



City of Beverly Hills

**Health and Safety Commission
Regular Meeting**

September 24, 2012

4:00 PM

City Hall Room 280-A

455 N. Rexford Drive

***Enhancing the Health and Safety of
Our Community***

A detailed Commission packet is available for review in the Library and City Clerk's Office.



In accordance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please call the City Manager's Office at (310) 285-1014. Please notify the City Manager's Office at least seventy-two hours prior to the meeting so that reasonable arrangements can be made to ensure accessibility. Conference Room 280-A is equipped with audio equipment for the hearing impaired, and is wheelchair accessible.

**CITY OF BEVERLY HILLS
City Hall Room 280-A
455 N. Rexford Drive
Beverly Hills, CA 90210
AGENDA**

HEALTH AND SAFETY COMMISSION REGULAR MEETING

September 24, 2012

4:00 p.m.

A. ROLL CALL

B. PLEDGE OF ALLEGIANCE

C. COMMISSION MINUTES

- Consideration of minutes of July 23, 2012.

D. ORAL COMMUNICATIONS FROM THE AUDIENCE

At this time, members of the public may address the Commission regarding any items not on the Agenda that are within the subject matter jurisdiction of the Commission. By State law, the Commission may not discuss or vote on items not on the Agenda.

E. REPORT FROM THE CHAIRPERSON

- Mayor's Cabinet Meeting – September 11, 2012.
- Other items of interest.

F. DIRECTOR'S REPORT

1. Report from Lewis Hall, Beverly Hills School District Board Member
2. Information Only:
 - a) Household Hazardous Waste Roundup
 - b) Public Safety Advisory - September 7, 2012
 - c) West Nile Virus Update – September 13, 2012
 - d) Crisis Response Team – Crisis Counselor/Volunteer Opportunities
 - e) Disaster Healthcare Volunteers
 - f) Beverly Hills CPR
 - g) Videotaping of Commission Meetings

- Other Items

G. NEW BUSINESS

1. AT&T Mobility Project: Provides information and seeks input on the AT&T telecommunications project that will increase wireless service for Public Safety and the community.
2. Tobacco Ordinance Update: Provides an update on the implementation of the Tobacco Ordinance.
3. Police Department Update: Sgt. Gregg Mader will attend to provide information on National Night Out, National Take Back Initiative, and other related topics.
4. National Preparedness Month: Provides information on National Preparedness Month activities held in the month of September.
5. Reinstatement of Beverly Hills CERT Training Program: Provides information on the reinstatement of the CERT Training Program.
6. City Council Liaison Meeting: Provides information on the City Council Liaison Meeting held on September 12, 2012.
7. 2012 Biennial Conflict in Interest Code Report-Health and Safety Commission.

H. COMMENTS FROM COMMISSIONERS

Commissioners' brief responses to public comments, questions for clarification, brief announcements, request for information, and brief reports on activities.

I. ADJOURNMENT

**CITY OF BEVERLY HILLS
City Hall Room 280-A
455 N. Rexford Drive
Beverly Hills, CA 90210
MINUTES**

**HEALTH AND SAFETY COMMISSION REGULAR MEETING
July 23, 2012
4:00 p.m.**

The meeting was called to order at 4:08 p.m.

A. ROLL CALL

Commissioners Present: Chair Judelson, Vice Chair Setian, Aronberg, Millan, Kopeikin, Landau, Seidel

Commissioners Absent: None

Staff: P. Mottice Muller, A. Tarazon, G. Mader, C. Di Renzo, R. Gale

B. PLEDGE OF ALLEGIANCE

The Pledge of Allegiance was led by Commissioner Judelson.

C. COMMISSION MINUTES

MOVED by Aronberg, SECONDED by Millan to approve the minutes with changes of the meeting on June 25, 2012 (6/0)

Ayes: Aronberg, Landau, Seidel, Millan, Vice Chair Setian, Chair Judelson

Noes: None

Absent: None

CARRIED.

D. ORAL COMMUNICATIONS FROM THE AUDIENCE

There were no comments made by members of the public.

E. REPORT FROM THE CHAIRPERSON

- Mayor's Cabinet Meeting – July 10, 2012 – cancelled.
- Other items of interest.

F. DIRECTOR'S REPORT

Lewis Hall, Beverly Hills School District Board Member, gave an update that the Beverly Hills Unified School District office had been evacuated due to an insect problem. Mr. Hall also reported field back studies had been conducted to make sure school buildings were safe during an earthquake. There was little damage and no structural damage to the school buildings.

Information Only:

- a) Commission Calendar
- b) Senior Falls, A Tool Kit to Prevent, What Can you Do To Prevent Falls NCIPC
- c) Home Modifications – Safety for Older Consumers

- d) La County Vector Control June 2012 Field Operations (Beverly Hills)
- e) Public Health Advisory – June 29, 2012 New West Nile Virus Positive in the City of Los Angeles (Zip Code 90024)

G. NEW BUSINESS

1. NATIONAL NIGHT OUT

Director Muller discussed the final plans for National Night Out to be held on August 7, 2012. The Commission planned to attend the event; job duties, materials, handouts, and giveaways were discussed. Commissioners would be handing out informational handouts and giveaways at an Emergency Management booth.

2. FY 2011 - 2012 ACCOMPLISHMENTS

Director Muller presented the accomplishments the Commission achieved during the year while Dr. Debra Judelson and Kar'en Setian served as the Chair and Vice Chair of the Health and Safety Commission from July 1, 2011 to June 30, 2012. A City Council liaison meeting would be held in the future to review the FY 2011 – 2012 accomplishments. The Commission reviewed and approved the list of accomplishments that would be presented to Council.

3. FY 2012 – 2013: DISCUSSION OF VISION STATEMENT, FY 2012 – 2013 WORK PLAN ITEMS, AND FUTURE CITY COUNCIL LIAISON MEETINGS

Director Muller presented Chair Setian and Vice Chair Millan's vision for the upcoming fiscal year. A discussion was held regarding the Commission's Work Plan Items as they appear in the City's adopted 2012/2013 budget and this year's Areas of Interest not yet decided upon by the Commission. One suggested work plan item discussed for 2012/2013 was to reinstate and support the CERT program.

4. VIDEOTAPING

Administrative liaison Adrienne Tarazon provided a report on the future videotaping of the Commission meetings which would begin at the next Health and Safety Commission meeting on September 24, 2012. Staff discussed the process, how the taping would work, and any changes or adjustments to be made in future Commission meeting procedures.

5. AUGUST MEETING

Director Muller requested the Commission discuss whether to hold or cancel the 2012 August Health and Safety Commission meeting. After discussion, it was agreed to cancel the August meeting due to vacation schedules.

HEALTH AND SAFETY COMMISSION CALENDAR

Updated: 9/14/12

Sept 2012

Day	Date	Time	Meeting/Event	Location	Attendees
Tues	11	8:45am	Mayor's Cabinet Meeting	City Hall 280-B	All
Mon	24	4:00PM	Health and Safety Commission Meeting	City Hall 280-A	

Oct 2012

Day	Date	Time	Meeting/Event	Location	Attendees
Tues	9	8:45am	Mayor's Cabinet Meeting	City Hall 280-B	TBD
Mon	23	4:00pm	Health and Safety Commission Meeting	City Hall 280-A	All

Nov 2012

Day	Date	Time	Meeting/Event	Location	Attendees
Tues	13	8:45Am	Mayor's Cabinet Meeting	City Hall 280-B	TBD
Mon	27	4:00pm	Health and Safety Commission Meeting	City Hall 280-A	All

Dec 2012

Day	Date	Time	Meeting/Event	Location	Attendees
National Preparedness Month					
Tues	11	8:45am	Mayor's Cabinet Meeting	City Hall 280-B	TBD
Mon	17	4:00pm	Health and Safety Commission Meeting	City Hall 280-A	All

TOO TOXIC TO TRASH



**Household Hazardous Waste
and E-Waste Roundup**

Saturday, September 29, 2012
9:00 am - 3:00 pm

Beverly Hills City Streets
Foothill Road between
Alden Drive and West 3rd St.
Beverly Hills

Open to all Los Angeles County residents

Dispose of Household Hazardous Waste and E-Waste the right way on Saturday: **SEPTEMBER 29, 2012**

BUSINESS WASTE WILL NOT BE ACCEPTED.

What you CAN bring to an event (examples):

- Brake fluid, paint, paint thinner, cleaners with acid or lye, pesticides or herbicides, household batteries and car batteries, pool chemicals, motor oil, oil filters, expired pharmaceuticals, anti-freeze, and fluorescent light bulbs.
- Household electronic waste which includes: Computer monitors, televisions, computer CPUs, keyboards, printers, cellular phones, etc.

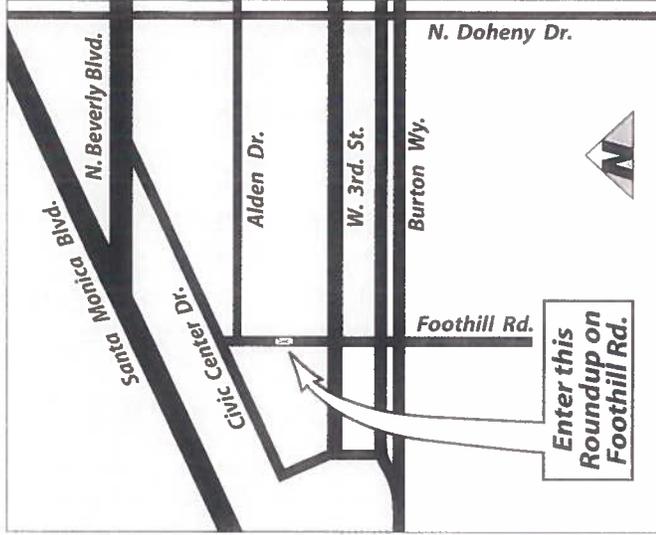
What you CAN'T bring to an event:

- Hazardous waste and electronic waste from businesses.
- Explosives, ammunition and radioactive materials.
- Trash and tires.
- White goods such as refrigerators, stoves and washing machines, etc.
- Controlled substances.

How to prepare items for transportation:

- Bring the items in a sturdy box, preferably in their original labeled containers.
- Do not mix the items together.
- There is a limit of 15 gallons or 125 pounds of hazardous waste per trip.
- Be prepared to leave your containers and boxes. Remove all other items from your trunk.

For a complete listing of what you can and cannot bring or information on upcoming events, contact: 1(888) CLEAN-LA • www.CleanLA.com, or 1(800) 238-0172 • www.lacsd.org.



Brought to you by the County of Los Angeles and presented by the Department of Public Works and the Sanitation Districts of Los Angeles County in cooperation with the cities of Beverly Hills, Culver City, Los Angeles, and West Hollywood

Home-generated sharps waste such as hypodermic needles, pen needles, syringes, lancets, and intravenous needles **SHOULD NOT** be placed in your trash. Bring them to the Roundups or visit www.CLEANLA.com for alternate disposal options.



You can also take your used motor oil to more than 600 oil recycling centers in Los Angeles County. Call 1(888) CLEAN-LA for a complete listing.

MUY TÓXICO PARA TIRAR A LA BASURA



Recolección de Desechos
Tóxicos del Hogar
y Electrónicos

Sábado, 29 de septiembre de 2012
9:00 am - 3:00 pm

En las Calles de la Ciudad
Foothill Road entre
Alden Drive y West 3rd Street
Beverly Hills

Abierto a todos los
residentes del Condado de Los Angeles.

Deshágase de sus Desechos Tóxicos del Hogar y Electrónicos de la Manera Correcta, el sábado: 29 de septiembre de 2012

DESECHOS DE NEGOCIOS NO SERÁN ACEPTADOS.

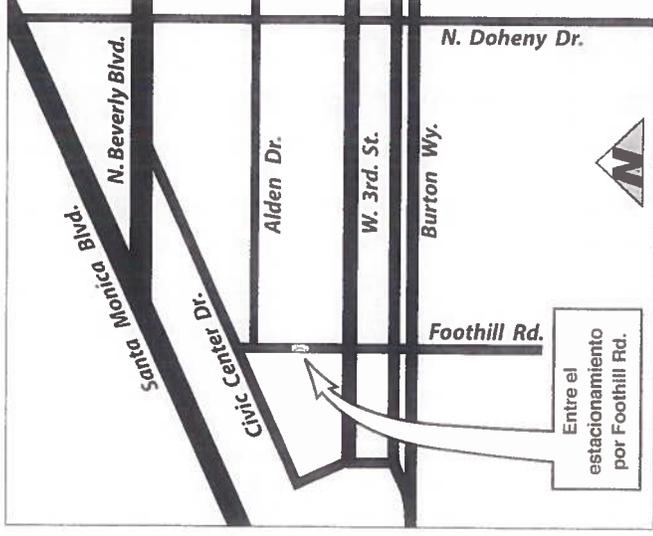
Que puede traer al evento:

- Líquido de frenos, pintura, tiner, limpiadores con ácido, pesticidas o herbicidas, baterías de casa y automóvil, químicos de alberca, aceite de motor, filtros del aceite, medicamentos caducados, anticongelantes y lámparas de tubo fluorescentes.
 - Desechos electrodomésticos, monitores de computadoras, televisiones, UPC's de computadoras, teclados, impresoras, teléfonos móviles, etc.
- #### Lo que no puede traer:
- Desechos tóxicos y electrónicos de negocios.
 - Explosivos, municiones y materiales radiactivos.
 - Basura y llantas.
 - Refrigeradores, estufas y lavadoras.
 - Substancias controladas.

¿Cómo preparar artículos para el transporte?

- Traiga los artículos en una caja firme, de preferencia en sus envases originales con las etiquetas.
- No mezcle productos diferentes.
- Hay un límite de 15 galones o 125 libras por viaje.
- Esté preparado para dejar sus envases y cajas. Favor de sacar todos los otros artículos de la cajuela.

Para una lista completa de lo que puede o no puede traer o para información sobre los eventos llame al: 1(888) CLEAN-LA • www.CleanLA.com, o al 1(800) 238-0172 • www.lacsd.org



Patrocinado por el Condado de Los Angeles y presentado por el Departamento de Obras Públicas y los Distritos Sanitarios del Condado de Los Angeles en cooperación con las ciudades de Beverly Hills, Culver City, Los Angeles, y West Hollywood.

Desechos de Agujas y Jeringas Usadas de uso doméstico como agujas hipodérmicas, agujas de pluma, lancetas y agujas intravenosas NO SE DEBEN TIRAR en la basura. ¡Tráigalos a los eventos de recolección o visite www.CleanLA.com para opciones alternativas de la disposición!



También puede llevar su aceite de motor usado a más de 600 centros de reciclaje en el Condado de Los Angeles. Llame al 1(888) CLEAN LA para el lugar más cercano a usted.



**Los Angeles County West Vector
& Vector-Borne Disease Control District**
6750 Centinela Avenue, Culver City CA 90230
Ph: 310-915-7370 ext. 223; Fax: 310-915-9148
Email: rsaviskas@lawestvector.org

Public Health Advisory

September 7, 2012

A New Dead Birds Collected in the City of Beverly Hills (90210) has Tested Positive for West Nile Virus.

A new dead bird collected in the City of Beverly Hills (90210) has tested positive for West Nile Virus (WNV).

WNV is transmitted through the bite of an infected mosquito. Mosquitoes become infected when they first feed on birds that carry the virus, and then bite a human or animal.

What does it mean?

West Nile virus is endemic in Los Angeles County and California, and nationally has been found in all 50 states since its introduction into the United States in 1999.

Currently, 87 zip codes out of 361 located in the County of Los Angeles have recorded positives for WNV.

A positive result from sentinel chicken flocks and trapped adult mosquitoes are more specific with respect to the actual site of the infection, whereas positive dead birds are less specific with respect to the actual site of the infection.

Birds routinely travel many miles from their nighttime nesting locations to feed and scavenge during the day before they return to their original location in the evening. Although positive birds collected in a specific area are significant with respect to trends on a wider basis, it does not definitively identify a specific city, zip code, or location as the site where the actual mosquito bite and infection occurred because of the birds extended daily travel patterns. A bird may travel and die as much as 1 to 10 miles away from the location where it was infected. A positive result from a sentinel chicken flock or trapped adult mosquitoes is more specific with respect to the location of the infection since they are site specific.

What should the city do?

There is no specific action that is required by the city, but the District recommends that the city make this information known to their residents through their normal communication process so people walking or sitting outside at dawn or dusk will take the appropriate precautions listed below to protect themselves from being bitten by infected mosquitoes.

Residents can protect themselves from WNV by doing the following:

- DEET - Apply insect repellent according to the label. Repellents containing DEET, picaradin, IR3535, and oil of lemon eucalyptus are the longest lasting and most effective. Repellents keep the mosquitoes from biting you.
- DAWN AND DUSK - Mosquitoes that carry WNV primarily bite in the early morning and evening so it is important to wear repellent at this time.
- MOSQUITO PROOF YOUR HOME - Make sure that your doors and windows have tight-fitting screens to keep out mosquitoes. Repair or replace screens with tears or holes.
- DRAIN - Mosquitoes lay their eggs on standing water. Eliminate all sources of standing water on your property, including flowerpots, old car tires, rain gutters and pet bowls. Ensure that swimming pools, spas, and ponds are properly maintained. If you have an ornamental pond, use mosquito fish. You can make an arrangement to pick up free mosquito fish at the District by calling 310-915-7370.

Reporting Dead Birds: 1-877-WNV BIRD (1-877-968-2473):

The public is encouraged to report dead birds to help with West Nile virus surveillance and control efforts. Dead birds should be reported to the toll-free hotline number at **1-877-WNV BIRD (1-877-968-2473)**. Dead birds must be less than 24 hours old to be able to test them for West Nile virus. If the bird is rigid or decomposed, it cannot be used for testing. Birds that are not in a condition to be tested can be disposed of in your normal weekly trash pickup by taking the following steps: 1) Take a plastic garbage bag and inserting your hand in the open end; 2) Grab the dead bird and pull it into the garbage bag using an "outside-to-inside" pulling motion; 3) Tie off the bag with the bird inside and place it in your regular trash for disposal.

Symptoms of West Nile virus:

People infected with WNV can experience a variety of symptoms that may include: no symptoms, West Nile Fever, or West Nile Neuroinvasive disease. Symptoms usually occur 2-15 days after infection. If you suspect you have contracted WNV, consult your physician for testing and care.

Symptoms of "West Nile Fever" can include:

- Headaches (often severe)
- High fever
- Tiredness and body aches
- A skin rash and swollen lymph glands

These symptoms may last from several days to several weeks.

Symptoms of "West Nile Neuroinvasive Disease" can include:

- Severe Headache
- High Fever
- Stiff neck
- Stupor
- Disorientation
- Tremors, convulsions, muscle weakness
- Paralysis
- Coma: This form of the disease can lead to long lasting and/or permanent damage to the brain.

For mosquito problems or to pick up mosquito fish (1-310-915-7370): Call 1-310-915-7370 Monday through Friday, 8:00 a.m. – 4:00 p.m.

For additional information on WNV and the Los Angeles County West Vector & Vector-Borne Disease Control District (www.lawestvector.org): Please visit the District's website at www.lawestvector.org. WNV results and new positives are updated on a weekly basis.

Questions: If you have any questions, please contact Robert Saviskas, Executive Director, at (310) 915-7370 ext. 223 or at rsaviskas@lawestvector.org.



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West Nile Virus Update **&** **Public Health Advisory**

September 13, 2012

This is a West Nile Virus (WNV) update and public health advisory for all cities and unincorporated county areas within the Los Angeles County West Vector & Vector-Borne Disease Control District.

The West Nile virus has been particularly active throughout the United States and now, because of persistent hot weather and high humidity, monitoring data indicates that Los Angeles County has made a significant jump in positive dead birds and tested mosquitoes in 2012 compared to 2011. Although human cases in Los Angeles County are down from 63 in 2011 to only 18 in 2012, extra care should be taken by all residents to reduce their exposure and the likelihood of contracting WNV by following the recommendations listed.

Nationwide (Infections are Up ↑ from 2011): As of September 11, 2012, 48 states have reported West Nile virus infections in people, birds, or mosquitoes. A total of 2,636 cases of West Nile virus disease in people, including 118 deaths, have been reported to CDC. Of these, 1,405 (53%) were classified as neuroinvasive disease (such as meningitis or encephalitis) and 1,231 (47%) were classified as non-neuroinvasive disease.

The 2,636 cases reported thus far in 2012 is the highest number of West Nile virus disease cases reported to CDC through the second week in September since 2003. Two thirds of the cases have been reported from six states (Texas, Louisiana, South Dakota, Mississippi, Michigan, and Oklahoma) and 40 percent of all cases have been reported from Texas.

California (Infections are Up ↑ from 2011): Human infections in California for 2012 are up 92% with 2 deaths and 99 cases statewide compared to only 44 cases at the same time last year.

LA County (Infections are Down ↓ from 2011): Human infections for 2012 (18 cases) are down by 72% in Los Angeles County compared to 2011 (63 cases and 4 deaths). At this time last year (2011), there were 93 positive zip codes with positive dead birds, sentinels chicken flocks, mosquitoes, or dead squirrels. This year (2012), there is presently 101 positive zip codes.

However, positive zip codes in the Los Angeles County West Vector & Vector-Borne Disease Control District are up from last year's total count of 17 to 23 for the same period due primarily to the unusually hot and persistent temperatures and humidity along the coastline and adjacent coastal communities.

