University of California, San Francisco (UCSF)	United States	The Fogarty International Center of US National Institutes of Health (NIH) developed the International Tobacco and Health Research and Capacity Building Program.
Johns Hopkins Bloomberg School of Public Health (JHSPH)		UCSF and JHU, both WHO tobacco control surveillance and evaluation collaborating centers, have been awarded grants to train researchers from Argentina, Mexico, and Brazil: http://tobacco.ucsf.edu/ http://www.jhsph.edu/global_tobacco/capacity_building/
University of Rochester Medical Center (URMC)		URMC obtained a grant to train researchers from the Dominican Republic
The International Development Research Center (IDRC)	Canada	IDRC established the Research for International Tobacco Control (RITC) program that funds multidisciplinary tobacco control research projects in developing countries. Provide small grants for research activities to ratify, implement, and enforce the FCTC in the region: http://www.idrc.ca/en/ev-83280-201-1-DO_TOPIC.html
InterAmerican Heart Foundation (IAHF)	United States	Supports advocacy activities to sign, ratify and implement the FCTC in the region (including smoke free policies): http://www.iahf.org/
Framework Convention Alliance (FCA)	Switzerland	Monitors the implementation of the FCTC in countries that became Parties: http://fctc.org/index.php
American Cancer Society (ACS)	United States	Provides small grants to pass and enforce smoke free policies: http://www.cancer.org/docroot/AA/content/AA_2_5_5x_Building_Infrastructure.asp?sitearea=AA
International Union Against Cancer (UICC)	Switzerland	Small grants to pass and enforce smoke free policies: http://www.uicc.org/index.php?id=511&L=0%2Ftm5.html Support effective smoke free policies through the Global Smoke Free Partnership Initiative: http://www.globalsmokefreepartnership.com/ Provides a tobacco control network, GLOBALink, a giant online communication tool for over 4,700 tobacco control professionals around the world: http://www.globalink.org/
Americans for Non-smokers' Rights (ANR)	United States	Material and data base, provides advise on smokefree implementation and how to counteract tobacco industry actions: http://www.no-smoke.org/
Campaign for Tobacco-Free Kids (TFK)	United States	The Bloomberg Global Initiative to Reduce Tobacco Use has been launched with funds for a competitively awarded grants program, which will support projects to develop and deliver high- impact tobacco control interventions in low- and middle-income countries: http://www.tobaccocontrolgrants.org/tbcg/
World Lung Foundation & International Union Against Tuberculosis and Lung Disease	Switzerland	
Roswell Park Cancer Institute (RPCI)	United States	The International Tobacco Control (ITC) Transdisciplinary Tobacco Use Research Center (TTURC) provides small grants to conduct research through its Developmental Research Program and Career Development Program: http://roswelltturc.org/funding.html RPCI also provides equipment and technical advise to conduct air monitoring studies: http://www.tobaccofreeair.org/index.htm

smokers reduce tobacco consumption, and reducing the social acceptability of tobacco use.

Conflict of interest statement

None.

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