Positive Birds: Eighty-one percent (81%) of all of the positive indicators (dead birds, sentinels chicken flocks, mosquitoes, and dead squirrels) are dead birds. Birds routinely travel many miles from their nighttime nesting locations to feed and scavenge during the day before they return to their original location in the evening. Although positive birds collected in a specific area are significant with respect to trends on a wider basis, it does not definitively identify a specific city, zip code, or location as the site where the actual mosquito bite and infection occurred because of the birds extended daily travel patterns. A bird may travel and die as much as 1 to 10 miles away from the location where it was infected. It is believed that a large number of birds are travelling further west this year to the coastal communities to seek relief from the unusual heat.

Residents can reduce the risk of being infected with WNV by doing the following:

- DEET - Apply insect repellent according to the label. Repellents containing DEET, picaradin, IR3535, and oil of lemon eucalyptus are the longest lasting and most effective. Repellents keep the mosquitoes from biting you.
- DAWN AND DUSK - Mosquitoes that carry WNV primarily bite in the early morning and evening so it is important to wear repellent at this time
- MOSQUITO PROOF YOUR HOME - Make sure that your doors and windows have tight-fitting screens to keep out mosquitoes. Repair or replace screens with tears or holes.
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Symptoms of West Nile virus:

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Questions: If you have any questions, please contact Robert Saviskas, Executive Director, at (310) 915-7370 ext. 223 or at rsaviskas@lawestvector.org.

CRISIS RESPONSE TEAM

10-week, 30-hour Training
Thursday Evenings, 6 - 9pm
Begins Thursday, October 4, 2012

www.theCRT.org

Space is limited to the first 30 qualified applicants.



Make a Difference in Our Community

Crisis Counselor ~ Volunteer Opportunity



Respond On-Scene to assist survivors of trauma or serious loss:

- *homicide, suicide, death of a child, home-invasion robbery, fatal traffic collision, sudden death of a loved one...*

Work alongside Police, Fire, Sheriff, and EMS personnel.

Ongoing training and supervision provided by nationally recognized trauma mental health specialists.

For more information visit our website: www.theCRT.org,

Call the CRT Training Information Line: (855) 343-6012, x712, or contact us via email: ChironCRT@gmail.com



The Crisis Response Team is a program of Chiron Center, Inc. ~ a 501(c)3 Non-profit
www.ChironCenter.org ~ www.theCRT.org

Paging all healthcare pros

August 9, 2012

If you've got the skills, L.A. County wants you to be part of The Surge.

A new advertising campaign is being launched to expand the ranks of the county's network of volunteer healthcare professionals who help out when major disasters or public health emergencies strike.

"No matter what happens with a disaster, there are always issues with medical needs," said Cathy Chidester, director of the county Emergency Medical Services Agency. "Right now our hospitals are really maxed out, so, in case of a large-scale disaster, you are going to need extra professionals to staff those needs."

Electronic billboard space valued at up to \$250,000 recently was donated to the [Los Angeles County Disaster Healthcare Volunteers](#), a collaborative effort led by the county's Emergency Medical Services Agency and Department of Public Health, by outdoor communications companies, through a partnership with the City of Los Angeles. The donation was approved by the county Board of Supervisors on Tuesday.

One of the new billboard ads will recruit for the [L.A. County Surge Unit](#), the largest of four volunteer groups under the "Disaster Healthcare Volunteers" umbrella. Another will spread the word about the [Medical Reserve Corps of Los Angeles](#)—a volunteer unit associated with the [Los Angeles Department of Public Health](#). A third ad will be reserved for recruiting when a major disaster already has occurred.

The county volunteer collaborative was founded after the 9/11 attacks and Hurricane Katrina increased awareness of a need for backup healthcare personnel. Volunteers pre-register as professionals by entering their information into a database managed by the State of California. Their licensure and place of practice are verified by the program, and they are then considered "hospital ready."

The Surge Unit seeks a variety of healthcare professionals, including doctors, nurses, dentists, pharmacists, EMTs and lab technicians. The unit is not aimed at recruiting first responders; rather, it



seeks people to serve during the days following a large-scale disaster, when they would be contacted and mobilized to increase the capacity of hospitals and clinics.

Licensed mental health professionals are also vital to the effort, said Sandra Shields, Senior Disaster Services Analyst for the unit.

“Following a disaster, we expect a surge in people coming to the hospital concerned that they may be ill or have an injury, but are not actually hurt,” said Shields. Mental health professionals “can help manage the psychological casualties of major disasters.”

For more information about the Surge Unit or to register to help, visit the [website](#) or call (818) 908-5150. The unit also offers training sessions several times per year. The sessions are voluntary, as are all other aspects of the program. The personal information of volunteers is secured and can only be accessed by official representatives of the group.

The Surge Unit currently boasts 3,027 volunteers. With the help of the billboards, the program hopes to reach 4,000 by the end of the year. If you think you may want to help out during a disaster, signing up in advance is critical.

“The hospitals and clinics cannot effectively utilize spontaneous volunteers,” Shields said. “We want to use their skills appropriately and that’s easier if they are pre-registered.”

Posted 8/9/12

- Share this:



BHCPR.org
BEVERLY HILLS CPR

Learn **CPR** Today!



AHA Training Courses Available:



**BLS
Heartsaver CPR/AED
First Aid**



Beverly Hills CPR
An American Heart Association Regional Training Center
**455 North Rexford Drive,
Beverly Hills, CA 90210**
(Next to the Fire Department and City Hall, across the street from
the Police Station and Public Library.)
310-281-2753
www.BHCPR.org

Register **online** or call Beverly Hills CPR at **(310) 281-2753**
and enroll in a life saving CPR class now!

[Click Here for Map](#)

BLS for Healthcare Providers (SP Classroom)

08/14/2012 @ 6:30PM

The BLS for Healthcare Providers Course covers core material such as adult and pediatric CPR (including two-rescuer scenarios and use of the bag mask), foreign-body airway obstruction, and automated external defibrillation.

For healthcare providers such as EMS personnel, physician assistants, doctors, dentists, nurses, and respiratory therapists, who must have a credential (or are documenting successful completion of a CPR course). This would also include nursing students, EMT students and anyone that is interested in becoming a BLS instructor.

BLS for Healthcare Providers (Online & Skills Test)

08/14/2012 @ 6:00pm to 7:00pm

In this program, students complete the cognitive portion (Part 1) of BLS for Healthcare Providers training through a series of self-paced online modules. Students answer short multiple-choice questions within case-based scenarios, and receive feedback based on their answers, to proceed through 10 critical checkpoints. This course provides access to 21 optional review sections, including 17 videos from the BLS for Healthcare Providers video, which reinforce the adult, child and infant CPR sequences taught in the course.

This course is for healthcare providers seeking an initial or renewal BLS for Healthcare Providers Course Completion Card. Part 1 can be completed in approximately 1-2 hours, time to complete a practice and testing session (Parts 2 and 3) varies.

Please note: Your online web key will be sent to you within 24 hours of course registration so long as it's done during normal business hours, Monday - Friday 9:00am - 5:00PM. Registrations received after business hours will be sent the next business day.

Family & Friends CPR (Adult CPR)

08/21/2012 @ 5:30pm

Family members, friends and members of the general community who want to learn CPR but do not need a course completion card. The Family & Friends CPR program teaches how to perform CPR in adults, children, and how to help an adult or child who is choking.

Friends & Family (Infant CPR)

08/21/2012 @ 6:30pm

The Family & Friends CPR program teaches how to perform CPR on infants, and how to help an infant who is choking. The Family & Friends CPR program teaches how to perform CPR infants and how to help an infant who is choking.

Heartsaver CPR/AED & First Aid (Classroom)

[08/14/2012 @ 6:30pm](#)

[08/25/2012 @ 9:30am](#)

The Heartsaver CPR Course teaches CPR and relief of choking in adults and children and infant CPR and relief of choking, and use of barrier devices and Automatic External Defibrillators for all ages.

Does Your Baby Sitter Know Infant & Child CPR?

Pet CPR

Call for Schedule

Please be advised that we also offer all of our classes as an online course followed by a short skills test that takes place one hour prior to each of our regularly scheduled classes.

To obtain more information on class location, pricing, and to register, you can visit our website at www.bhcopr.org

Did you know?

In 1960, Cardiopulmonary resuscitation (CPR) was developed. The American Heart Association started a program to acquaint physicians with close-chest cardiac resuscitation and became the forerunner of CPR training for the general public.

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CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commission
FROM: Pamela Mottice-Muller, Director of Emergency Management
DATE: September 24, 2102
SUBJECT: Information Only

Reminder: This and future Commission meetings will be recorded for posting on the City's website.

A light snack will be provided at the meeting.



CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commission

FROM: Madhi Aluzri, Assistant City Manager
Chief David Snowden, Police Department
Chief Timothy Scranton, Fire Department

DATE: September 24, 2012

SUBJECT: AT&T Mobility Project

AT&T Mobility is proposing to upgrade the City of Beverly Hills' wireless service and coverage by installing a Distributed Antenna System (DAS) throughout the city. This project was initially spearheaded by the City's Public Safety staff (specifically the Police Department) to increase the performance of their public safety computers and will achieve the goal together with increasing the performance of all the other AT&T wireless devices owned and operated throughout the City by residents, businesses and visitors.

City Management and Public Safety staff will be on hand to provide an overview of the project, seeking input and support from the Commission on this matter.

The attached FAQ were prepared by AT&T as technical explanation of the project.

Beverly Hills Outdoor Distributed Antenna System FAQs

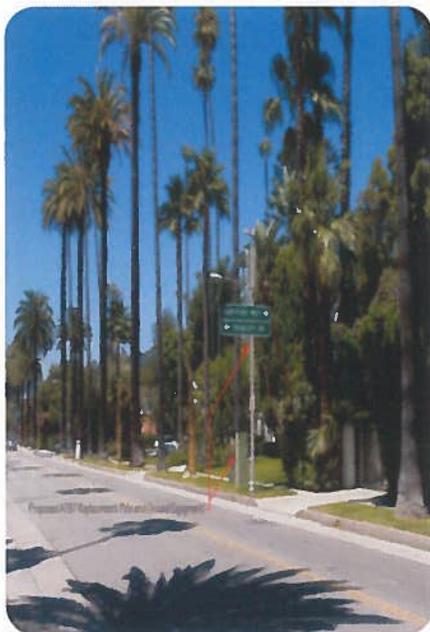
1 What is an oDAS and how does it work?

An Outdoor Distributed Antenna System, or oDAS, is a network of smaller, spatially separated antenna nodes connected to the communications network.

An oDAS network transmits the wireless signal through several smaller antennas to provide coverage, capacity and reliability over similar areas as a larger cell tower. oDAS networks are effective in augmenting areas with difficult topography, structural impediments (e.g. buildings, or within buildings), or in locations where it may not be optimal or possible to build additional traditional larger macro towers.

2 Why do we need an oDAS and what will it do for me?

Beverly Hill's topography and building density pose a challenge to wireless network performance. Deploying a DAS network will increase network performance by providing greater coverage throughout the city and filling gaps in existing coverage. AT&T's DAS network will improve call quality and reliability while also supporting increased traffic and faster transfer of data.



3 What will oDAS provide to the City?

In addition to improving service for customers in Beverly Hills, the City's Police and Fire departments have requested enhanced citywide connectivity to improve safety. The oDAS system will improve first responder communication and provide safe 9-1-1 coverage throughout the City. AT&T has also agreed to provide 14 poles with mounts for traffic control cameras, should the City move forward with that program.

4 What is the design for the Beverly Hills oDAS?

The electronic equipment and power meter will be housed in a small cabinet on the ground and the antennas will be mounted primarily on Beverly Hills street light posts. The street light will also be designed to accommodate police surveillance cameras should the City decide to add cameras.

5 What's involved in building this oDAS?

AT&T starts by identifying any gaps in coverage and/or the need for additional capacity to meet customer demand. It then calculates the most efficient way to provide complete coverage with as few oDAS sites as possible.

6 How many oDAS sites is AT&T planning to build in Beverly Hills? How many homes are served by a single site?

76 nodes are proposed in Beverly Hills. Serving capacity varies by cabinet and by the density of homes or business, geography and topography in a neighborhood.

7 Will AT&T be paying the City of Beverly Hills to place your oDAS on the poles?

Yes. AT&T will pay the city for placing equipment on city-owned street light standards through a Master Lease Agreement with the City.

8 How did AT&T select the oDAS locations?

Locations for the oDAS equipment are chosen based on many factors. First, AT&T looked for poles that would be properly spaced to provide effective coverage throughout the service gap area. Second, AT&T worked in concert with city staff to minimize the visibility of the equipment. Third, AT&T looked for poles that would have easy access to fiber facilities and power in order to minimize construction disruption. AT&T worked with the City for over a year to identify sites, survey sites together, and in many cases, relocate the proposed site to find the best possible location.

9 What happens when the equipment cabinet on the ground gets hit by a car?

If the damage is of the magnitude that causes the cabinet to fail, an alarm will alert AT&T's Network Operations Center triggering a dispatch to repair the cabinet.

10 Why can't AT&T just co-locate on other carriers' existing cell sites?

If there were existing cell sites and infrastructure that would provide the necessary locations to address coverage and/or capacity needs, then AT&T would attach to them. AT&T has determined that each and every proposed DAS location is necessary to provide coverage or capacity for the City. AT&T is motivated to keep the number of facilities to a minimum while providing as complete coverage and customer demand as possible. In addition, in the future it is possible that these new facilities may be used by other carriers to enhance their own coverage.





CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commission

FROM: Pamela Mottice-Muller, Director of Emergency Management

DATE: September 24, 2102

SUBJECT: Tobacco Ordinance Update

Mark Brower, Senior Budget and Financial Analyst will be here to discuss the following:

- overview of the first year operation,
- lessons learned,
- changes to process and,
- moving Forward

Attached are journal articles on the effectiveness of these types of programs.

Factors Associated With Tobacco Sales to Minors

Lessons Learned From the FDA Compliance Checks

Pamela I. Clark, PhD

Sharon L. Natanblut, MPA

Carol L. Schmitt, MA

Charles Wolters, MS

Ronaldo Iachan, PhD

AFTER MORE THAN A DECADE OF efforts to reduce youth access to tobacco, tobacco products remain widely available to adolescents through retail sources. In 1999, it was estimated that 3.76 million daily smokers aged 12 to 17 years consume an estimated 924 million packs of cigarettes per year, generating a retail value of \$1.86 billion.¹ Surveys consistently show that minors believe they can easily obtain cigarettes,²⁻⁴ and that adolescents can readily purchase tobacco in retail outlets.⁵ Curtailing easy youth access to tobacco is a crucial component in the primary prevention of tobacco use, and restricting retail sales is an important element of reducing youth access. Given that tobacco control resources are limited, it is important to understand the predictors of sales to minors and thus design efficient compliance check programs to identify retailers who sell tobacco to minors. This analysis of 110062 compliance checks performed by the US Food and Drug Administration (FDA) was undertaken to determine what elements of the compliance check process are most likely to result in illegal sales and therefore might be used in formulating best practices for efficient checks.

Context Tobacco products continue to be widely accessible to minors. Between 1997 and 1999, the US Food and Drug Administration (FDA) conducted more than 150000 tobacco sales age-restriction compliance checks. Data obtained from these checks provide important guidance for curbing illegal sales.

Objective To determine which elements of the compliance checks were most highly associated with illegal sales and thereby inform best practices for conducting efficient compliance check programs.

Design and Setting Cross-sectional analysis of FDA compliance checks in 110062 unique establishments in 36 US states and the District of Columbia.

Main Outcome Measure Illegal sales of tobacco to minors at compliance checks; association of illegal sales with variables such as age and sex of the minor.

Results The rate of illegal sales for all first compliance checks in unique stores was 26.6%. Clerk failure to request proof of age was strongly associated with illegal sales (uncorrected sales rate, 10.5% compared with 89.5% sales when proof was not requested; multivariate-adjusted odds ratio [OR], 0.03; 95% confidence interval [CI], 0.03-0.04). Other factors associated with increased illegal sales were employment of older minors to make the purchase attempt (adjusted ORs for 16- and 17-year-old minors compared with 15-year-olds were 1.52 [95% CI, 1.46-1.63] and 2.43 [95% CI, 2.31-2.59], respectively), attempt to purchase smokeless tobacco (adjusted OR, 2.16 [95% CI, 1.90-2.45] vs cigarette purchase attempts), and performing checks at or after 5 PM (adjusted OR, 1.28 [95% CI, 1.21-1.35] vs before 5 PM). Female sex of clerk and minor, Saturday checks, type of store (convenience store selling gas, gas station, drugstore, supermarket and general merchandise), and rural store locations also were associated with increased illegal sales.

Conclusions This analysis found that a request for age verification strongly predicted compliance with the law. The results suggest several ways in which the process of compliance checks might be optimized.

JAMA. 2000;284:729-734

www.jama.com

Previous articles focused on youth access issues have identified factors associated with illegal sales, including sex of the minor and the clerk, age of the minor, ethnicity of the minor, and type of store visited. These studies have reported conflicting findings about the direction and magnitude of sales predictors, making it difficult to use the previously published literature to determine the best practices for conducting checks.⁶

Older minors buy more often than younger minors.⁷⁻¹⁵ The sex of the minor has a mixed influence on illegal to-

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Corresponding Author and Reprints: Pamela I. Clark, PhD, Centers for Public Health Research and Evaluation, Battelle Memorial Institute, 6115 Falls Rd, Suite 200, Baltimore, MD 21209 (e-mail: clarkp@battelle.org).

acco sales rates, with some investigators finding girls could buy more often than boys,^{14,16-18} others finding that boys buy more often than girls,¹⁹ and some investigators have found no sex difference.^{12,16,17} Studies that have reported the likelihood of sales by retail outlet type are also mixed. At least 2 studies have shown lowest sales rates in pharmacies,^{20,21} 1 found mid-level sales rates in pharmacies,¹⁰ and 1 found high sales in pharmacies.²² Inconsistencies among previous studies may be the result of small samples, few minors employed in the checks, and wide ranges in the minors' ages. Employing few minors may be particularly problematic given that the apparent age and maturity of a particular youth and that youth's experience with conducting compliance checks can affect his or her ability to purchase tobacco. These factors could partially account for the varying sales outcomes when minors of the same age and sex try to buy tobacco. For instance, DiFranza et al²³ reported widely varying buy rates for three 16-year-old boys they employed to attempt to buy smokeless tobacco. Purchase rates for each of the 3 ranged from 26.5% to 88.4%. This would suggest that a large sample of compliance checks performed by a large number of minors is required to offset the differences between minors that might affect their ability to successfully purchase tobacco. The large FDA data set, composed of data from compliance checks performed by more than 3000 minors, provides such information.

In 1996, the FDA asserted jurisdiction over cigarettes and smokeless tobacco products and issued a rule regulating youth access to these products.²⁴ The youth access provisions made it illegal for retailers to sell cigarettes or smokeless tobacco to anyone under the age of 18 years and required that retailers verify the age of anyone under the age of 27 years by checking photographic identification (ID). To enforce the rule, the FDA contracted with the states and territories to perform unannounced compliance checks in which undercover minors visit retail cigarette outlets and attempt to purchase tobacco products.

By December 1999, when this analysis was begun, more than 150000 compliance checks had been completed in 43 states and territories, providing the largest number ever performed under a relatively uniform protocol.

METHODS

The FDA trained and commissioned state officials to conduct compliance checks on its behalf under protocols prescribing such things as ages of the minors attempting the purchase, the procedures for conducting the purchase, and the handling of evidence. In brief, trained and commissioned adult investigators accompanied minors to the stores. The FDA required the adult agents be in the store when the minors made purchase attempts unless the agent believed that his or her presence in the store would signal a compliance check (usually in very small stores). The minors attempted to buy the cigarette brands or smokeless tobacco products frequently used by young people in their area and had the option of purchasing other items, such as gum or chips, at the same time. They were encouraged to carry valid photographic ID, if owned, and were required to produce it at the request of a clerk. In addition, they were not allowed to lie about their ages or for whom the tobacco purchase was made.

Characteristics of the Minors

During the first year of the program, only 15- or 16-year-old minors were employed. Subsequently, 17-year-olds were included, with the FDA requiring a substantially equal mix of the 3 age groups. Minors were instructed to maintain their normal, everyday appearance. If they typically wore make-up or facial hair, they were permitted to do so during compliance checks, but were not permitted to alter their appearance to appear older. States were instructed to select minors who reflected the ethnic and racial characteristics of the communities in which they conducted the checks. For reasons of safety, minors did not conduct checks in their own communities. Minors were typically paid by the states for their participation.

Selection of Stores to Check

The FDA generally required that states conduct a minimum of 375 checks per month. States that license tobacco retailers used their licensure lists as a basis for identifying outlets to check. If a state could not generate a list of tobacco retailers, the FDA provided a retailer list from a commercial source. There was no attempt by the FDA to systematically sample stores in the states; rather, the intention was to do a complete census of all tobacco retail outlets. The store checks analyzed here represent checks of approximately 10% of the retail tobacco outlets in the United States.

Statistical Analyses

This analysis used the first compliance check done in each unique store ($n=110062$). The outcome variable was the outcome of the purchase attempt (sale or no sale) at that first check. The relationships among potential explanatory variables and between independent and dependent variables were explored through frequency tables, appropriately stratified.

Logistic regression analysis was used to investigate the contribution of the independent variables to the probability of illegal sales to minors. Variables included in the model were those significantly associated with sales in an exploratory analysis (including 2- and 3-level interaction terms) and those reported as associated with sales in the published literature. Dummy variables were constructed when appropriate. Odds ratios (ORs) were constructed to reflect the ratio of the odds of a sale while controlling for the simultaneous effects of the independent variables. Ninety-five percent confidence intervals for ORs were calculated using SEs estimated by the Wald statistic.

To account for potential clustering of stores within communities, SUDAAN (Research Triangle Institute, Research Triangle Park, NC) software was used to account for any effect of clustering within states or within ZIP codes. Measures of precision for the model parameters were approximately the same as those generated by a simple log-linear

model, suggesting that the degree of homogeneity between stores within clusters was small and did not affect overall results.

Sources of Data Used in the Analyses

The Compliance Check Record. Agents supervising compliance checks were required to complete a written report immediately following each buy attempt. This written report documented the outcome of the check, the type of establishment visited (convenience store, convenience plus gas station, gas station, drugstore, general merchandise, supermarket, tobacco store, or other), the date and time of the check, the sex of the store clerk, the type of tobacco the minor attempted to buy (cigarettes or smokeless tobacco), the minor's ID code, whether the minor was asked for proof of age, and whether the minor carried a valid ID card.

The FDA's contract with the states did not require that they report age and sex of the minors, and not all states had the resources to abstract the sex and age of the minors from their records, particularly from their earliest checks for the purpose of this analysis. The sex and age of the minors was available for 81 181 checks (74% of first compliance checks). TABLE 1 shows a comparison of all first-time checks and checks for which minor data were available.

Urbanicity of the Community in Which the Check Occurred. The actual store address, including the postal ZIP code, was available for most stores. Postal ZIP codes often cross over urban, suburban, and/or rural areas. An urbanicity variable was constructed to represent the largest proportion of households within each ZIP code, using 1990 US Census Bureau data. Because uncorrected sales rates were lowest in predominantly urban ZIP codes, dummy variables were constructed for suburban and rural areas, with urban areas as the reference category.

Approximately 8000 ZIP codes were missing because a business address was different than the address of the store location. After using commercial busi-

ness lists to locate as many missing store location ZIP codes as possible, 3733 (3.4%) remained missing.

RESULTS

The FDA completed 151301 compliance checks in 110062 unique to-

bacco retail outlets between 1997 and 1999. The postal ZIP codes and minor characteristics were available for 78812 (72%) of the compliance checks in 36 states and the District of Columbia. The rate of sales for all first compliance checks in unique stores

Table 1. Comparison of Full and Reduced Data Sets of First Compliance Checks in Unique Stores*

Variable	All Checks, No. (%)	Checks With Data on Minors, No. (%)
Store type		
Convenience store	15 112 (13.8)	11 236 (13.9)
Convenience + gas	43 071 (39.3)	31 590 (39.1)
Gas station	5755 (5.3)	4449 (5.5)
Drugstore	6703 (6.1)	4821 (6.0)
Supermarket	18 524 (16.9)	13 372 (16.5)
General merchandise	5522 (4.8)	3875 (4.8)
Tobacco store	1742 (1.6)	1242 (1.5)
Other	13 514 (12.3)	10 303 (12.7)
Age of minor, y		
15	...	22 196 (28.4)
16	...	34 124 (43.7)
17	...	21 758 (27.9)
Sex of minor		
Male	...	46 418 (57.2)
Female	...	34 763 (42.8)
Sex of clerk		
Male	42 751 (38.9)	31 803 (39.2)
Female	67 149 (61.1)	49 242 (60.8)
Item bought		
Cigarettes	105 835 (97.2)	78 316 (97.7)
Smokeless tobacco	3043 (2.8)	1874 (2.3)
Time of check		
Before 11 AM	14 243 (12.9)	10 966 (13.5)
11 AM to 12:59 PM	21 978 (20.0)	16 499 (20.3)
1 PM to 2:59 PM	23 801 (21.6)	17 982 (22.2)
3 PM to 4:59 PM	29 107 (26.5)	22 231 (27.4)
5 PM to 6:59 PM	15 963 (14.5)	11 059 (13.6)
7 PM or later	4967 (4.5)	2442 (3.0)
Day of the week		
Sunday	7423 (6.7)	5313 (6.5)
Monday	11 611 (10.6)	9092 (11.2)
Tuesday	16 448 (14.9)	12 778 (15.7)
Wednesday	17 284 (15.7)	13 163 (16.2)
Thursday	16 893 (15.4)	12 812 (10.0)
Friday	12 792 (11.6)	8130 (10.0)
Saturday	27 611 (25.1)	19 893 (24.5)
Identification requested		
No	23 236 (21.2)	17 534 (21.6)
Yes	86 653 (78.8)	63 550 (78.4)
Community		
Mostly urban ZIP code	60 526 (57.9)	45 108 (58.0)
Mostly suburban ZIP code	15 758 (15.1)	11 541 (14.9)
Mostly rural ZIP code	28 333 (27.1)	20 990 (27.0)

*Postal ZIP codes and characteristics of the minors were available for 78 812 (72%) of the compliance checks in 36 states and the District of Columbia (Alaska, Ala, Ark, Ariz, Calif, Colo, Conn, DC, Del, Fla, Ga, Hawaii, Iowa, Idaho, Ill, Ky, Mass, Md, Me, Mich, Minn, Mo, Miss, NC, NH, NJ, Nev, NY, Okla, Pa, Tenn, Tex, Utah, Va, Vt, Wash, WV). Ellipses indicate data not available for entire data set.

was 26.6%. The rate was 27.7% for checks in which there were complete data. Characteristics of the checks are shown in Table 1 and results of the logistic regression modeling are shown in TABLE 2.

Characteristics of the Minors and Clerks

Older age of the minor was associated with illegal tobacco sales, with the odds of buying increasing with each year of age. Girls were more likely to be able

to successfully buy than were boys, and female clerks were more likely to sell than were male clerks. The percent sales, corrected only for minor sex and age and clerk sex, are shown in TABLE 3. Two- and 3-way interaction terms for sex of the minor, age of the minor, and sex of the clerk were not significant in the exploratory analysis and are not included in the model.

Table 2. Variables Associated With Sales to Minors

Variable	Unadjusted Percent Sales	Adjusted Odds Ratio (95% CI)*	P Value
Store type			
Convenience store	21.6	1.00	
Convenience + gas	25.8	1.53 (1.42-1.64)	<.001
Gas station	29.1	1.67 (1.50-1.86)	<.001
Drugstore	22.9	1.68 (1.51-1.87)	<.001
Supermarket	23.8	1.21 (1.12-1.31)	<.001
General merchandise	24.0	1.34 (1.19-1.50)	<.001
Tobacco store	23.7	1.19 (0.99-1.43)	.07
Other	24.5	0.94 (0.86-1.02)	.13
Age of minor, y			
15	17.7	1.00	
16	25.3	1.52 (1.46-1.63)	<.001
17	36.3	2.43 (2.31-2.59)	<.001
Sex of minor			
Male	25.2	1.00	
Female	26.3	1.18 (1.13-1.23)	<.001
Sex of clerk			
Male	24.7	1.00	
Female	24.5	1.19 (1.15-1.26)	<.001
Item bought			
Cigarettes	24.4	1.00	
Smokeless tobacco	38.1	2.16 (1.90-2.45)	<.001
Time of compliance check			
Before 5 PM	24.1	1.00	
After 5 PM	26.6	1.28 (1.21-1.35)	<.001
Day of the week			
Not Saturday†	25.0	1.00	
Saturday	25.2	1.12 (1.06-1.18)	<.001
Identification requested by clerk			
No	89.5	1.00	
Yes	10.5	0.03 (0.03-0.04)	<.001
Community			
Mostly urban ZIP code	22.3	1.00	
Mostly suburban ZIP code	23.6	1.16 (1.09-1.24)	<.001
Mostly rural ZIP code	26.4	1.45 (1.38-1.53)	<.001

*CI indicates confidence interval.

†Sunday through Friday compliance did not differ significantly.

Requesting Photographic ID

Clerks' requests for proof of age were highly associated with denial of sales to the minors. However, some sales (10.5%) occurred even though the clerk requested proof of age. The minors had been trained to produce valid photographic ID for inspection if requested, although it is not known how many actually did show an ID. The model was reproduced with the reduced data set of only checks done by minors who carried their own valid ID cards (n = 39726). Results were similar, with 9.8% of sales completed when an ID card was requested.

Buying Smokeless Tobacco

Minors attempted to buy either cigarettes or smokeless tobacco. Only 2.3% of all buy attempts were for smokeless tobacco products. The corrected buy rate was significantly higher when the attempt was for smokeless tobacco compared with cigarettes.

Day of the Week and Time of Day

Only 17% of the checks occurred after 5 PM (16% by boys and 18% by girls). The rate of sales was flat until that hour, and then rose so that completed sales were significantly higher after 5 PM compared with before 5 PM. Sales were significantly higher on Saturdays than on any other day of the week.

Type of Store

The type of store was categorized by the agent, using his or her best judgment. Consistent with past studies, there was variation in the sales rate by the type of retail store visited. Convenience stores not selling gasoline had the lowest rate of sales in the exploratory analy-

Table 3. Percent Sales by Sex of Minor, Age of Minor, and Sex of Clerk

Sex of Minor	Age of Minor, y	Male Clerk	Female Clerk	Total
Male	15	15.5	16.9	
	16	23.5	24.9	
	17	34.9	36.1	
	Total	24.6	26.3	25.6
Female	15	18.6	19.3	
	16	27.1	25.7	
	17	37.5	36.6	
	Total	26.9	26.5	26.7

sis, so that category was set as the reference value. Sales rates were highest in gas stations. Only the category "other" did not have a significantly higher sales rate than did convenience stores.

Urbanicity of the Store Community

More than half of buy attempts were in urban areas. In the logistic model, both suburban and rural areas were significantly associated with increased sales compared with urban areas.

COMMENT

This was an analysis of the largest available set of compliance checks conducted under a relatively uniform protocol. The analysis suggested several ways in which the process of compliance checks might be optimized. As with most previous studies, older minors were more likely to be able to buy tobacco products than were younger minors.⁷⁻¹⁵ To determine which retailers are more diligently complying with age restriction laws, it is vital that older teens be included in the mix of teens doing compliance checks.

Some of the most conflicting results in previously published reports have been the effects of the sex of the minor.^{10,16-19} As previously discussed, these disparate results may be due in part to the relatively few minors used in those studies, such that differences in perceived maturity by sex may have contributed to the variation in results. Approximately 3172 minors contributed to the compliance checks for the FDA, providing stable estimates of sales by age and sex.

In keeping with past research, this study found that a request for age verification strongly predicted compliance with the law.^{15,23,25,26} It is not clear how often asking for an ID card is a serious request for proof of age eligibility and how often it is the verbal mechanism that merchants use to terminate the transaction when they have already decided that the buyer is too young.

Interestingly, in 10% of the compliance checks in which clerks asked for

proof of age, they still sold to minors. Sales rates under these conditions have ranged from 6% to 33% in previous studies.¹⁵⁻²³ These findings may suggest an incomplete understanding of the "carding" or age-verification process. The process necessitates 3 actions by the clerk: requesting the ID card, inspecting the card, and calculating or verifying the age of the buyer. If retailers merely request an ID card, without the requisite inspection and calculation or verification of age, then age verification may not actually occur. Clerks may sell tobacco even after requesting proof of age because they cannot calculate age eligibility from a birth date. Training programs for clerks typically teach them that they must request an ID card and know how to spot a fake one, but they may not teach the clerk how to make a correct decision about age eligibility once a card is presented.^{27,28}

Previous studies have shown slightly lower or similar success rates for smokeless tobacco purchases compared with cigarettes.^{21,23,29-32} In this analysis, attempts to buy smokeless tobacco products were almost twice as successful as attempts to buy cigarettes. This phenomenon deserves more study to determine why it occurs, and smokeless tobacco should more frequently be included in compliance check programs.

The time of day when purchase attempts occur has been suggested as a potential confounding variable.⁶ O'Grady et al³³ also found higher sales among checks performed later in the day, with 6% sales among checks performed in the morning, 18% in the afternoon, and 21% among checks performed after 6 PM. It is not known why late afternoon sales rates were significantly higher in this and the previous study, but it is possible that clerks who are on duty after 5 PM are younger than daytime clerks and more inclined to sell tobacco products to their contemporaries. Evening clerks may have less training, or they may be supervised and monitored less closely than their daytime counterparts. Sales were higher on

Saturday than other days of the week, perhaps for the same reasons. Two conclusions are clear: it is important to conduct some compliance checks during later hours and on Saturdays, and owners and managers should improve the training and supervision of evening and weekend clerks.

The sales rates in this sample were highest for gas stations and convenience stores that also sold gas. The different sales rate by outlet type, however, was not so great that any particular store class should be excluded from compliance check programs.

Sales rates were higher in rural and suburban areas compared with urban areas, but more than half of the checks were performed in urban areas. These results suggest that a better mix of stores will be an important component of future compliance check programs, even though the relative proximity of stores in urban areas makes urban checks more efficient to perform.

As with other analyses of administrative data sets, some additional cautions are warranted. It is not known whether the loss of almost 30% of the compliance checks because of missing data (primarily missing sex or age of the minor and missing ZIP codes) may have introduced some bias. The stores were not randomly sampled, and no national estimates of sales rates can be inferred. It is not known if the sampling of stores for inclusion produced any biases in the results. Also, when data are not acquired under a research protocol, misclassification errors may be more likely. The most likely source of error in this data set was in classification of the store type, which was left to the judgment of the agent. In addition, the use of postal ZIP codes for definition of urbanicity does not provide the precision that would exist if the store neighborhoods were identified at the census block level. Whether or not the adult accompanied the minor into the store was not consistently reported; another important predictor of sales, the ethnicity of the minor, was not identified. There is need for further research that explores the interaction between clerk, minor, and neighborhood

characteristics and the effect of witnesses to the transaction on illegal tobacco sales.

CONCLUSION

This analysis explored a wide range of variables related to the illegal sale of cigarettes or smokeless tobacco from a very large number of compliance checks conducted across the country. These results provide important guidance for public health officials responsible for curbing illegal sales to minors.

Retailers interested in stopping illegal sales in their own stores can also learn from this analysis. First, all retailers need to understand that no type of store is risk free. This study should serve as a wake-up call to pharmacy employees, for

example, who may not realize how easy it is for minors to buy tobacco from them. Also, retailers must recognize the need to train their clerks that a tobacco sale to a 17-year-old minor is just as illegal as a sale to a 15-year-old minor. By the same token, a sale in which a clerk asks for a photographic ID but sells anyway is as illegal as one in which the clerk does not ask for an ID card. The results suggest that additional training and monitoring of clerks who work in the evening and the weekends may be needed. All clerks must be trained that selling smokeless tobacco products to minors is illegal.

Between 1997 and 1999, the FDA completed more than 150 000 compliance checks in about 110 000 retail es-

tablishments throughout the United States. While that is the largest number of checks ever conducted by a single entity, it represents only about 10% of the approximately 1 million retailers selling tobacco in this country. On March 21, 2000, the Supreme Court ruled that the FDA lacked the authority to regulate tobacco as customarily marketed.³⁴ As a result of that decision, the FDA will no longer be conducting compliance checks. Further, it is unlikely that sufficient funding will be available from other sources to conduct compliance checks in every store even once a year. As a result, efficient compliance check programs are needed to conserve limited resources, while reducing illegal sales of tobacco to minors.

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The Effects of Combining Education and Enforcement to Reduce Tobacco Sales to Minors

A Study of Four Northern California Communities

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Objective.—To examine the effects of a community education and law enforcement intervention on illegal tobacco sales to minors.

Design.—A 2-year, before and after trial with retail stores as the unit of analysis.

Setting.—Implementation occurred in four suburban California communities with populations of 25 000 to 100 000.

Participants.—All the retail stores in one intervention community and half the retail stores, randomly selected, in the other three intervention communities (n = 169) were visited by minors aged 14 to 16 years with the intent to purchase tobacco.

Intervention.—Ongoing community and merchant education and four law enforcement operations were conducted.

Main Outcome Measures.—Over-the-counter and vending machine sales of tobacco to minors were the primary outcomes.

Results.—Among a cohort of stores visited by minors at the pretest (n = 104) in June 1988, 71% sold tobacco over the counter and 92% sold tobacco through vending machines. At posttest 2 in May 1990, 24% sold tobacco over the counter and 93% sold tobacco through vending machines. Of the 31 stores issued citations, 16 were followed into the courts where the fines were dismissed or reduced.

Conclusions.—Education alone had a limited effect on reducing illegal tobacco sales to minors. It did promote community support for more aggressive enforcement strategies. Education plus enforcement decreased significantly over-the-counter sales; vending machine sales were unaffected by these interventions. The lack of support at the judicial level may temper the effectiveness of enforcement. Legislative remedies addressing judicial obstacles and vending machine sales are needed.

(JAMA. 1991;266:3169-3171)

EASY access to tobacco products by adolescents is a major public health problem. Approximately 75% of current

smokers become addicted to tobacco by the age of 18 years, generally before it is legal for them to purchase tobacco products.¹ The importance of preventing early tobacco use is reinforced by data illustrating that tobacco is the initial drug of preference for young people and that its use is associated with other drug use.¹⁻⁵ A 1990 report of tobacco use in California⁶ found that current smoking status was 3.3% in 12- and 13-year-

olds, 9.5% in 14- and 15-year-olds, and 19.1% in 16- and 17-year-olds. The rate for 16- and 17-year-olds is just 2% less than that of the overall California adult population. This study also identified experimenters: 12.9% of 12- and 13-year-olds, 29.4% of 14- and 15-year-olds, and 40.8% of 16- and 17-year-olds. Nationally, in 1988, more than 3 million Americans under the age of 18 years consumed almost 1 billion packs of cigarettes and 26 million containers of smokeless tobacco, accounting for approximately 3% of annual tobacco industry profits.⁷ These data illustrate that minors are obtaining tobacco readily.

See also pp 3159 and 3186.

Indeed, in field trials around the country, minors have purchased tobacco successfully from stores and vending machines 70% to 100% of the time (E.F., unpublished data, 1991).⁸⁻¹⁰ In May 1990, Louis Sullivan, MD, Secretary of the Department of Health and Human Services, wrote: "Access of minors to tobacco is a major problem in every state of the nation. About three-fourths of the million outlets which sell cigarettes to adults also sell cigarettes to minors. These stores ignore the laws of their states because enforcement is almost nonexistent."¹¹ The Inspector General's Office of the Department of Health and Human Services found blatant disregard of the laws that prohibit the sale of tobacco to minors by merchants, law enforcement agencies, and communities at large. Specifically, they found only 11 active state and local jurisdictions where these laws were enforced.¹² In one of

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these jurisdictions, Woodridge, Ill, illegal sales to minors in the 26 stores licensed to sell tobacco were eliminated due to a tobacco retailer licensing ordinance and active law enforcement. This impressive finding should be interpreted in light of the fact that in the four villages contiguous to Woodridge, tobacco sales to minors occurred in 94% of the stores. Thus, tobacco is still readily accessible to Woodridge minors. The current study evaluates an intervention, also cited in the Inspector General's report, that combined merchant and community education with active enforcement of the California law by local police departments. The goal was to reduce tobacco sales to minors by 50%.

Laws regulating sales of tobacco products to minors differ from state to state. California law prohibits the sale and purchase of tobacco products to and by anyone under the age of 18 years. Retailers who break this law are subject to a misdemeanor with a first-offense fine of \$200, a second-offense fine of \$500, and a third-offense fine of \$1000. As of January 1, 1989, minors caught purchasing tobacco are subject to a fine of \$50 or 25 hours of community service work.

METHODS

In 1988, the Solano County Cancer Prevention Program embarked on a community-wide effort to reduce the illegal sale of tobacco to minors. The four targeted cities in Solano County, California (Benicia, Fairfield, Vacaville, and Vallejo), with populations ranging from 25 000 to 100 000, account for approximately 85% of the county's 340 000 residents. These are suburban communities separated from each other by 8 to 24 km.

Tobacco sales to minors (yes or no) was the primary outcome variable of the study. Data were collected at the pretest (June through August 1988); posttest 1, after an education-only intervention (December 1988); and posttest 2, after an education plus law enforcement intervention (May 1990). Data were analyzed using the McNemar non-parametric test.

In June through August 1988 (pretest), 20 youths ranging in age from 14 to 16 years were recruited through local community agency contacts and escorted to 169 stores in the four intervention cities to purchase tobacco. The 14- to 16-year-old age group was selected because this is generally when experimentation and adoption of smoking behavior occurs. The stores comprised approximately half of all the retail outlets in each city with the exception of Benicia where all tobacco retailers were surveyed. The outlets in the other three cities were selected randomly from lists

generated from the telephone company yellow pages and the county health department's listing of eating establishments. The outlets included grocery, liquor and convenience stores, restaurants, pharmacies, and gas stations.

In September 1988, a comprehensive educational intervention directed at merchants, law enforcement agencies, and the community at large was begun. The intervention included widely publicizing the results of the pretest through the local media; making presentations to city councils, the county board of supervisors, and community organizations; and mailing educational packets to all tobacco retailers in the four cities. The packets included a cover letter that described the results of the first survey and why it was important to comply with the law, a copy of the law, warning stickers for cash registers, employee education materials, and a list of individuals and community organizations supporting the project.

In December 1988, half of the stores visited at the pretest were selected randomly and visited by eight of the original 20 minors (posttest 1). A total of 83 stores were visited. Because the results of this visit fell short of project expectations to reduce sales by at least 50%, face-to-face interviews were conducted with 17 merchants to discover why the educational effort did not achieve the results of a similar study in Santa Clara County, California.^{5,13} Merchants reported the following: (1) frustration that minors could purchase tobacco products easily from other local sources, making it a disincentive to change their practices; (2) knowledge that the law was not enforced and a belief that without the sanctions of active enforcement, business as usual was acceptable; and (3) belief that the most effective method to stop sales to minors was by active enforcement. The results of the store surveys and the merchant interviews were communicated to local police departments with requests to enforce the law.

In November 1989, a law enforcement intervention was added to the ongoing educational intervention. Four police department enforcement operations (ie, "stings") were conducted by three police departments. Upcoming police visits to stores were announced in local newspapers. A total of 90 stores were visited by underage police cadets; 34% of the stores sold tobacco products and received citations. Each enforcement effort required about 8 hours of each police department's time, half of which was spent visiting the stores and the other half on paperwork. The results of this police activity were reported in the local media, including the

names of violators and stores.

In May 1990, following police enforcement activities and continued education, 15 male and female minors aged 14 to 16 years who had not participated previously in the project visited 145 stores in the four cities with the intent to purchase tobacco (posttest 2). Of the original 169 outlets visited in June through August 1988, 104 were revisited in May 1990. The 65 stores not visited in May 1990 either went out of business, did not sell tobacco products, or could not be located by project staff members. At posttest 2, 41 of the 145 stores visited had not been visited previously. To examine the representativeness of the 104 stores that were visited at the pretest and posttest 2, two analyses were conducted. The first, an analysis of pretest data, compared stores with pretest data only ($n = 65$) to stores with pretest and posttest 2 data ($n = 104$). The second, an analysis of posttest 2 data, compared stores with posttest 2 data only ($n = 41$) to stores with pretest and posttest 2 data ($n = 104$). Neither of these analyses was significant, suggesting that the 104 stores visited at the pretest and posttest 2 were representative of the entire sample of 210 different stores visited over the course of the intervention (169 at the pretest, 41 at posttest 2).

Because the California law was not enforced prior to the intervention, we wanted to document how judges interpreted it. In the summer of 1990, staff members followed half of the store clerks cited for selling tobacco to minors through the county court system and interviewed each judge after court sessions to obtain explanations of their decisions.

RESULTS

Overall, 73% ($n = 169$) of stores sold tobacco to minors at the pretest, 68% ($n = 83$) sold tobacco at posttest 1, and 31% ($n = 145$) sold tobacco at posttest 2. Over-the-counter sales dropped from 72% at the pretest ($n = 144$), to 62% ($n = 69$) at posttest 1, and to 21% ($n = 122$) at posttest 2. Vending machine sales were 84% at the pretest ($n = 25$), 93% at posttest 1 ($n = 14$), and 83% ($n = 23$) at posttest 2. Table 1 presents data from the cohort sample of stores visited at both the pretest and posttest 1, and Table 2 presents data from the cohort of stores visited at both the pretest and posttest 2.

Following the issuance of citations, 16 of the 31 merchants who received citations were followed through the judicial system by Solano County Cancer Prevention Program staff members to track the disposition of the cases. In seven cases, the judges suspended the

Table 1.—Cohort of Stores Visited at Pretest and Posttest 1 to Determine Percentage of Stores Selling Tobacco to Minors

Variable	June 1988 Pretest, No. of Stores (%)	December 1988 Posttest 1, No. of Stores (%)	P*	% Change Pretest to Posttest 1† (95% Confidence Interval, %) [‡]
All stores	77 (77)	77 (85)	NS	-12 (1, -24)
Over-the-counter sales	64 (73)	64 (59)	NS	-14 (0, -28)
Vending machines sales	13 (92)	13 (92)	NS	0 (21, -21)

*NS indicates a significance level > .05.

†Percent in pretest - percent in posttest 2.

[‡]95% confidence interval calculated for change using sample with data at pretest and posttest 1.

Table 2.—Cohort of Stores Visited at Pretest and Posttest 2 to Determine Percentage of Stores Selling Tobacco to Minors

Variable	June 1988 Pretest No. of Stores (%)*	May 1990 Posttest 2 No. of Stores (%)	P†	% Change Pretest to Posttest 2‡ (95% Confidence Interval, %) [§]
All stores	104 (75)	104 (35)	<.0001	-40 (-26, -55)
Over-the-counter sales	87 (71)	87 (24)	<.0001	47 (31, -64)
Vending machines sales	14 (93)	14 (93)	NS	0 (20, -20)

*The numbers for over-the-counter sales (87) and vending machine sales (14) do not add up to the number for all stores (104) because three stores were dropped from the analysis since tobacco was purchased differently between tests (eg, one time by over-the-counter and one time by vending machine).

†NS indicates a significance level > .05.

‡Percent in pretest - percent in posttest 2.

[§]95% confidence interval calculated for change using sample with data at pretest and posttest 2.

sentences, placed those cited on informal probation, and imposed \$50 fines as a condition of probation. One judge suspended the sentences of all nine persons issued citations and although they were found guilty, the individuals were not required to pay a fine.

Interviews were conducted with two judges to learn why these decisions were made. Three primary reasons were given. First, the judges were reluctant to establish criminal records for citizens with no prior criminal history. Since it is a misdemeanor in California to sell tobacco to a minor, convicted violators will have lifetime criminal records. Second, the judges believed that a \$200 fine placed an unfair burden on store employees, many of whom worked for minimum wage. California law states that the clerk who sold tobacco illegally, rather than the manager or store owner, is cited. Third, judges believed that violations of the law on tobacco sales to minors were far less serious than most of the other cases they face daily. As a result, judges treated violators leniently, particularly first-time offenders. Unlike the California law regulating sales of alcohol to minors, judges interpreted the tobacco sales law as providing them with discretion in determining the penalties, if any, imposed.

COMMENT

This study illustrated that enforcement of laws regulating sales of tobacco products to minors had a significant effect on over-the-counter sales above and beyond that obtained through commu-

nity and merchant education alone. Given the small amount of time spent by each police department to implement the intervention, our findings suggest that enforcement is a feasible way to reduce tobacco sales to minors.

While education alone yielded a relatively small reduction in illegal sales of tobacco products to minors, it did garner broad community support and set the stage for the more punitive action of police department enforcement. Educating merchants and the community at large about the law demonstrated to the police departments that a serious effort was made to obtain voluntary compliance with the law. When educational efforts fell short of project goals, police departments were willing to take action. Additionally, because police departments are public servants and therefore sensitive to community pressure, presenting evidence of the problem and support from the local media and community leaders influenced their decisions to enforce a law that is largely ignored throughout the state and nation.

Since this project modeled its educational intervention on the Santa Clara County project,⁹ we expected to achieve similar reductions in over-the-counter sales due to education alone. In retrospect, there were two major differences in program implementation that may account for our educational intervention not reducing tobacco sales significantly. The first difference is the type of community. The four intervention cities in Solano County are small and suburban, whereas the cities in the Santa Clara

County study, one of which was San Jose, the 11th largest city in the United States, were primarily urban. Second, while we used local print and radio media extensively, we were generally unable to capture the attention of the larger San Francisco Bay area television media market as was accomplished in the Santa Clara study. We did, however, get some television coverage when police departments started issuing citations.

There are several disappointing outcomes of the intervention to date. First, vending machine sales were unaffected. This provides support for the elimination of all tobacco vending machines, an action called for by Department of Health and Human Services Secretary Louis Sullivan and several prohealth groups. Community experiences with partial vending machine bans (eg, voluntary surveillance of machines by retailers, the use of locking devices or tokens, or limiting machines to adult locations) in limiting vending machine sales of tobacco to minors are not encouraging.

The second outcome was the judges' dismissals of charges and reductions of fines when store clerks who received citations appeared in court. This was particularly disappointing in light of the broad community support and police commitment to enforcement. Continued lack of punishment would eventually act as a deterrent to police involvement and would weaken the effectiveness of police enforcement efforts in the community. Additionally, merchants would again flaunt the law knowing that citations would not be upheld in court. Following this study, however, when new citations were processed through the same courts, the judges were far less lenient than they were when first confronted with this type of case. This suggests that the court system can be stimulated to respond when repetitive violations occur.

Third, although it is clear that merchant behavior can be affected significantly by active enforcement of the law by police departments, multiple problems with access laws exist. Given that the dockets of criminal courts are generally overloaded, these courts are inappropriate vehicles for the disposition of access violations. Also, judges' reluctance to establish criminal records for citizens with no prior convictions must be recognized. Both of these problems lend support for access laws to be considered as civil rather than criminal offenses and processed administratively rather than through the criminal justice system.

Fourth, the responsibility for enforcement has implications for the success of access laws. To increase enforcement,

authority should rest with both law enforcement agencies and with local or state government agencies such as public health departments. Secretary Sullivan and other tobacco control activists propose the establishment of a licensing system that would fund enforcement and tie compliance with laws to selling tobacco products.

Fifth, there is the issue of who should be culpable and for what. Some have argued that the owner or manager of a store selling tobacco products should be fined for not setting and enforcing policies. The establishment of a licensing system would address this issue because stores would be punished for violations, including the loss of their license to sell any tobacco. Others have suggested that minors should be held accountable by making possession and use of tobacco illegal. The effects of these different options need further evaluation.

The interpretation of the findings of

this study should be considered in light of several potential design limitations. First, the design did not allow a test of the independent effects of education and enforcement. Thus, it is unclear whether enforcement alone would have achieved the same outcomes. Second, a truer cross section of merchants would have been obtained if sampling occurred on several different days and times. Third, the absence of data from some stores at the three data collection points may limit the conclusions derived, although statistical analysis of potential differences was not significant.

The results of this study illustrate the complexity of the problem regarding access to tobacco products by underage youth. An over-the-counter sales rate of 21% still provides minors with access to tobacco, although it is possible that this level of sales may serve as an effective impediment to minors who are not yet addicted or who are contemplat-

ing use of tobacco or are already in the early stages of use. Unfortunately, there are virtually no data on the relationship between reductions in tobacco access and youth smoking prevalence. In the case of alcohol, however, there is a moderate amount of literature on the effects of raising the minimum age of purchase, alcohol availability, and prohibition of consumption.¹⁴⁻¹⁶ Although this study demonstrated that active enforcement of sales-to-minors laws is an effective and viable way to reduce sales of tobacco products to minors, the most fundamental question has yet to be answered -- what effect does decreased access by underage youth have on their use of tobacco?

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care and outcomes, increase efficiency and effectiveness, and inform mental health and health care policy.

Continuing Oversight: Role of the Interagency Council

A sustained effort is required to address the complex factors that cause and prolong homelessness among people with severe mental illnesses. Therefore, we have recommended, and the Interagency Council on the Homeless has agreed, that the

Council will develop, within 60 days from the issuance of this report, a plan for monitoring and tracking the completion of each of the Federal action steps outlined in the report and for identifying new opportunities to assist States and localities in meeting the needs of their homeless mentally ill citizens.

Additionally, a committee of the Council, working closely with NIMH and other agencies, will be constituted to provide integrated Federal leadership and oversight to address the needs of homeless severely mentally ill people on an ongoing basis.

Impact of a Local Ordinance Banning Tobacco Sales to Minors

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Synopsis

Most addictions to tobacco begin when a person is younger than age 18. Although the sale of tobacco to minors is illegal in most jurisdictions,

there is often little enforcement of these laws, and minors can usually purchase tobacco easily.

The impact of a local ordinance designed to prevent tobacco sales to minors was assessed by surveys of 10th grade students before and after the implementation of the ordinance.

Tobacco use declined from 25.3 percent to 19.7 percent overall, with a significant ($P=0.004$) decline from 26.4 percent to 11.5 percent among girls. There was also a significant ($P=0.008$) increase from 29.3 percent to 61.5 percent in the proportion of students reporting they were asked for proof of age when they attempted to purchase tobacco. Local ordinances may be an effective tool for reducing tobacco use by adolescents.

The age at which the use of tobacco begins is a critical variable in targeting prevention efforts. Unfortunately, tobacco use often begins during early adolescence and appears to be occurring at younger ages among more recent birth cohorts, especially among girls (1).

Although 43 States and the District of Columbia have laws prohibiting the purchase of tobacco by minors (2), it has been documented that such laws often have little or no effect and that purchase of tobacco by minors occurs often (3,4). In a recent survey by the Inspector General of the U.S. Department of Health and Human Services, two-thirds of State health department officials indicated that there is virtually no enforcement of their State law. What enforcement exists is typically of local ordinances (5). Everett, WA, is one city that has implemented a local ordinance designed to reduce access to tobacco by adolescents under age 18.

Surveys of 10th grade students in a local high school suggest that the ordinance may be having a positive effect.

Methods

In November 1988, the Snohomish Health District Board recommended to all cities within the district that a model ordinance be adopted with the objective of reducing access of minors to tobacco. The city of Everett (population 66,740) adopted the ordinance in the spring of 1989, with an implementation date of January 1, 1990. The delay in implementation provided an opportunity for a survey to be conducted in the local high school.

In October 1989, and again in October 1990, a one-page questionnaire was distributed to 10th grade students at the high school. This grade level was used because anecdotal information suggested

Table 1. Tenth grade students reporting regular tobacco use, Everett, WA, 1989 and 1990

Responder group	1989 Users		1990 Users		P value
	Number	Percent	Number	Percent	
Ages 14-15.....	31	22.0	29	14.2	0.08
Ages 16-17.....	25	31.3	26	34.7	0.7
Boys ¹	25	22.8	39	27.8	0.5
Girls ¹	29	26.4	16	11.5	0.004
All.....	56	25.3	55	19.7	0.16

¹ Two users in 1989 did not report their sex.

Table 2. Sources of tobacco products reported by tenth grade students, Everett, WA, 1989, 1990

Source	51 1989 Responders		53 1990 Responders		P value
	Number	Percent ¹	Number	Percent ¹	
Store.....	42	82.4	40	75.5	0.5
Vending machine..	8	15.7	13	24.5	0.4
Friend.....	16	31.4	28	52.8	0.04
Stealing.....	6	11.8	9	17.0	0.6
Other ²	3	5.9	5	9.4	0.7

¹ Percentages add to more than 100 because multiple responses to question were allowed.

² Other source most frequently specified was parent.

Table 3. Tenth grade students asked for proof of age when they attempted to buy tobacco products at stores, Everett, WA, 1989 and 1990

Age group (years)	1989		1990		P value
	Number ¹	Percent ²	Number ¹	Percent ²	
14-15.....	³ 20	35.0	20	65.0	0.11
16-17.....	21	23.8	³ 19	57.9	0.06
All.....	41	29.3	39	61.5	0.008

¹ Number attempting to buy tobacco.

² Percent asked for proof of age.

³ Response missing for one 15-year-old in 1989 and for one 16-year-old in 1990.

that a substantial proportion of students in 10th grade use tobacco, most are younger than age 18, and most have not yet dropped out of school. Response to the questionnaire was anonymous, and no individual student's answers could be identified. One set of questions was asked of all students. Separate questions were added only for those who identified themselves as regular (once a week or more) users of any tobacco product. The questionnaire was completed voluntarily by all students present on the day it was distributed.

Data from the questionnaire were analyzed by a microcomputer program (A) using contingency table analyses. Chi-square values with continuity correction were used to assess the probability (two-tailed) of chance occurrence of differences in

proportions. There were no special State or school-based anti-tobacco campaigns, increased tobacco taxes, or other recognizable occurrences that might have affected this high school population during the period of the study.

The Everett ordinance (available upon request from the author) contains several provisions.

- a requirement that a sign indicating that sale of tobacco to persons younger than age 18 is illegal be posted at all points of retail sales,
- tobacco vending machines can be located only in areas where they are not accessible to minors,
- proof of age is required of any person attempting to purchase tobacco if he or she is not clearly older than age 18,
- a local license is required for all vending machines as well as any over-the-counter sales of tobacco products, and
- violations will result in suspension and revocation of the license, civil penalties, or both.

During the spring of 1990, all retail sales sites in Everett were identified and notified of the ordinance. Licenses and signs for posting were issued through the Everett Department of Licensing. Active enforcement began in July 1990, with one person having responsibility for enforcement of the ordinance. Snohomish Health District food establishment inspectors reported any infractions to the Everett Department of Licensing.

Results

There were 221 usable responses to the 1989 survey, representing 70.6 percent of the enrolled 10th grade population in the high school and 279 responses in 1990, representing 82.3 percent. In 1989, 2.9 percent of the responses were not used, either because the student was age 18 or older or the answers given were obviously fraudulent. Non-usable answers amounted to 2.2 percent in 1990. The lower response rate in 1989 was due to one class of students being away on a field trip on the day the questionnaire was distributed.

In 1989, 2.7 percent of 1990 responders were age 14, 61.2 percent were age 15, 30.1 percent were age 16, and 5.9 percent were age 17. In 1990, 0.7 percent were 14, 72.4 percent were 15, 23.7 percent were 16, and 3.2 percent were 17. For most analyses, students were grouped as ages 14-15 and 16-17.

Table 1 shows the proportions reporting regular tobacco use for 1989 and 1990 by age and sex

groups. While there was an overall reduction in use, this change was not statistically significant. The reduction in use among students ages 14-15 years, however, was of borderline significance and among girls, was significant.

There was no clear change in the types of tobacco used most often between 1989 and 1990, with cigarettes being most common. In 1989, cigarettes were used by 77.8 percent, followed by chewing tobacco (14.8 percent), and snuff (7.4 percent). In 1990, it was cigarettes 75.9 percent, chewing tobacco 18.5 percent, and snuff 5.6 percent. Only one female respondent reported using a tobacco product other than cigarettes.

Table 2 indicates the various sources of tobacco identified by tobacco users in each year. In general, there was a tendency in 1990 toward less use of stores and more use of vending machines, friends, and theft as sources of tobacco. Among these sources, the only significant change between 1989 and 1990 was that of use of friends as a source.

In both years, a great majority of students indicated that they believe a person can become addicted to tobacco (93.6 percent in 1989 and 96.0 percent in 1990). There was, however, a substantial change in the proportion of students who agreed that it should be illegal to sell tobacco to persons younger than age 18. In 1989, 60.3 percent of 14-15-year-olds and 41.3 percent of 16-17-year-olds so agreed. In 1990, that increased to 66.5 percent of the 14-15 group and 52.8 percent of the 16-17-year-olds. For all ages, agreement that sale of tobacco to minors should be illegal increased between 1989 and 1990 from 53.6 percent to 62.8 percent ($P=0.05$).

Among all tobacco users, there was an increase between 1989 and 1990 in the proportion that indicated that they had been asked for proof of age when attempting to purchase tobacco. When this analysis was restricted to users who indicated that they purchased tobacco from a store (table 3), the increase between 1989 and 1990 in requests for proof of age was significant. As would be expected, younger students were more often asked for proof of age than older students.

Discussion

Aggressive community education efforts to reduce sales of tobacco to minors can be partially successful, even in the absence of implementation and enforcement of a local ordinance (3). Education is, of course, an important component of the implementation of a new local ordinance, and such

education, particularly of tobacco retailers, may play as large a role as the threat of civil penalties or suspension or revocation of a license in producing the desired reduction of sales to minors.

Our evidence, however, suggests that a local ordinance with enforceable provisions may have an important impact on the purchase and use of tobacco by adolescents. The findings also suggest that further measures may be of use, including placement of all tobacco products behind counters to prevent theft, banning of tobacco vending machines, and raising the legal age for purchase to age 19. The last measure might assist in reducing the availability of tobacco from high school friends, since a legal age of 19 would mean that very few high school students could purchase it legally.

This study further suggests that younger students in particular and all girls in general may be affected more strongly by knowledge that sale of tobacco to minors is illegal and that enforcement of the law is likely. We found no evidence that boys overall or students ages 16-17 reduced their tobacco usage, although the attitudes of these groups regarding tobacco sales to minors did appear to change, and they were asked more often for their age when attempting purchase. Perhaps it is not surprising that adolescent boys and older adolescents may be less influenced by concerns about illegal activities than are girls and younger teens. Additional provisions, such as those suggested previously, may be necessary to achieve a significant impact on tobacco use by boys and older adolescents.

National surveys indicate that there is strong public support for regulation of minors' access to tobacco products (6). Sustained efforts, such as an ordinance, may be necessary to maintain long-term reductions in sales to minors (7).

The achievement of a smoke-free society in the year 2000 will take efforts at all levels of society, not the least important of which is the local community level. An ordinance, such as the one enacted and implemented by the city of Everett, can assist a community in establishing an environment in which it is clear that tobacco use is not desirable, particularly for adolescents. It could also reinforce the educational messages that children receive in schools regarding tobacco and other drug use.

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Evaluation of an Enforcement Program to Reduce Tobacco Sales to Minors

ABSTRACT

Objectives. This study evaluated an active enforcement program to increase retailers' compliance with the law prohibiting tobacco sales to minors.

Methods. Tobacco sales to minors were monitored in 319 outlets in 6 pairs of communities in Erie County, New York. One community in each pair was randomly assigned to an enforcement intervention.

Results. Retailers' compliance with the law increased from 35% in 1994 to 73% in 1995. However, the change in compliance rates was roughly the same for stores in the enforcement and nonenforcement communities.

Conclusions. Active compliance checking of retail outlets as a strategy to reduce illegal tobacco sales to minors may only be necessary insofar as it contributes to an increase in retailers' perception that the threat of enforcement is real. (*Am J Public Health*, 1998;88:932-936)

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Introduction

All states have laws prohibiting the sale of tobacco products to young people.¹ Despite such laws, it is generally easy for minors to purchase cigarettes. Previous research has shown that merely educating retailers about the law has little long-term impact on reducing tobacco sales to minors.²⁻⁴ Yet enforcement efforts are not widespread because communities typically have limited funds, time, manpower, and commitment for such activities.⁵⁻⁷

In New York State, it is illegal to sell tobacco to persons younger than 18 years, and stores are required to ask customers who appear to be younger than 25 years for proof of age. Penalties range from a \$100 fine to a 1-year license suspension. Enforcement of the law is the responsibility of county health departments, yet no funds are earmarked for compliance checks. Most county health departments in the state have therefore chosen not to mount aggressive programs to enforce the law.

This situation offered an opportunity to evaluate the cost and effectiveness of an active enforcement program to increase retailers' compliance with the law prohibiting tobacco sales to minors. Although compliance checks of retail outlets are generally considered a crucial element of programs to prevent tobacco sales to minors, few studies of such programs have been done.⁸⁻¹⁰ Moreover, it is not clear how often stores in a community must be checked to achieve an acceptable level of compliance.

This paper reports the results of an experimental study of an active enforcement program conducted in Erie County, New York. The study was designed to address 2 questions: What is the effect of an active enforcement program on getting retailers to request proof of age from underage customers who attempt to purchase tobacco? What effect does varying the frequency of enforcement checks of stores have on retailers' checking customers for age identification?

Methods

Study Design and Setting

The study involved monitoring tobacco sales to minors in all tobacco-selling retail outlets in 6 pairs of communities in Erie County, New York, between September 1994 and November 1995. Communities were matched on the basis of the socioeconomic characteristics of the population and number of tobacco-selling retail outlets. Two of the pairs, Amherst-Lancaster/Depew and Orchard Park-Clarence, represent typical middle-class and upper-middle-class suburban towns; 2 other pairs, Cheektowaga-Kenmore/Tonawanda and West Seneca-Hamburg, include large blue-collar populations; and the last 2 pairs, Eden-East Aurora and Springville-Elma, are small rural communities. One community in each pair was randomly assigned to an active enforcement program that involved enforcement checks by local police authorities; checks were not conducted in stores located in nonenforcement communities. Many of the 12 communities bordered each other. However, each community has well-defined geographic boundaries and its own police services; therefore, there was no overlap in enforcement activities between communities assigned to the enforcement and nonenforcement conditions.

Any store caught selling tobacco to a minor during an enforcement check was reported to the health department and fined. To evaluate the effect of varying the number of enforcement checks on compliance with the law, stores in enforcement commu-

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nities were randomly assigned to receive 1, 2, or 3 enforcement checks over an 8-month period from March through October 1995. Pre- and postintervention checks were conducted to measure the effect of the enforcement program on tobacco sales to minors.

In the summer of 1994, telephone books and various business lists were used to compile a list of tobacco-selling retail outlets for each study community. Stores that were no longer in business were identified during an initial round of compliance checks in fall 1994 and were struck from the list. We excluded bars and private work sites from our study on the assumption that minors generally do not attempt to purchase cigarettes at these sites.¹¹ We also excluded locations that sold cigarettes exclusively from vending machines, because there were so few. We thus restricted our analysis to retail outlets that sold tobacco products over the counter.

Pre- and Postintervention Compliance Checks

A baseline measure of retailer compliance with the law prohibiting tobacco sales to minors was obtained for stores in both enforcement communities and nonenforcement communities during fall 1994, before the first round of enforcement checks. A follow-up assessment was conducted in fall 1995, after the final round of enforcement checks had been conducted.

The first round of compliance checks included a total of 336 stores in the 12 study communities. During the follow-up assessment, checks were completed in 319 (95%) of these stores. Of the 17 stores for which a second round was not done, 11 had gone out of business, 5 had changed owners, and 1 had stopped selling tobacco products. The number of stores for which follow-up was not possible was similar for the enforcement and nonenforcement communities. The analyses presented here are based on the 319 stores that underwent both pre- and postintervention compliance checks. There were 171 outlets in the active enforcement group and 148 in the nonenforcement group.

The compliance checks followed a standardized protocol. A group of 23 adolescents aged 15 to 17 years conducted the checks under the direction of research staff at Roswell Park Cancer Institute. Some minors who were involved in the compliance checks also conducted enforcement checks. The minors who participated were first trained at a seminar where the procedures for conducting compliance checks were explained. Their parents were sent a letter outlining the purpose of the study, and they were required to

sign a consent form giving their child permission to participate in the project.

Most checks were done on the weekend or during the week after school hours. The minors were instructed to wear their usual dress and not to carry age identification. Adult volunteers or research staff drove the minors to preassigned stores. Upon entering a retail outlet, if there was a self-service display, the minor took a pack of cigarettes from the display and put it on the counter. If there was not a display, the minor asked the clerk for a pack of Marlboro, Camel, or Newport brand cigarettes. If the clerk asked the minor's age, he or she responded truthfully. If the clerk asked to see age identification, the minor replied that he or she had none. If the clerk rang up the sale without asking for age or age identification, the minor told the clerk that he or she did not have the money to pay for the cigarettes and left the store. The minors did not purchase cigarettes during the compliance checks because a previous study had shown that the method of measuring retailer compliance outlined here yields almost identical results.¹²

Following an attempted purchase, the minor returned to the car and reported the clerk's sex and approximate age and whether the clerk had requested age or age identification. The adult driver then entered the store to observe and record information about the type of tobacco displays and any signage about the law present in the store.

In the first round of compliance checks, stores were checked 1 time. In the second round, an effort was made to check each store 3 times, using a different teenager for each check. In an attempt to reduce any bias in compliance rates resulting from the varying characteristics of the minors used to conduct checks, the same 3 minors were used to conduct all compliance checks in paired enforcement and nonenforcement communities. Ninety-eight percent of the stores were checked 3 times, and 2% were checked twice. A total of 1241 compliance checks were conducted and used in this analysis.

Intervention

In the 6 enforcement communities, police agencies hired minors 14 to 16 years of age to perform enforcement checks; the researchers reimbursed the agencies for the costs associated with conducting enforcement checks. The minors visited stores and attempted to purchase cigarettes. Stores that sold tobacco to an underage operative were immediately informed in person by a police officer that they had violated the law and that the county health department would impose a fine. Store owners had the option of paying

the fine or requesting a hearing. Stores that refused to sell cigarettes to a minor were sent a congratulatory letter informing them that they had passed the inspection.

Police authorities conducted a first round of enforcement checks in March and April 1995; all stores in the 6 enforcement communities were checked during this round. A second round of checks was conducted in July and August 1995. During this round, and during a final round in October and November 1995, police were asked to check stores either 2 times or 3 times, according to a predetermined random assignment. However, police in 3 of the 6 enforcement communities did not adhere to the schedule. In 1 community, police checked about half the stores more often than assigned; in the 2 other communities, they checked the stores less often than assigned.

The number of enforcement checks performed breaks down as follows: 51 stores were checked 1 time, 46 were checked 2 times, 54 were checked 3 times, and 20 were checked 4 times, for a total of 385 checks. Forty-four stores were fined for violating the law; 1 store was fined twice. Four of the 44 stores requested a hearing by the county health department to challenge the fine. None of these challenges were successful. Overall, the fines yielded \$4600 in revenue for the county. Expenses incurred to conduct the enforcement program totaled \$23 000: \$15 750 for contracts with local police authorities to conduct compliance checks, \$2175 for the county to mail information to merchants about the law, and \$5075 for administrative costs for the county health department. If the fine revenue is subtracted from the cost of the program, the average net cost of the enforcement was \$48 per enforcement check.

To ensure uniform knowledge of the law among merchants in enforcement communities and those in nonenforcement communities, the county health department sent a warning letter to all stores in Erie County licensed to sell tobacco in December 1994. The letter reminded store owners about the law and warned that random enforcement checks were planned. The enforcement program, called Operation Protect Kids, was also announced at a press conference the health department held in January 1995. The program was presented as a countywide effort, even though enforcement efforts were planned only for the 6 active enforcement communities. In addition to these efforts by the health department, police departments often issued press releases about the program before enforcement checks, as well as releases identifying stores that had been caught violating the law.

Survey of Retailers

In February and March 1996, a telephone survey of retailers was conducted to determine retailer awareness of and response to the enforcement program. In these 5-minute calls, merchants were asked whether they were aware of police sting operations to crack down on the illegal sale of tobacco products to minors, and whether they believed that stores in the county had become more vigilant in the past year in asking customers purchasing tobacco products for age identification.

Surveys were attempted only for stores whose telephone numbers were listed in the telephone book. Of the 319 stores in the study, telephone numbers were identified for 193 (61%). The remaining stores were not listed. Telephone surveys were completed for 174 stores (90%); the other 19 refused to participate. The participation rate for stores in the enforcement communities (87%) did not differ significantly from the rate for stores in the nonenforcement communities (95%).

Analysis

We used 2 analytic approaches to evaluate the effect of the active enforcement program on retailer compliance with the minors' access law. First, we performed a permutation test contrasting the change in the pre- and postintervention compliance rates for the enforcement and nonenforcement communities. Second, to adjust for uncontrolled factors that might influence a store's compliance with the law and to take into account the clustered repeated measures design, we performed a logistic regression analysis with the statistical software package SUDAAN.¹³ The SUDAAN software computes standard errors that take into account the multiple sources of correlation between measures obtained from the same stores over time and between stores within the same community. Standard errors computed with SUDAAN will be inflated relative to standard errors that assume independence among observations; hence, this approach provides a more conservative test of the statistical significance of the enforcement program and other independent variables on retailer compliance. The regression analysis used the following variables to model a store's compliance with the law: study condition (active enforcement or no enforcement); year of the compliance check (1994 or 1995); type of retail outlet (supermarket, small food/convenience store, gas station/convenience store, or pharmacy); signage about the law (i.e., state-mandated sign displayed or not); sex, age, and race of the

minor; and sex and approximate age of the store clerk.

We also used SUDAAN's logistic regression procedure to test the effects of varying the number of enforcement checks on compliance rates for the stores in the 6 enforcement communities. We divided the stores in the enforcement communities into 3 groups: stores that were checked once, stores that were checked twice, and stores that were checked 3 or more times.

In analyzing retailers' responses to questions in the telephone survey, we examined the stores in the enforcement communities separately from the stores in the nonenforcement communities. We used the chi-square statistic to test for differences in responses by the 2 groups of owners/managers.

Results

The baseline compliance rate for the 6 enforcement communities was 36%; this rate is comparable to the baseline rate of 35% for the nonenforcement communities. The follow-up compliance rates for the 2 groups of communities were 74% and 72%, respectively; measured either by the permutation test ($P = .97$) or by logistic regression analysis (odds ratio [OR] = 1.2; 95% confidence interval [CI] = 0.5, 2.6), the difference in the 2 rates was not significant. Compliance rates at follow-up were nearly identical for the 44 stores that had been fined for selling tobacco to a minor (70%) and the 275 that had not been fined (73%).

As shown in Table 1, the logistic regression analysis revealed no significant difference between the enforcement and nonenforcement communities. Overall, minors were 5.8 times more likely (95% CI = 3.2, 10.5) to be asked for age identification during the follow-up compliance checks than during the baseline checks. Clerks were less likely to ask older minors than younger minors about their age, and younger clerks were somewhat less likely than older clerks to ask minors for proof of age.

The logistic regression analysis revealed that clerks in stores that were checked twice asked the minor for age identification 1.8 times more often than did clerks in stores that were checked only once (95% CI = 1.0, 3.3). Clerks in stores that were checked 3 or more times asked the minor for age identification 2.1 times more often than did clerks in stores that were checked only once (95% CI = 1.1, 4.0).

Reported awareness of the sting operation by law enforcement agencies was nearly universal for store owners/managers in both enforcement and nonenforcement

communities (i.e., both > 90%). Respondents in both groups agreed overwhelmingly that stores in Erie County had become more vigilant in asking customers for proof of age when selling tobacco products. The reasons the owners/managers mentioned most frequently were fear of being fined or losing their license, public pressure, and concern that smoking poses a health risk. Again, the 2 groups' responses did not differ significantly.

Discussion

The data show a dramatic increase in compliance with the law by stores in both the enforcement and the nonenforcement communities. However, the compliance rate for stores in enforcement communities following the enforcement program did not differ significantly from that for communities in which no enforcement checks had been conducted. In enforcement communities, the frequency of compliance checks performed was associated with increased compliance with the law. However, this effect was small in comparison with the overall change in compliance rates observed for all stores between baseline and follow-up.

In its failure to show a benefit for active enforcement at retail outlets, this study contrasts with most earlier studies.^{7,14,15} Contamination from publicity about the enforcement program and the resulting widespread awareness among retail store owners/managers in the study communities may be the reason. The survey of retail outlets revealed that awareness of the sting operation was nearly universal for stores in both enforcement and nonenforcement communities. As mentioned earlier, before the enforcement checks were begun, the health department sent all stores in the county a letter about the law, warning that random checks would be performed. The enforcement program also received widespread publicity in the local print and broadcast media. Many of the store owners/managers in both groups of communities belonged to the same business and trade associations, and some worked for the same company, which may have contributed to the high level of awareness about the enforcement program throughout the county.

The enforcement program also coincided with publicity about the Food and Drug Administration's (FDA's) proposed regulations to curb adolescent smoking and prevent illegal tobacco sales to minors.¹⁶ President Clinton's August 1995 announcement and the resulting media attention may have

TABLE 1—Percentage of Minors Asked for Age or Age Identification, by Each Independent Variable, and Results of Multiple Logistic Regression Modeling Retailers' Compliance with the Law: Erie County, New York, Fall 1994 to Fall 1995

	% Asked for Age	Logistic Regression Results	
		Odds Ratio	95% Confidence Interval
Study condition			
Nonenforcement	62.7	1.0	Referent
Enforcement	64.8	1.2	0.5, 2.6
Sex of minor			
Male	55.9	1.0	Referent
Female	76.2	1.0	0.3, 3.4
Age of minor, y			
15	83.4	1.0	Referent
16	63.4	0.6	0.1, 2.5
17	57.9	0.3	0.1, 1.2
Race of minor			
White	70.9	1.0	Referent
Black	45.4	0.9	0.2, 4.2
Hispanic	63.0	1.5	0.4, 5.9
Type of store			
Supermarket	62.2	1.0	Referent
Small food/convenience	65.6	1.2	0.7, 2.0
Gas/convenience	60.0	0.9	0.6, 1.5
Pharmacy	70.9	1.5	0.7, 3.1
State sign posted			
No	55.4	1.0	Referent
Yes	65.5	1.3	0.9, 1.7
Year of check			
1994	35.1	1.0	Referent
1995	73.1	5.8	3.2, 10.5
Age of clerk, y			
≤ 20	58.6	1.0	Referent
21–35	64.1	1.9	1.5, 2.5
≥ 36	68.4	1.9	1.2, 2.9
Sex of clerk			
Male	61.8	1.0	Referent
Female	65.2	1.2	0.9, 1.7

Note. A total of 1241 compliance checks were used in the analysis.

prompted store owners/managers to take steps to curb illegal tobacco sales to minors.

Actions by the tobacco industry may also have influenced compliance with the law. At about the same time that the FDA announced its proposed regulations, the tobacco industry, working in collaboration with retailer trade associations, sent retailers information about tobacco sales to minors. Seventy-seven percent of store owners/managers in the active enforcement communities and 87% in the nonenforcement communities reported receiving such information in the past year.

Although contamination of our control communities may have negated our ability to judge the effectiveness of an active enforcement program on retailer compliance, it is our impression that active compliance checking of retail outlets does contribute to improved compliance by strengthening the perception of store owners/managers that the threat of

enforcement and the consequences of violating the law are real and imminent. Previous research has shown that without enforcement, simply educating retailers about the law has little long-term impact on reducing tobacco sales to minors,²⁻⁴ but that when merchant education is combined with actual enforcement of the law, sales to minors can be dramatically reduced.^{7,14,15} However, it cannot be determined from this study whether compliance checking or the publicity surrounding the enforcement initiative had the greater effect on changing retailers' practices with regard to tobacco sales to minors on a communitywide basis. □

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ABSTRACT

Objectives. This study compared the impact of educational and enforcement interventions on retailers' sale of tobacco to minors in Central Harlem, New York.

Methods. In a randomized trial with repeated measures, 152 stores were randomly divided into control, education, and enforcement groups.

Results. Overall tobacco sales to 12- and 13-year-old minors at baseline (98%) were among the highest in the nation. At 6-month and 1-year follow-ups, decreases in rates of tobacco sales to minors were modest among education stores and substantial among enforcement stores.

Conclusions. Effective reduction of tobacco sales to minors may require ongoing enforcement measures, including fines for retailers who violate state and local laws. (*Am J Public Health*. 1998;88:936-939)

Laying Down the Law: Reducing Illegal Tobacco Sales to Minors in Central Harlem

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Introduction

Tobacco is the nation's leading cause of preventable death and disability and is responsible for more than 400 000 deaths each year.¹ Tobacco use has been termed a "pediatric disease" by the Food and Drug Administration commissioner,² because approximately 90% of all initiation of tobacco use occurs among persons 18 years of age or younger.³ Initiation of smoking at younger ages is associated with a longer duration of smoking and an increased likelihood of nicotine dependence.⁴ A goal of *Healthy People 2000* is to reduce roughly by half the use of tobacco products by children and adolescents by the year 2000.⁵ Recent data, however, indicate that tobacco use has been increasing among the young.⁶ Reducing tobacco use among youth has become a major national priority.⁷

One approach to prevention and control of tobacco use in youth is to restrict sales of tobacco products to minors. All 50 states have laws prohibiting sale of tobacco products to minors (usually defined as those less than 18 years of age),⁶ and the Food and Drug Administration has proposed that 18 years be established as the federal minimum age of purchase of tobacco products.⁸

Numerous studies have indicated that adolescents have little difficulty purchasing tobacco products.⁹⁻²⁸ A 1994 surgeon general's report, *Preventing Tobacco Use among Young People*,³ cited 13 published studies that examined over-the-counter sale of cigarettes to minors from 1989 to 1993.¹⁶⁻²⁸ The baseline sales rates ranged from 32%²⁴ to 87%.^{26,27}

Little is known about the relative efficacy of educational vs enforcement interventions to enhance the compliance of merchants with laws prohibiting tobacco sales

to minors. The purpose of this randomized trial was to compare the impact of an educational visit to tobacco retailers with that of an enforcement strategy in which retailers found to have sold tobacco to a minor were fined in accordance with the law.

Methods

A section of central Harlem (New York City) with boundaries from 110th St to 158th St and Fifth Ave to Morningside Ave was selected as the target for this study. Central Harlem is a predominantly African-American community with relatively high rates of poverty, morbidity, and mortality.²⁹ Within this region, 181 stores possessed licenses to sell tobacco. These stores were randomly assigned to 1 of 3 intervention categories: control, education, or enforcement. Twenty-nine stores that closed or that discontinued cigarette sales during the study period were excluded from the analysis. The 152 eligible stores were categorized as bodegas (convenience stores) (78%), supermarkets (12%), delicatessens (5%), and smokeshops (5%). There were no statistically significant differences between bodega

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A systematic review of interventions for preventing tobacco sales to minors

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Abstract

Objective—To assess the effectiveness of interventions to reduce underage access to tobacco by deterring shopkeepers from making illegal sales.

Method—Systematic literature review.

Data sources—The Cochrane Tobacco Addiction group specialised register and Medline. Studies of interventions to alter retailer behaviour were identified. The terms used for searching combined terms for smoking and tobacco use with terms for minors, children or young people, and retailers, sales or commerce.

Study selection—Studies in which there was an intervention with retailers of tobacco, either through education about, or enforcement of, local ordinances. The outcomes were changes in retailer compliance with legislation (assessed by test purchasing), changes in young people's perceived ease of access to tobacco products, and changes in smoking behaviour. Controlled studies with or without random allocation of retail outlets or communities, and uncontrolled studies with pre- and post intervention assessment, were included.

Data extraction—Two reviewers assessed studies for inclusion. One extracted data with checking by the second.

Data synthesis—The results were synthesised qualitatively, with greater weight given to controlled studies. Thirteen of 27 included studies used controls.

Results—Giving retailers information was less effective in reducing illegal sales than active enforcement and/or multicomponent educational strategies. No strategy achieved complete, sustained compliance. In three controlled trials, there was little effect of intervention on youth perceptions of access or prevalence of smoking.

Conclusions—Interventions with retailers can lead to large decreases in the number of outlets selling tobacco to youths. However, few of the communities studied in this review achieved sustained levels of high compliance. This may explain why there is limited evidence for an effect of intervention on youth perception of ease of access to tobacco, and on smoking behaviour.

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Keywords: smoking prevention; sales to minors; young people; systematic review

Controlling access is an established strategy for reducing consumption of substances harmful to health, in particular tobacco, alcohol, and illicit drugs. Of adolescents who try smoking more than a third become daily smokers in secondary school.¹ Successful restriction of young people's access to tobacco products could help prevent them from developing this addiction. Accordingly, many countries prohibit tobacco sales to minors.

Although young people perceive difficulties in obtaining cigarettes as a deterrent to tobacco use,² poor compliance with access laws is well documented.³ In most surveys, underage young people report little difficulty when illegally purchasing cigarettes.⁴⁻⁶ In the USA a 1998 survey found that 90% of 10th grade students (ages 15-16 years) would find it "fairly easy" or "very easy" to get cigarettes.⁹ In a 1997 survey, 30% of high school smokers reported cigarette purchase in the previous month, of whom less than a third had been asked for proof of age.¹⁰ In England a 1996 survey suggested that 25% of all secondary school children had tried to buy cigarettes in a shop in the last year. Only 38% had been refused at least once.¹¹

Furthermore, commercial sources of tobacco are not the only way in which young people obtain products.³ They may also get cigarettes from parents, siblings, friends, and by theft. Reducing access to commercial sources could lead to increased use of such sources. In determining policy it is important to know both how best to restrict access, and the likely effect of successful restriction on youth tobacco consumption.

Objective

The aim of this review was to assess the effectiveness of reducing underage access to tobacco products by deterring shopkeepers from illegal sales. We asked three questions:

- (1) Does intervention with retailers, by education, active enforcement of laws, or combinations of strategies lead to decreased sales to minors? Is there evidence that any of the strategies is superior to the others?
- (2) Do reduced sales of tobacco to minors lead to a decrease in their self reported ease of access?
- (3) Do reduced sales of tobacco to minors reduce prevalence of tobacco use?

Data sources

We used the Cochrane Tobacco Addiction Group specialised register which has been developed by systematic sensitive searches of

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Medline and PsycLit and handsearching of journals, including *Tobacco Control*. We looked for studies involving restrictions on sales to minors or sales from vending machines, and interventions with retailers related to compliance with legislation. We searched Medline for any other controlled or uncontrolled evaluations. The search strategy is specified in an additional table on the Web site.

Study selection

TYPES OF STUDIES

We considered studies of measures to improve compliance with laws restricting youth access to retail sales of tobacco, using one of these study designs:

- (1) Controlled trials randomising retail outlets, communities or geographical regions.
- (2) Controlled trials without randomisation allocating retail outlets, communities or geographical regions.
- (3) Time series studies.
- (4) Uncontrolled before and after studies.

We excluded uncontrolled studies with post intervention measurements only.

TYPES OF PARTICIPANTS

We evaluated strategies which targeted retailers to reduce tobacco use by minors. Minors were defined by the legal age limit in the communities studied.

TYPES OF INTERVENTION

We considered education, law enforcement, community mobilisation, or combinations of strategies that aimed to deter retailers from selling tobacco to minors.

TYPES OF OUTCOME MEASURES

We considered the outcomes of:

- (1) Illegal tobacco sales, assessed by attempted purchase by young people.
- (2) Perceived ease of access to cigarettes by young people.
- (3) Prevalence of tobacco use among young people. We accepted self reports of tobacco use.

Data extraction

The review was conducted in four stages:

- (1) One reviewer prescreened reports for relevance.
- (2) Two reviewers assessed relevant studies independently. To be included they had to meet all the criteria listed above for study design, type of participant and intervention and outcomes assessed.
- (3) One reviewer extracted, and the second checked, data from included studies.
- (4) Studies were combined using qualitative narrative synthesis.

We chose narrative, rather than quantitative, synthesis because we expected heterogeneity in the study designs, type of interventions and outcomes measured.

Data synthesis

DESCRIPTION OF INCLUDED STUDIES

A table containing full details of each study including setting, design, intervention and outcomes is available on the *Tobacco Control* web site.

We identified 27 studies that met the inclusion criteria. Of these, 13 used some form of control group. In six studies the store was the unit of randomisation.¹²⁻¹⁸ One study identified the retailers who made illegal sales to minors at baseline.¹⁶ These retailers were then randomly allocated to receive a warning letter threatening prosecution, or no letter. One carried out test purchasing around one school and not around another.^{14, 20} Six studies compared interventions in different communities. Forster and colleagues' tobacco policy options for prevention (TPOP) study randomised 14 Minnesota communities after stratification on baseline variables.²¹⁻²³ Altman and colleagues allocated two pairs of Monterey communities on the basis of a coin toss.²⁴ Cummings and colleagues assigned six matched pairs of communities to intervention or control status; within the intervention communities the stores were randomly allocated to different schedules of enforcement checks.¹³ The other three community studies in Massachusetts,²⁵ San Diego^{26, 27} and Sydney, Australia²⁸ compared the intervention communities with a control community in which similar baseline and follow up assessments were conducted, but without random assignment. In Massachusetts,²³ intervention communities were those in which active enforcement of tobacco sales regulations was intended. The control communities were not planning active enforcement, although by the end of the study some enforcement was being conducted.

The remaining uncontrolled studies compared rates of illegal sales or smoking behaviour before and after an intervention. In some, only the outlets that allowed purchase at baseline were followed up. In Ontario, Canada, a series of interventions were implemented in neighbouring health units and the follow up ranged from two weeks to 21 months.²⁹ In Oregon, implementation occurred in eight communities at different time points.¹⁰

TYPES OF INTERVENTION

The main interventions were: education about legal requirements; notification of the results of compliance checks; warning of enforcement, and implementation of enforcement by police or health officials. Some studies tested different frequencies of enforcement activity, and different channels of information. In some the intervention included the introduction of new legislation or local ordinances such as a licensing system or a formal requirement for compliance checking.

The TPOP campaign in Minnesota aimed "to make tobacco access by youth a salient community issue, to change local ordinances . . . to change retailers' and other adults' practices . . . and to promote enforcement of tobacco age-of-sale laws". The campaign used a direct action community organising model so

communities differed in the specific ordinances introduced. These included an increased licence fee for tobacco outlets, penalties for the vendor and the clerk, a requirement for unannounced compliance checks, and bans on vending machines and self service displays. Other studies also included elements to raise community awareness and support.^{16 17 24}

26-28 30-35

In some studies, the intervention had to be modified because of local attitudes. Altman and colleagues were unable to bring about enforcement action because of legal concern about the use of "sting" operations and an unwillingness to prosecute clerks.²⁴

In most studies there was dissemination of information to retailers about their legal obligations, including reminders of the age at which purchase was legal, that proof of age should be required before sale, or that warning notices should be displayed. Usually this information was posted, but sometimes mass media channels were used.

OUTCOME ASSESSMENT

Twenty five studies assessed retailer compliance with the law using test purchasers. Most studies focused on "over the counter" sales but some also assessed ease of purchase from vending machines. Some distinguished between sales in shops with behind the counter or locked displays and self service.³⁶ One study³⁷ investigated vending machine purchases only.

Eight studies assessed the effect of an intervention on the smoking behaviour of underage youth. Five of these were controlled trials. Three assessed retailer behaviour as well,^{21 24 25} while one assessed only smoking behaviour.²⁸ One assessed smoking prevalence in both areas but retailer behaviour only in the intervention area.¹⁹ The three uncontrolled studies measured smoking behaviour before and after a change in enforcement practice. Two assessed retailer behaviour as well.^{32 33 38} Six studies also asked underage smokers where they obtained their cigarettes and how difficult it was to buy them.

EXCLUDED STUDIES

Two surveys have assessed the effect of the tobacco industry sponsored voluntary compliance programme "It's the Law".^{40 41} We did not include them because there was no baseline assessment of retailers before they joined the programme. The authors found no evidence that those participating in the scheme were less likely than other retailers to make illegal sales. Reasons for excluding three other studies^{42 44} are given in an additional Web table.

METHODOLOGICAL QUALITY OF INCLUDED STUDIES

As we considered a heterogeneity of study designs, we made no attempt at statistical meta-analysis. However, we gave greater weight in our synthesis to the three controlled studies that measured the behaviour of retailers and minors in the community.^{21 24 25} In uncontrolled studies, background secular change

may be incorrectly attributed to an intervention.

Although randomisation by community is a less biased method for assessing the effect of intervention, statistical analysis of such studies should address the issue of clustering of behaviour within communities. Clustering usually increases the required sample size.⁴³ Few of the included studies directly addressed this issue: another reason why formal meta-analysis could be misleading.

A further methodological concern is the measurement of outcome. In most studies compliance was judged by a single purchase attempt. However, when multiple purchase attempts were made, the estimates of compliance were lower when retailers were classified as non-compliant only if they never sold. Junck and colleagues¹⁴ found that compliance after intervention was 74% on the basis of a single purchase attempt at each store, but only 45% if three attempts were made. This bias may overestimate compliance rates in studies using only one purchase attempt. The age of the assessor also affects measurement of compliance. DiFranza and colleagues showed that 16-17 year olds were more successful than younger children, and girls were more successful than boys.⁴¹ Sales rates may also be underestimated if test purchasers act differently from true underage purchasers. All the studies which gave details noted that the youths engaged in testing were to state their true age if challenged, and to say that the cigarettes were for their own use.

Results

DOES INTERVENTION WITH RETAILERS LEAD TO DECREASED SALES TO MINORS?

Eleven controlled trials assessed the effect of an intervention on illegal sales, measured by compliance checks (table 1). Six found that intervention reduced the level of illegal sales compared to the control group.^{12 14 18 24 27}

Active enforcement was used in three of the successful interventions. In Chicago,¹² sales fell marginally in the month after all merchants who had sold cigarettes received a warning, but enforcement produced a much larger fall in sales rates. Media coverage of the study at one point during the follow up period caused a further substantial drop in sales in all groups. This study showed that two monthly enforcement visits were more effective than four and six monthly schedules, giving a sales rate of 19% in the final six months of the intervention. In Harlem¹⁴ enforcement produced a substantial decrease in sales, not found after an educational visit alone. However, the rate still fell only to 47%. In Massachusetts,²⁵ compliance rates improved from 35% to 82% in the intervention communities and from 28% to 45% in the control areas.

Three interventions without enforcement produced greater improvements in compliance than in control areas. Project Trust in San Diego^{26 27} used multicomponent community and retailer education with personal visits. Sales fell significantly between pre- and post-intervention measurement in four out of six

Table 1 Results from controlled trials

Studies	Objectives	Outcomes
Monterey: Altman <i>et al.</i> ¹ Community intervention with retailer education	Illegal sales	Proportion of successful purchases fell from 75% to 0% in intervention and from 64% to 39% in comparison communities. The difference was significant towards the end of the assessment period. Sales rate in intervention communities < 20% at final four assessments. Proportion of clerks asking for ID rose more in intervention communities.
Minnesota (TPOB): Forster <i>et al.</i> ¹⁻³ Comprehensive community intervention	Smoking behaviour	Cross sectional analyses of smoking behaviour (30 day tobacco use) found an effect on 7th graders which was not sustained to the end of study, but no significant effect in other grades. A longitudinal analysis of grade cohorts using generalised estimating equations found a significant effect favouring intervention communities only for the 7th grade. Females in intervention communities less likely to use tobacco post intervention than females in comparison communities.
	Perceived access Illegal sales	Intervention community 7th graders were less likely to report tobacco purchases at survey points 2 and 3, and 9th graders less likely to do so time 4. There was a decline in over the counter purchase success in all communities, from 36.7% to 3.1% in intervention, 41% to 8.8% for control. The net difference did not reach significance.
Massachusetts: Rigotti <i>et al.</i> ⁴ Enforcement compared to information alone	Smoking behaviour	Baseline prevalence marginally lower in intervention than control communities. Prevalence of all levels of smoking climbed sharply in control communities over the course of the study, the increase in the intervention communities was less pronounced. The difference in prevalence was only significant for daily smoking (-4.9%, 95% CI -9.0% to -0.7%). Effects were homogeneous across sex and grade. For daily smokers there was a non-significant trend towards greater effectiveness among younger students.
	Perceived access	Perceived availability from commercial sources was high in all communities but there was a small decline in intervention areas (79.8% to 77.2% rating as high). There was also a decline in proportions citing a commercial source for most recent cigarette and making a purchase attempt in last month in intervention versus an increase in control areas.
Gateshead, UK: Bagott <i>et al.</i> ^{5, 6} Enforcement (intended)	Illegal sales	There were no significant differences in baseline intervention and control compliance rates (35% and 28%). Compliance increased among the merchants in all communities but more rapidly in intervention than control according to a mixed effects model with adjustment for time point, type of store and type of sale. Most effects in first 6 months, with rise to > 70% compliance in intervention areas. Final compliance rates 82% in intervention and 45% in control areas.
	Smoking behaviour	There were significant differences between intervention and control communities at baseline and both follow ups, even after adjustment for age, sex, and ethnic group. The rate of current tobacco use rose slightly in the intervention communities but remained stable in controls, with borderline significance. No other measures of use changed differentially.
Sydney Australia 1995: Staff <i>et al.</i> ⁷ Retailer education and community awareness	Perceived access	Young people's self reported difficulty in buying cigarettes increased over time but there were no differences between the intervention and control groups. There were similar shifts in the sources of tobacco in the two groups with a reduction in the proportion buying their own in their community.
	Illegal sales	Only assessed as part of intervention—no sales made. No checks in control area.
Chicago: Jason <i>et al.</i> ⁸ Active enforcement with different scheduled frequency	Smoking behaviour	There were no significant changes in smoking prevalence. Regular smoking was more prevalent in the intervention school before and after.
	Perceived access	Few children reported being refused sales and there was no change over time. Over half of regular smokers bought cigarettes every day.
Eric County 1987: Skreiny <i>et al.</i> ⁹ Mailed education package	Smoking behaviour	In some school year sex subgroups there were significant changes in prevalence from baseline. In the intervention group, 2 were decreases and 3 increases. In the control group there were 2 increases. When logistic models were used there was only an indication of the effect of the intervention in year 7, the youngest students.
	Perceived access	Ease of purchase was rated as being greatest from vending machines (93% rated as easy or very easy) and lowest in supermarkets (60%). The proportion of males in the intervention area who rated purchasing from petrol stations as easy or very easy was significantly lower post intervention but no other significant changes were noted.
Eric County 1995: Cummings <i>et al.</i> ¹⁰ Enforcement (with different numbers of checks) compared to warning only	Illegal sales	Baseline sales rates were high and similar across all interventions and communities: 86-89% over 5 months. Sales decreased in all conditions following warning. For last 6 months of intervention, average sales rates were 19% in 2 month, 34% in 4 month, and 42% in 6 month condition. Publicity about the project caused a decrease in sales in all conditions in months 11/12, and this contributes to the low average rate in 2 month condition.
	Illegal sales	There were no significant differences in illegal sales between intervention and control groups (77% v 86%). 40% of intervention stores posted the warning signs provided, no control stores had warning signs.
Harlem: Gemson <i>et al.</i> ¹¹ Enforcement or education	Illegal sales	There were 44 violations/385 checks. Only one store fined twice. The baseline compliance rates were similar in enforcement (30%) and non-enforcement (35%) communities. Rates at follow up were 74% and 72% (difference NS). Rates were similar in stores that had and had not been fined. Significant change in asking for age ID from baseline. Lack of differential effect for enforcement may be due to the prior warning and widespread publicity about the sting operations in all communities. Also coincided with FDA's proposed regulations, and tobacco industry mailings.
	Illegal sales	Baseline sales were high; 70% sold loose and 98% sold loose or packet. No significant group differences at baseline. Control group showed no significant change over time. Both education and enforcement group sales declined from baseline to 6 and 12 months, but there was a clear benefit of the enforcement strategy (from 100% to 47% for any sale at 1 year).
New South Wales, Australia: Schofield <i>et al.</i> ¹² Education, or education and threat of enforcement	Illegal sales	There were no intervention effects on compliance; there was a pre- to post-test increase across all groups in the number of retailers requiring proof of age (17-43%) but no differences between intervention and control.
	Illegal sales	Baseline sales rates were 70% intervention/65% control. Intervention stores showed a significant decrease to 32% after intervention. Control stores showed a non-significant reduction to 59%. Results were similar 6 months later.
Project TRUST San Diego: Keay, Wildey <i>et al.</i> ¹³ Retailer education and community awareness compared to community education alone	Illegal sales	There was no differential effect on sales as a function of the type of contact project staff had with merchants. Baseline purchase rate was 74%; at 6 months 39%; at 1 year 56%. There was no change in vending machine sales.
	Illegal sales	The combined effects of publicity about undercover buying operations and warning letters threatening prosecution reduced sales of cigarettes to minors by 29% (95% CI 8% to 50%). 31% of retailers receiving warning letter sold at T2 compared to 60% of those not sent letter. However among 146 retailers who had not sold at T1 and were resurveyed, 24% did sell at T2.

intervention areas and in no control area. The sales rate was reduced from 70% to 32%, an effect sustained at six month follow up. In Monterey,²⁴ education and community organisation eliminated successful test purchases by the end of a three year project in two communities compared to a 39% sales rate in the comparison communities. In Sydney¹⁸ warning letters threatening prosecution to retailers who had made illegal sales led to a second offence rate of 31%, compared to 60% among those not warned.

Other controlled trials did not find a difference. The comprehensive community approach used in Minnesota reduced successful over the counter purchases in intervention communities from 36.7% to 3.1%, but the net change was not significantly different from the control communities where the rate fell from 41% to 8.8%.²¹ In Santa Clara¹⁶⁻¹⁷ there was no additional effect of mailed or personally delivered educational materials without enforcement. However, the community and merchant education media had some short term effect, with sales rates reduced from 74% to 39%.

In Erie County there was no effect of education alone¹⁶ or active enforcement.¹³ In the second study the lack of effect could have been because all stores were sent letters warning of possible random checks. The news of "sting" operations also spread rapidly to the non-enforcement communities. A study in

New South Wales, Australia¹⁵ used education and the threat of enforcement. Youths old enough to buy cigarettes, but looking younger, were used for compliance checks so the outcome was requiring proof of age before making a sale. There was an overall improvement from 17% to 43% in the proportion of retailers requiring such proof, but no difference between intervention and control retailers.

All the uncontrolled studies (table 2) showed reduction in illegal sales following intervention, but the size of the pre- and post-difference was variable, and not always consistent across communities.⁴⁷ There was some evidence that effects declined over time.³⁰⁻³⁸ In Oregon, advising retailers whether they had or had not complied with the law at a test purchase had an effect.¹⁰ In Solana County³¹ a merchant education programme had such a limited effect that a second phase of police enforcement was initiated. This reduced over the counter sales from 74% to 24%. The highest compliance rates were in Woodridge (over 95%)³² and Leominster (84%)³⁸ which used enforcement, and in Manly³³ (86%), Ontario²⁹ (94%), and Wisconsin⁴⁸ (82%) which did not. The lowest was 49% for baseline non-compliers in Cook County.⁴⁹

In the study of vending machines, a locking device policy resulted in fewer locations selling cigarettes to minors than a policy of no restriction.¹⁷ However, the authors concluded

Table 2 Results from uncontrolled trials

Studies	Objectives	Outcomes
Leominster: DiFranza <i>et al</i> ³⁸ Education and enforcement	Illegal sales	Sales were refused in 81%, 84%, and 35% of tests at each follow up. No baseline assessment of sales rates and different ages used for test purchasing.
Woodridge: Jason <i>et al</i> ^{32, 33, 50} Legislation and enforcement	Smoking behaviour	Smoking prevalence fell significantly in 12-13 years and 16-17 years age groups.
	Illegal sales	Sales were reduced to a minimal level (average < 4% in 5 checks over 12 months) for the first 2 years after passage of legislation, as measured by quarterly compliance checks. In later periods youths were older and sales rates also rose. When a 17 year old was used 25% sold illegally.
	Smoking behaviour	Between 1989 and 1991 the proportion of 7th-8th graders describing themselves as regular smokers fell from 16% to 5% and experimenters from 46% to 23%. In 1996 there were significantly fewer smokers among a sample of Woodridge students compared to students at the same school from a non-enforcement community (42.2% v 54.7%, $p < 0.05$). The difference in regular smoking was 8.3% v 13.4% (NS).
Everett: Hinds ¹⁶ Legislation	Perceived access	In 1991 69% of students felt the law would either prevent their procurement of cigarettes or make them harder to obtain. In 1996 more Woodridge smokers felt it was difficult or moderately difficult to get cigs than smokers from non-enforcement community (20% v 14.3%, NS).
	Smoking behaviour	Tobacco use fell from 25.3% to 19.7% (not significant), but reduction among girls was significant (26.4% to 11.5%).
Alberta (Compliance for Kids): Abernathy ¹⁷ Legislation and education	Perceived access	Stores as a source of tobacco products did not change significantly, but some reduction was noted post intervention. Friends increased as a source of tobacco products post ordinance ($p = 0.04$).
	Illegal sales	There was some reduction in willingness to sell in all three communities. The change was significant only in controls: pre 57.1%, post 14.3% ($p < 0.02$).
Bristol: Naidoo and Platts ⁵¹ Education and publicity	Illegal sales	91% (n = 100) sold at baseline, 44% (n = 50) sold at 1 year. New guidelines and publicity materials were issued nationally between baseline and follow up.
Cook County: McDermott <i>et al</i> ¹⁹ Education and warning	Illegal sales	120/129 non-compliant stores revisited. Purchase success rate fell to 51%.
Manly: Junck <i>et al</i> ³³ Community + feedback	Illegal sales	Purchase success fell. At baseline 52% of outlets sold (85% if up to 3 attempts), fell to 26% (55% if 3 attempts) at 3 months, and 14% at 10 months.
Ontario: Dovell <i>et al</i> ²⁹ Education	Illegal sales	In KFL&A willingness to sell fell from 46% at baseline to 43% after general education and to 6% after receiving kit. Also effect in H&PE, 47% to 2%, 1 week after intervention.
Oregon (Project SixTeen): Biglan <i>et al</i> ^{30, 35} Community + feedback	Illegal sales	There was a significant reduction in the mean level of sales, from 57% to 22%, based on multiple assessments in 8 communities.
Perth: Mawkes <i>et al</i> ¹⁹ Community + enforcement	Illegal sales	At baseline 89% of outlets prepared to sell. At follow up overall rate fell to 28%, but substantial variation by area.
Solana County: Feighery <i>et al</i> ³¹ Retailer education + enforcement	Illegal sales	73% sold at pretest, 68% at post-test 1 (after education), 31% at post-test 2 (after enforcement). Change in over counter sales significant. Vending machine sales remained high.
St Paul: Forster <i>et al</i> ¹⁷ Vending machine locks	Illegal sales	1 year after the law 47% with locks, 30% were still not in compliance. Overall purchase success rate was 86% before law, 30% at 3 months and 48% at 1 year.
Stirling: Campbell ⁶ Warning	Illegal sales	At baseline 37% sold. Of 13 revisited, only 1 sold at follow up. Among outlets visited for first time at follow up survey, sales rate 35%.
Wisconsin: Schensky <i>et al</i> ⁴⁸ Education and feedback	Illegal sales	40% permitted purchase at baseline and 18% at follow up. Of those who permitted purchase at baseline 25% permitted at follow up.

KFL&A, Kingston Frontenac Lennox and Addington Health Unit; H&PE, Hastings and Prince Edward Counties Health Unit.

that it was probably less effective than the major policy alternative, a ban on vending machines.

DO REDUCED SALES OF TOBACCO TO MINORS
LEAD TO A REDUCTION IN MINORS' SELF-
REPORTED EASE OF ACCESS?

Six studies assessed perceived ease of access. In three, intervention was associated with decreased test sales. In Monterey²¹ self reported recent purchase of tobacco was less frequent among seventh grade students (ages 12–13) in the intervention than in the control communities. In the other two grades there were large baseline differences in the proportion reporting a purchase in the last three months, so longitudinal changes were difficult to interpret. However, at the final follow up recent purchase was significantly less common among intervention community ninth grade students (ages 14–15). After intervention in Woodridge,³² 69% of students said that the law would make cigarettes harder to obtain. In 1996 more Woodridge smokers felt it was difficult or moderately difficult to get cigarettes than smokers from another community (20 v 14.3%, not significant).³² In Massachusetts²⁵ despite an effect of intervention on sales there was no difference in perceived ease of access. There were significant falls in the proportion who had tried to buy tobacco in the previous six months, and increases in those who were refused at least half the time. Since these occurred in all communities they could not be attributed to the active enforcement programme. There were also similar changes across intervention and control communities in reported source of cigarettes. Fewer youths bought tobacco in their own city or town and more bought it elsewhere or had someone buy it for them.

In Minnesota,²¹ the proportion who perceived high availability decreased in the intervention communities while increasing in the control communities, despite similar levels of retailer compliance. The proportion of adolescents reporting at least one purchase attempt in the previous month declined in the intervention communities while it increased in the control communities. The authors suggested that these changes might be attributable to the community awareness and mobilisation campaigns that were a part of the intervention.

In Sydney²⁸ there was a significant reduction in the proportion of male students who rated purchasing cigarettes from petrol stations as "easy" or "very easy" postintervention, but no other significant changes for the six categories of purchase source. In Everett³⁹ more students reported that retailers asked for proof of age. Neither of these studies directly assessed retailer behaviour. In Gateshead few children reported being refused, with no change over time.^{16 20}

DO REDUCED SALES OF TOBACCO TO MINORS
DECREASE PREVALENCE OF TOBACCO USE?

Three of five controlled trials found an effect of intervention on youth smoking behaviour. Alt-

man and colleagues²⁴ found a lower smoking prevalence in those who were in seventh grade at baseline, but the effect was not sustained at the end of the 32 month study. There were no significant differences among the other age groups.

In Minnesota, there was a lower rate of increase in all measures of smoking prevalence in seven areas with a comprehensive community based intervention than in seven control communities. The net difference in prevalence was significant for daily, but not weekly or monthly, smoking.²¹ They concluded that refusals by sellers at the time of purchase attempts by young people did not account for the lower adolescent smoking rates seen in the intervention communities, since all communities showed increases in compliance. Other components of the intervention may have changed young people's behaviour. Businesses in the intervention communities were more likely to post warning notices and to store cigarettes behind the counter.

Staff and colleagues assessed a community intervention in Sydney with education of retailers and local publicity, measuring smoking behaviour and reported ease of purchase but not illegal sales.²⁸ There was an effect of intervention only in the youngest students.

Two studies did not find evidence of change in smoking behaviour. In Massachusetts²⁵ there was no difference in the rate of change of prevalence of "any tobacco use" or "daily tobacco use" between the intervention and control communities. The rate of "current tobacco use" rose marginally in the intervention communities but remained stable in controls, with borderline significance for the comparison between group trends. In Gateshead, an intervention of test purchases in the intervention area resulted in full compliance and hence no prosecutions, although children in the area reported buying cigarettes with ease. There was no change in smoking prevalence.¹⁹

In the light of these findings, three uncontrolled studies should be interpreted with caution. Two reported a decrease in smoking prevalence in students associated with a reduction in illegal sales in single intervention communities.^{12 31 38 39 50} In Woodridge the proportion of regular smokers among seventh and eighth grade students (ages 12–14 years) fell from 16% to 5%. In this study³² access was very successfully restricted, and possession of tobacco by a minor was also an offence. Longer term assessments in this community using older youths showed higher rates of sales, although still below 20%.³³ A survey in 1996 found a lower proportion of smokers among Woodridge students than students from a community not conducting regular enforcement.⁵⁰ In Leominster there was a fall in smoking prevalence in three out of four age groups.³⁸ In Everett³⁹ there was no significant change in overall reported tobacco use after introduction of a local ordinance, but there was a significant decrease among girls.

Conclusions

This review provides evidence about the relative effectiveness of different interventions for reducing tobacco sales by retailers. Simply giving information to retailers about the law is not effective. DiFranza and colleagues showed that merchant participation in voluntary compliance programmes was low.^{40 41} There is evidence that interventions to educate retailers can improve compliance, but the successful interventions used a variety of strategies, including personal visits and mobilising community support.²⁴

Enforcement, or warnings of it, generally had an effect on retailer behaviour. Sustaining compliance requires regular enforcement, and the existing evidence suggests reduced effectiveness if checking occurs much less than 4–6 times a year.¹² The penalty for infringement may also be important, although there is little direct evidence of the relative deterrent effect of different penalties. If fines for offenders are low, retailers may become inured to the threat of a prosecution, diminishing the effect of warnings or prosecutions. Removal of a license to sell tobacco could be more effective, if the licensing itself is strictly monitored.¹⁸ Imposing too harsh a penalty may, however, be counterproductive if community attitudes are not supportive. In one study using enforcement, judges were inclined to give suspended sentences because they felt that imposing a heavy fine or criminal record on the clerks making the sale was inappropriate.³¹ Enforcement may produce a backlash against tobacco control activities if the value of reducing sales has not been adequately publicised. A graduated system of penalties from a warning to a fine and then loss of licence may be most appropriate where legal systems allow it. The combination of enforcement and fines on youth users was associated with high compliance rates in Woodridge, but punishing the user may not gain widespread acceptance.³¹

Retailer interventions may not work if neighbouring districts have discordant policies. Retailers who make illegal sales argue that minors will simply go elsewhere, depriving them of revenue without benefiting the community.³² Uniform enforcement policies may help retailers to comply by reassuring them that their competitors will do the same. Similarly, fitting locks to vending machines is probably less effective than banning them.³⁷

The main methodological problem in evaluating retailer interventions is that assessment of retailer behaviour during compliance checks does not show whether smoking behaviour by minors has changed, or even how easy it is for them to buy tobacco. Retailers may be able to identify “test” purchasers, especially if they know or suspect that checks are being made. “Real” purchasers may be known to the sales clerks, may lie about their age or may behave differently. If retailers are aware of the possibility of compliance checks they may sell only to young people they know. Young people may also change their source, by going to another community or by asking someone else to make

the purchase for them.²⁵ Measuring changes in self reported ease of access to tobacco is important to show that an intervention has had an impact on purchasing behaviour. If minors do not perceive that buying tobacco has become more difficult, then it is unlikely that they have changed their use of tobacco. Conversely, a change in smoking behaviour can most confidently be attributed to a change in retailer behaviour if the intermediate outcome of a change in perception of ease of access has also been observed. This is an important message for future research in this area.

There are a number of problems in drawing conclusions about the effectiveness of interventions with retailers for reducing youth tobacco use. In particular, effectiveness can only be assessed if tobacco sales are reduced. If some retailers continue to sell, a channel of access will exist. Many of the communities studied achieved large decreases in sales, but none achieved complete, sustained compliance. Hence it is not surprising that there is only limited evidence from controlled trials that reducing the ease with which underage youth can purchase cigarettes will reduce their use of tobacco. Some uncontrolled studies, notably Woodridge, have reported impressive reductions in youth smoking behaviour in association with interventions achieving high compliance. This might suggest that there is a threshold level of compliance above which access can be effectively reduced. This hypothesis needs testing prospectively. The findings from Massachusetts²³ suggest that, if there is such a threshold, it must be greater than 80%; density of vendors may be another determinant of availability. The challenge for future research on the effects of restriction of underage sales is to ensure effective implementation of the intervention. Translating access restriction from research to practice is a further challenge. In the USA, despite federal legislation in 1992 (the Synar Amendment) requiring all states to enact and enforce a law to prohibit sale of tobacco to minors, surveys have shown no change from 1992 to 1997 in the proportion (almost 90%) of 10th grade students who believed that they can easily obtain tobacco products.³³

A further limitation of current research is that it is largely confined to more developed countries. The effectiveness and feasibility of retailer interventions will depend on the attitudes and available resources in different societies. With the acceleration of tobacco use in the developing world there is a particular need for cost effective interventions to prevent uptake of smoking by the youth of these societies.

A version of this review has been published in the Cochrane Library. Cochrane systematic reviews are regularly updated to include new research, and in response to comments and criticisms from readers. If you wish to comment on this, or other Cochrane reviews of interventions for tobacco control, please send it to lindsay.stead@dphpc.ox.ac.uk. Information about the Cochrane Collaboration and subscribing to the Cochrane Library is available from www.cochrane.org. We wish to acknowledge the support for the Cochrane Tobacco Addiction Group from the UK NHS Research and Development Programme, and the Imperial Cancer Research Fund. We thank the editors of *Tobacco Control* for agreeing to publish this version.

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A systematic review of interventions for preventing tobacco sales to minors

Lindsay F Stead and Tim Lancaster

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Special Articles

THE EFFECT OF ENFORCING TOBACCO-SALES LAWS ON ADOLESCENTS' ACCESS TO TOBACCO AND SMOKING BEHAVIOR

NANCY A. RIGOTTI, M.D., JOSEPH R. DIFRANZA, M.D., YUCHIAO CHANG, PH.D., THELMA TISDALE, R.N., M.P.H., BECKY KEMP, B.A., AND DANIEL E. SINGER, M.D.

ABSTRACT

Background Enforcing laws banning tobacco sales to minors is widely advocated as a way to reduce young people's access to tobacco and tobacco use. Whether this approach is successful is not known.

Methods In a two-year controlled study, we assessed sales of tobacco to minors and young people's access to and use of tobacco in six Massachusetts communities. Three communities (the intervention group) enforced tobacco-sales laws, whereas three matched communities (the control group) did not. To assess compliance with the law, minors working for the study investigators attempted to purchase tobacco from all retail vendors in each community every six months. Three annual anonymous surveys of a total of 22,021 students in grades 9 through 12 (response rate, 84 percent) measured access to tobacco and smoking behavior.

Results At base line, 68 percent of 487 vendors sold tobacco to minors. Compliance with the law improved significantly faster in the intervention communities than in the controls ($P < 0.001$). By the study's end, 82 percent of the merchants in the intervention communities complied with the law, as compared with 45 percent in the control communities ($P < 0.001$). However, adolescents under 18 years old reported only a small drop in their ability to purchase tobacco and no decline in its use. Communities with and those without enforcement programs did not differ with respect to these outcomes.

Conclusions Enforcing tobacco-sales laws improved merchants' compliance and reduced illegal sales to minors but did not alter adolescents' perceived access to tobacco or their smoking. Test purchases of tobacco do not accurately reflect adolescents' self-reported access to tobacco, and reducing illegal sales to less than 20 percent of attempts — the goal of a new federal law — may not decrease young people's access to or use of tobacco. (N Engl J Med 1997;337:1044-51.)

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PREVENTING people from beginning to smoke is a major public health priority.¹⁻³ Efforts must focus on the young, because 88 percent of smokers start by the age of 18³ and smoking is increasing among adolescents.^{4,5} Reducing young people's access to tobacco is proposed as one way to decrease their use of tobacco.^{6,7} Policies with this goal are widely advocated and have strong public support,⁸ but their effectiveness in deterring smoking is unknown. Nonetheless, many state and local governments, and now the federal government, are attempting to reduce access to tobacco among minors.^{6,7,9} Beginning on February 28, 1997, the Food and Drug Administration (FDA) established 18 as the national minimum age at which tobacco could be sold and required vendors to verify purchasers' ages.¹⁰ New regulations of the Department of Health and Human Services require that states demonstrate progress in reducing sales of tobacco to minors in order to receive block-grant funding to combat substance abuse.¹¹

All 50 states already prohibit tobacco sales to minors, but they rarely enforce the laws.¹² Tobacco retailers frequently sell to minors,^{3,13-18} and stores and vending machines are the primary sources of tobacco for adolescents.^{13,19-22} Improving compliance with tobacco-sales laws can potentially reduce the availability of tobacco to young people and thus discourage them from smoking. Educating vendors about the laws has not brought sustained improvement in compliance.²³⁻²⁵ Active enforcement of tobacco-sales laws is now widely advocated. This approach entails having minors periodically try to purchase tobacco and fining merchants who violate the law. Enforcement has reduced sales to minors,^{6,7,26-28} but there are limited data on its effectiveness in limiting adolescents' access to tobacco or their smoking. In two uncontrolled studies conducted in single communi-

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ties, teenage smoking was reduced when enforcement programs achieved compliance rates greater than 90 percent (that is, when more than 90 percent of minors' attempts to purchase tobacco failed).^{6,7} However, without data from control communities the decline in tobacco use cannot be attributed unequivocally to enforcement.

We sought to determine in a controlled study whether enforcing a tobacco-sales law reduced the proportion of stores selling tobacco to minors and consequently limited adolescents' access to and use of tobacco. We hypothesized that if a level of compliance similar to the 90 percent rate reached in the earlier studies could be achieved, adolescents would report more difficulty obtaining tobacco and less smoking.

METHODS

Study Design

We tested the effect of enforcing tobacco-sales laws in six Massachusetts communities. The study design called for three communities to implement enforcement programs over a two-year period, while three matched control communities did not. Outcome measures — tobacco sales to minors and adolescents' access to tobacco and smoking behavior — were assessed before and after the intervention.

Selection of Communities

Massachusetts law prohibits the sale of tobacco products to people under the age of 18. Local health departments can enact additional tobacco-sales regulations and enforce state and local restrictions. The intervention sites were three communities in metropolitan Boston that had recently enacted similar tobacco-sales regulations and planned to enforce them actively, but had not yet done so. Each was matched according to population size and median household income with a control community that was not currently enforcing the tobacco-sales laws and had no plans to do so. The control and the intervention communities were separated geographically but were well matched with respect to sociodemographic factors (Table 1). During the study period, all six local health departments received funds from the Massachusetts Tobacco Control Program on a per capita basis for the development and implementation of tobacco policy.

Measures

Tobacco Sales to Minors

Merchants' compliance with tobacco-sales laws was monitored in all six communities at base line (February through April 1994) and every six months thereafter for two years. Minors, supervised by adult study personnel, attempted to purchase tobacco at every retail tobacco outlet in each community. We used girls 16 years old (20 in all) in the compliance checks to minimize variability in measurement due to the buyer's age and sex.^{15,23,24}

In each store, the girl asked a clerk for a pack of cigarettes. If asked, she stated her true age but showed no proof of age. If there were vending machines, she attempted to purchase cigarettes directly from them, asking a clerk to unlock any vending machine that had a locking device. After each attempt to buy tobacco, study personnel recorded data on the type of store, the type of sale (over the counter or from a vending machine), the results of the purchase attempt, and whether the minor was asked for proof of her age. These data were kept confidential and were not used for enforcement purposes. We identified the vendors from lists of tobacco licensees kept by the health department. In communities

TABLE 1. CHARACTERISTICS OF THE STUDY COMMUNITIES.

COMMUNITY	POPULATION, 1990	MEDIAN HOUSEHOLD INCOME, 1990	HIGH-SCHOOL ENROLLMENT, 1993-1994*
	no.	dollars	no. of students
Pair 1			
Intervention	76,210	32,455	1896
Control	84,985	35,858	2417
Pair 2			
Intervention	54,718	45,598	1651
Control	44,630	43,309	1664
Pair 3			
Intervention	27,557	60,357	1179
Control	20,267	65,994	808

*These figures include students enrolled in grades 9 through 12 in all public and private high schools in the community.

that lacked such information, we identified the tobacco vendors by screening all establishments that had retail food or food-service licenses and all liquor stores, gas stations, and recreational facilities.

Access to Tobacco and Smoking Behavior

Students in grades 9 through 12 in all the public and private high schools in the six communities were given anonymous, self-administered surveys at base line (from December 1993 through February 1994) and annually for two additional years. Passive parental consent for the study was obtained (that is, the parents returned a form only if they did not want their child to participate).²⁹ The 33-item survey instrument assessed sociodemographic factors (age, sex, ethnic group, grade in school, and city of residence), past and present tobacco use, and the source of any tobacco products obtained. Items eliciting data on smoking behavior were adapted from previous surveys.³⁰⁻³² The students' use of cigarettes and smokeless tobacco was assessed with parallel questions. The students were asked if they had purchased tobacco in the past 30 days and if so, how they had mainly obtained it. The degree of access to tobacco was measured by asking respondents who had tried to buy tobacco in the past six months how often they had been refused it.

Intervention

After the base-line collection of data, all six local health departments distributed written information about the tobacco-sales laws to the retailers. The health departments in the intervention communities then began testing vendors regularly for compliance and penalizing violators with an escalating series of warnings and fines. These compliance checks done for purposes of enforcement were separate from those conducted by members of the research staff to assess outcomes. On the basis of experience in other communities,^{6,7} the goal was a compliance rate among merchants of more than 90 percent. The intervention communities were encouraged to test all merchants four times a year (a total of eight tests) and to test noncompliant merchants more often. The control towns were contacted annually in order to monitor their regulations and any enforcement activity.

Statistical Analysis

The intervention and control communities were compared in matched pairs. Each pair was considered first separately and then together with the other pairs. We examined changes in end points over time in each community and then compared the matched communities at each point and over time. Multiple logistic-regression

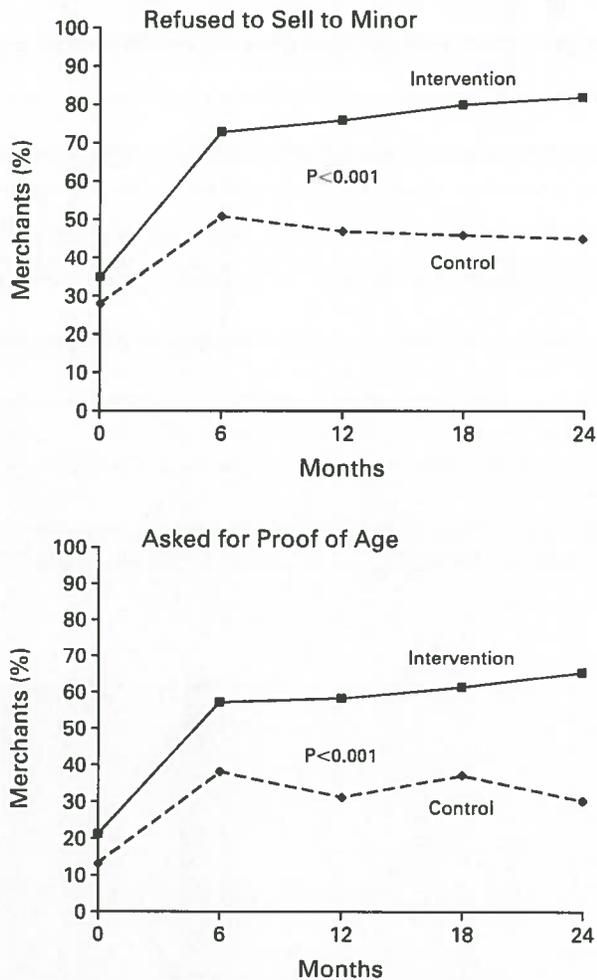


Figure 1. Merchants' Compliance with the Tobacco-Sales Law. The upper panel shows the proportion of merchants who refused to sell tobacco to a minor. The lower panel shows the proportion of merchants who asked youths for proof of age. Over the two years of the study, both measures of compliance increased more rapidly in the intervention group than in the controls ($P < 0.001$), according to a mixed-effects model. Compliance was significantly higher ($P < 0.001$) in the intervention group at each observation after base line.

analysis was used to examine the differences between communities at each assessment. Changes over time in end points were examined in mixed-effects models.³³ Two-tailed P values of less than 0.05 were considered to indicate statistical significance.

The main outcome for the sales of tobacco was the rate of compliance by merchants, which was defined as the proportion of tobacco vendors who refused to sell tobacco to minors. Vending-machine sales and over-the-counter sales were analyzed both together and separately. The list of identified vendors changed over time, but there was considerable overlap from each time point to the next. Therefore, the data were analyzed with a mixed-effects model in which the covariates that were related to the outcome measure (study group, time point, type of sale, and store type) were included as fixed effects and the individual store was included as a random effect. The term for the interaction of group with

time was interpreted as the difference in the rate of change between the intervention and the control communities. The rate of enforcement was calculated for each community by dividing the number of tests of compliance performed for enforcement purposes by the number of tobacco vendors at the midpoint of the study period.

In the analysis of the school surveys, data from respondents 18 or more years old (to whom tobacco could be sold legally) were excluded, as were data from respondents who did not live in the city or town where they attended school. Cigarette smoking and the use of smokeless tobacco were analyzed separately, and the data were then combined. The primary end point was the prevalence of current tobacco use, defined as the smoking of a cigarette or the use of smokeless tobacco within the past 30 days. The secondary end points were the prevalence of any past use of tobacco (a puff on a cigarette or the use of smokeless tobacco) and the prevalence of regular use (daily cigarette smoking or daily use of smokeless tobacco for the past 30 days). The study design was cross-sectional because the surveys were anonymous, but substantial overlap in the pool of respondents over time was expected. Therefore, the data were analyzed with a mixed-effects model. Study group, time point, age, sex, and ethnic group were included as fixed effects, and the school attended was included as a random effect, to account for any correlation among the students at each school. The responses were studied in aggregate and then stratified according to age, sex, and ethnic group.

RESULTS

Enforcement of Tobacco-Sales Laws

The health departments in the three intervention communities instituted compliance testing as planned. The tobacco vendors were tested in April and May 1994, and violators received warnings. Fines of \$20 to \$200 were issued for subsequent violations, beginning one, two, and eight months after the start of the intervention period. The intervention communities conducted a total of 966 compliance tests (4.3 tests per vendor) over the two-year period — fewer than the 8 tests per vendor specified in the study protocol. Forty-six fines were paid. No license to sell tobacco was suspended.

None of the control communities conducted compliance tests or enforcement before the study began. During the study, all three control communities adopted tobacco-sales regulations similar to those in the intervention communities and began checking compliance, completing 111 tests (0.5 test per vendor) over the two-year period. Two towns began enforcement, and fines began to be issued 10 and 13 months after the study started. Five fines were paid. Nonetheless, the intervention communities conducted far more enforcement than the controls throughout the study. They initiated compliance testing earlier, conducted more tests per vendor, and issued fines earlier and in greater numbers. All the communities educated their merchants through mailings, retailer training, and publicity during the study.

Tobacco Sales to Minors

Five rounds of compliance checks were conducted for research purposes. At base line, of 487 vendors tested (375 stores and 112 vending machines), 68

percent sold tobacco to a minor, a compliance rate of 32 percent. The base-line rates did not differ significantly between the communities in each pair or between the intervention and the control groups overall (35 percent and 28 percent, respectively; $P=0.22$). During the study period, compliance increased among the merchants in all the communities, but it increased more rapidly in the intervention group than in the control group according to a mixed-effects model with adjustment for time point, type of store, and type of sale (Fig. 1, upper panel). The difference was also statistically significant ($P<0.001$) for two of the three pairs of communities (data not shown). Compliance was significantly better ($P<0.001$) in the intervention communities than in the controls at each follow-up point; by the end of the study, the rates were 82 percent and 45 percent, respectively ($P<0.001$). The proportion of minors who were asked to show proof of their age also increased over time (Fig. 1, lower panel). The mixed-effects model demonstrated that the rate at which such proof was requested rose more rapidly in the intervention group than in the controls ($P<0.001$). By the end of the study, these requests were made during 65 percent of purchase attempts in the intervention communities, as compared with 30 percent of attempts in the control communities ($P<0.001$). In both groups, most of these changes took place during the first six months, reflecting the education of merchants in all the cities and towns and the marginal benefit of enforcement in the intervention communities. There was gradual improvement with continuing enforcement in the intervention communities, but not with education in the control communities.

Thus, enforcement improved compliance with the law, but compliance in the intervention group overall never reached the study goal of 90 percent. These results were unchanged when the analyses were limited to over-the-counter sales; the sample was too small for a separate analysis of vending-machine sales.

Surveys of High-School Students

Three annual surveys were conducted in all 10 high schools in the six study communities. The student enrollment for the three years combined was 29,139, of whom 26,168 (90 percent) were in school on the survey days (Table 2). The parents of 0.4 percent of the students refused consent for the study. A total of 22,021 surveys were returned (response rate, 84 percent). We excluded the responses from 2816 students who did not live in the city or town where they attended school (13 percent) and from 1602 students 18 or more years old (7 percent), which left 17,603 surveys for analysis. The students in the intervention group (8702 students) and the control group (8901 students) did not differ in age (range, 13 to 17 years) or sex (52 percent were female). The control group included more whites

TABLE 2. CHARACTERISTICS OF THE HIGH-SCHOOL SURVEYS.

YEAR	STUDENT ENROLLMENT	STUDENTS PRESENT ON SURVEY DAY	USABLE SURVEYS	MEAN RESPONSE RATE (RANGE)*
	no.	no. (%)	no.	%
Base line (1993-1994)	9,615	8,625 (90)	7,112	82 (71-95)
Year 1 (1994-1995)	9,703	8,678 (89)	7,310	84 (70-100)
Year 2 (1995-1996)	9,821	8,865 (90)	7,599	86 (80-97)
All years	29,139	26,168 (90)	22,021	84
Intervention	14,282	13,096 (92)	10,581	81
Control	14,857	13,072 (88)	11,440	88

*Response rates equal the number of usable surveys divided by the number of students present on the survey day. Ranges refer to the response rates among the 10 schools studied.

than the intervention group (79 percent vs. 74 percent, $P=0.001$).

Access to Tobacco

The primary measure of access was the difficulty young people had in buying cigarettes, as reported by those who had tried to purchase tobacco in the previous six months. At base line, 76 percent of respondents in the intervention group and 78 percent of those in the control group said that vendors hardly ever refused to sell them tobacco (Table 3). These proportions decreased in both groups during the study. There was a corresponding increase in the proportion of students who were refused tobacco at least half the time they attempted to buy it. However, the control and intervention groups did not differ in the rate at which either measure changed, according to a mixed-effects model that adjusted for age, sex, ethnic group, study group, and study year. Two other measures of access to tobacco, the proportion of respondents who had recently either purchased tobacco or tried to do so, decreased no more rapidly in the intervention group than in the control group (Table 3). In short, the decline in access to tobacco reported by the youths could not be attributed to enforcement of the tobacco-sales laws.

The respondents who had smoked in the past 30 days were asked how they had obtained most of their tobacco. We expected that they would shift to alternative means of procurement if their commercial access to tobacco was restricted. In the six communities overall, the proportion of youths who bought most of their tobacco in their own city or town fell from 51 percent to 40 percent over the study period ($P<0.001$). There were corresponding increases in the proportions who purchased tobacco in other communities (from 5 percent to 8 percent, $P=0.002$) or had someone buy it for them (from

TABLE 3. ACCESS TO TOBACCO AS REPORTED BY THE YOUTHS SURVEYED.

MEASURE	STUDY GROUP	BASE LINE	YEAR 1	YEAR 2	P VALUE	
					TREND WITHIN GROUP*	COMPARISON BETWEEN GROUPS†
% of respondents						
Bought tobacco within past 30 days	Control	21‡	20‡	19‡	0.04	0.11
	Intervention	15	13	15	0.78	
Tried to buy tobacco within past 6 mo	Control	36‡	31‡	29‡	<0.001	0.44
	Intervention	29	23	24	<0.001	
Ease of purchase§ Hardly ever refused	Control	78‡	69‡	63‡	<0.001	0.99
	Intervention	76	62	58	0.02	
Refused at least half the time	Control	12	19	23	<0.001	0.09
	Intervention	13	23	28	<0.001	

*Values represent the statistical significance of the trend over time in the group shown and are derived by multiple logistic regression with adjustment for age, sex, and ethnic group.

†Values represent the statistical significance of the difference between the two study groups in the rates of change in a mixed-effects model with adjustment for age, sex, ethnic group, study group, and study year.

‡P<0.001 for the comparison with the intervention group by multiple logistic regression, with adjustment for age, sex, and ethnic group.

§Data shown were collected among respondents who had tried to buy tobacco in the previous six months.

7 percent to 16 percent, $P<0.001$). These increases occurred at similar rates in the intervention and control communities, indicating that they could not be attributed to enforcement (Fig. 2).

Smoking

Table 4 shows the rates of tobacco use reported by adolescents. The rates at base line and each year of follow-up were higher in the control group than in the intervention group. The prevalence of any use of tobacco and of daily tobacco use did not change at different rates in the two groups, according to a mixed-effects model that adjusted for respondents' age, sex, ethnic group, study group, and study year (Table 4). The rate of current tobacco use rose in the intervention communities but remained stable in controls, the reverse of what would have been expected; however, this difference was of borderline significance ($P=0.05$). When we repeated the analysis with the respondents stratified according to age, sex, and ethnic group, there was no significant difference in any subgroup, including the youngest one (respondents 13 and 14 years of age), in which the effect of the intervention was expected to be greatest. The results were unchanged when we limited tobacco use to cigarettes. The use of smokeless tobacco was low and declined similarly in both groups. In sum, there were no meaningful differences between the intervention group and the control group in the rate at which tobacco use changed during the study period.

DISCUSSION

This controlled study in six communities tested the efficacy of law enforcement in reducing young people's access to tobacco and their smoking. We found that enforcing a tobacco-sales law for two years improved merchants' compliance and reduced the sales of cigarettes to minors under our test conditions. Despite the dramatic and sustained increase in compliance by merchants, young people reported little decline in their ability to buy tobacco products. There was no greater decline in communities that had enforcement programs than in those that did not. Hence, even the small decrease in adolescents' perceived access to tobacco was not attributable to law enforcement. Because the intervention did not reduce high-school students' self-reported access to tobacco, it is not surprising that it did not alter their smoking behavior.

Reducing young people's access to tobacco has become a cornerstone of public policy regarding tobacco control in this decade. A growing number of federal, state, and local laws and regulations are intended to accomplish this goal.⁹⁻¹¹ This activity has occurred in the absence of evidence clearly supporting its efficacy, and therefore there has been debate in the public health community about the wisdom of the current focus on reducing access.³⁴ Empirical demonstration of benefit is critical to justify the resources being expended on this new effort. We addressed this important question.

This study documents a previously unreported dis-

crepancy between young people's reports about their access to tobacco and the results of compliance tests that are thought to measure access. We intentionally used only 16-year-old girls to measure tobacco sales to minors, because merchants are more likely to sell tobacco to girls and to older adolescents.^{15,23,24} Nonetheless, even with these stringent, standardized tests of compliance, the test results appear to overestimate the difficulty experienced by young people trying to buy tobacco. By the end of the study, 16-year-old girls participating in compliance checks could buy tobacco in only 18 percent of stores in communities with enforcement programs, yet 53 percent of 16-year-olds living in the same communities reported that they hardly ever failed to buy tobacco when they tried to do so, and 70 percent succeeded most of the time. Young people may exaggerate their ability to purchase tobacco, but it is unlikely that overstatement alone explains the discrepancy.

Our findings suggest that tests of compliance, as they are typically conducted, underestimate young people's access to tobacco. There are several potential explanations for this. Underage youths who try to buy tobacco probably behave differently than do youths in compliance checks. For example, they may lie about their age, use false identification, dress to appear older, cajole a clerk into making a sale, or enlist an older teenager or adult to buy for them. It is also possible that store owners who are aware of the possibility of compliance checks will sell tobacco only to youths with whom they are familiar. Health officials in the communities we studied reported such occurrences. Young people may also buy tobacco in neighboring towns that lack similar enforce-

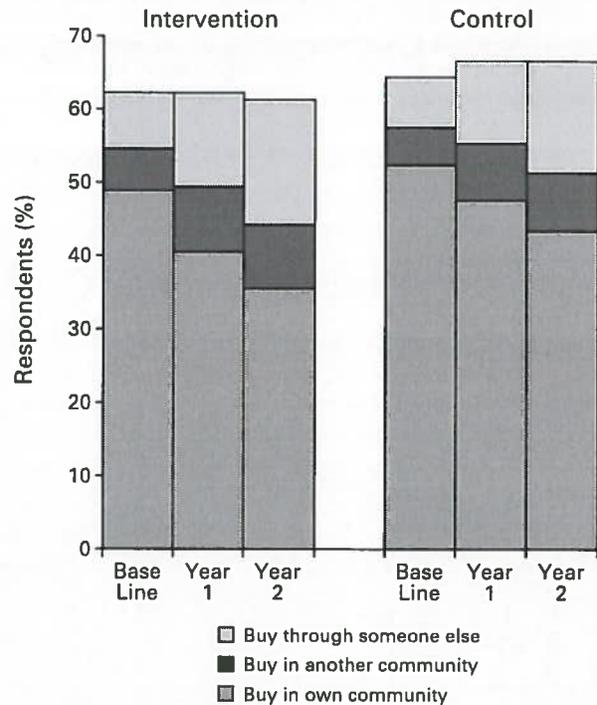


Figure 2. Smokers' Chief Means of Obtaining Tobacco. The chief means of obtaining tobacco in the 30 days before each survey, as reported by the current smokers, shifted over the 2-year study period. Declining proportions of the young people who smoked bought most of their tobacco in their own community, whereas the proportions who bought most of their tobacco in another community or had someone else buy it for them increased. The proportion who obtained their tobacco from friends or household members, which accounts for the remaining current smokers and is not shown, did not change. The rates of change were similar in the two study groups.

TABLE 4. TOBACCO USE AMONG ADOLESCENTS.*

MEASURE OF USE	STUDY GROUP	BASE LINE	YEAR 1	YEAR 2	P VALUE	
					TREND WITHIN GROUP†	COMPARISON BETWEEN GROUPS‡
% of respondents						
Use at any time	Control	64.5§	62.7§	62.7§	0.15	0.28
	Intervention	56.1	53.9	55.5	0.97	
Current use	Control	29.8§	30.1§	30.0§	0.93	0.05
	Intervention	22.5	23.5	25.3	0.01	
Daily use	Control	16.8§	16.0§	16.4§	0.57	0.08
	Intervention	10.7	11.4	13.2	0.14	

*Data are for the use of cigarettes or smokeless tobacco. Data on current use and daily use refer to the 30-day period preceding the completion of the survey questionnaire.

†Values represent the statistical significance of the trend over time in the group shown and are derived by multiple logistic regression with adjustment for age, sex, and ethnic group.

‡Values represent the statistical significance of the difference between the two study groups in the rates of change in a mixed-effects model with adjustment for age, sex, ethnic group, study group, and study year.

§P < 0.01 for the comparison with the intervention group by multiple logistic regression, with adjustment for age, sex, and ethnic group.

ment. Furthermore, even if compliance checks assessed the behavior of any one vendor accurately, the rate of compliance by merchants might not reflect actual access to tobacco. Even if only one store in a community sells tobacco to minors, young people who know about it could obtain tobacco easily.

We found no meaningful difference in smoking behavior between communities that implemented enforcement programs and those that did not. This cannot be interpreted as evidence that enforcing tobacco-sales laws does not alter young people's smoking behavior, because enforcement also failed to reduce young people's self-reported access to tobacco. Instead, this study shows that enforcement that did not reduce young people's access to tobacco substantially did not affect their smoking behavior. The results of this study differ from those of two previous uncontrolled studies, which found that enforcing tobacco-sales laws reduced youths' smoking.^{6,7} In Woodridge, Illinois, and Leominster, Massachusetts, smoking among junior-high-school students dropped by 69 and 44 percent, respectively, over a period of two years. In both studies rates of compliance by merchants that exceeded 90 percent were achieved and sustained. Presumably, young people's access to tobacco was also reduced, although that variable was not measured. In contrast, the communities in our intervention group achieved 82 percent compliance by the end of the study, a rate that proved insufficient to reduce access. In Woodridge, a law prohibiting the possession of tobacco by minors was enforced simultaneously and may have contributed to the reduction in smoking among young people.³⁵ Both studies included junior-high-school students, whom we did not study. We cannot be sure that in our study enforcement did not affect tobacco use among young people who were not yet teenagers, but it did not affect smoking in our youngest age group (those 13 and 14 years old).

This study is limited in that we could not randomly select the communities in the intervention group. Another limitation, inherent in community trials, is that the investigators did not fully control exposure to the intervention. Implementing vigorous enforcement programs was challenging for the directors of the health departments in the intervention communities, despite committed leadership, the presence of local regulations, and funds provided by the state for enforcement. Political, bureaucratic, legal, and logistic obstacles, including pressure from tobacco retailers, prevented the health departments from testing compliance as frequently as was planned and from imposing penalties as aggressively as was intended. Consequently, merchants' compliance never reached the level specified by the study design. The fact that enforcement was begun in two control communities was another factor beyond our control, one that potentially threatened our ability to measure an effect

of intervention. However, enforcement began later in those control communities and was far weaker than in the intervention communities. The fact that merchant compliance differed significantly between the control and the intervention groups throughout the study implies that enforcement also differed, thereby permitting a controlled test of the effects of enforcement.

In conclusion, our findings suggest caution with regard to the escalating efforts to reduce access to tobacco by young people. Law enforcement that appeared to substantially improve merchants' compliance with a tobacco-sales law failed to produce corresponding reductions in young people's self-reported access to tobacco from commercial sources or to alter their smoking behavior. Compliance checks used to monitor law enforcement did not reflect young people's access to tobacco, as policy makers, public health officials, and tobacco control advocates have generally assumed they do. Our findings suggest that reducing young people's access to tobacco will require even better merchant compliance than the 82 percent rate achieved here. This arouses concern about the likely effect of new federal regulations intended to reduce teenage smoking by reducing the supply of tobacco to minors.^{10,11} Federal law now requires the Department of Health and Human Services to withhold block grants from states that fail to "enforce their laws in a manner that can reasonably be expected to reduce the extent to which tobacco products are available to individuals under the age of 18."¹¹ The department has suggested that it will require states to achieve compliance rates of 80 percent.³⁶ Our study suggests that even if states meet that goal, the law cannot reasonably be expected to reduce the supply of tobacco to young people or alter their smoking behavior. New FDA regulations¹⁰ set a national standard for tobacco sales to minors, but careful monitoring of compliance with the regulations is likely to be needed if they are to affect tobacco use nationwide.

Supported by a grant (22928) from the Tobacco Policy Research and Evaluation Program of the Robert Wood Johnson Foundation and by a Preventive Oncology Academic Award (CA01673) from the National Cancer Institute (to Dr. Rigotti).

We are indebted to Karen Convery for data management; to the health departments and high schools of the participating communities (Arlington, Brookline, Needham, Quincy, Somerville, and Winchester, Massachusetts) for their cooperation and support; to Ann Elderkin, P.A., health director, and Eileen Sullivan, M.S., tobacco-control program director, Somerville Health Department; to Fredric Cantor, D.V.M., M.P.H., director, and Janet Lilienthal, M.Ed., tobacco-control program director, Needham Health Department; to Alan Balsam, Ph.D., M.P.H., director of public health and human services, John Locke, M.P.H., former health director, Patrick J. Maloney, M.P.A.H., chief of environmental health services, and Elizabeth Van Ranst, M.S.S.S., tobacco education specialist, Brookline Health Department, all of whose commitment and tireless efforts made the study possible; and to David Blumenthal, M.D., M.P.P., for his comments on the manuscript.

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CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commission
FROM: Sgt. Gregg Mader, Police Department
DATE: September 24, 2102
SUBJECT: Update from the Beverly Hills Police Department

Sgt. Gregg Mader will attend the meeting to provide information on the following subjects:

- seek feedback on National Night Out held August 7, 2012,
- update Commission on Neighborhood Watch status,
- The National Take-Back Initiative;
- provide information on Phase II of the 405 closure to be held Sept. 28th-Oct. 1st.
- traffic award recently rewarded to the Police Department,
- status of DUI checkpoints, and
- new appointments in the Police Department.



CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commission
FROM: Sgt. Gregg Mader, Police Department
DATE: September 24, 2102
SUBJECT: National Take-Back Initiative

On Saturday, September 29, 2012, the Los Angeles Field Division of the Drug Enforcement Administration (DEA) will coordinate a fifth nationwide one-day collaborative effort to remove potentially dangerous controlled substances from our nations homes. During the previous four take-back events, over 774 tons of medications were collected nationwide, of which more than 58 thousand pounds were collected in the greater Los Angeles area alone. The success of these events has been due to the partnership of the state and local law enforcement, community organization and the public. We hope that you will work with us to collect these potentially dangerous prescription drugs from your community.

The National Take-Bake Initiative will provide those who have accumulated unwanted and unused prescription drugs a great opportunity to safely dispose of them and remove them from their homes. I addition, the event also educates thousands of concerned citizen about the dangers of prescription drug abuse. Collection activities will take place from 10:00 a.m. through 2:00 p.m. on Rexford in front of the Library. DEA will provide collection boxes and coordinate pick-up of the surrendered pharmaceuticals for destruction in accordance with federal and state laws and regulations.



CITY OF BEVERLY HILLS STAFF REPORT

Meeting Date: September 24, 2012
To: Health & Safety Commission
From: Pamela Mottice Muller, Director of Emergency Management
Subject: National Preparedness Month

INTRODUCTION

National Preparedness Month is a nationwide campaign held each September to encourage Americans to take simple steps to prepare for emergencies in their homes, businesses and schools. Throughout September, the City of Beverly Hills will focus on the importance of emergency preparedness and promote disaster mitigation throughout the community. With emergency preparedness being a high priority of the City Council and building upon previous year's efforts, a variety of outreach efforts designed to reach all segments of the community are planned for September.

DISCUSSION

"Creating a Culture of Preparedness" is the overriding theme for all of the City's emergency outreach initiatives. The goal is to raise public awareness and inspire a "call to action" by community members to take the necessary steps to protect the life, property and safety of themselves, family members, neighbors and co-workers. Planning and preparing before a disaster occurs can greatly reduce the devastating impact of a large scale event as well as the time of recovery. A major disaster could overwhelm emergency and government service resources delaying response to those in need for days. These preparedness efforts include being self-sufficient for seven days including storing water for up to fourteen days. This year, the City wants to encourage community members to sign up for our emergency telephone notification system at www.beverlyhills/notification or by calling 310-285-2100. Also the City will highlight the places to seek City specific information during or after the disaster.

Meeting Date: September 24, 2012

Sources for emergency information specific to the City of Beverly Hills during or after a disaster are as follows:

- City of Beverly Hills Website: www.beverlyhills.org
- City of Beverly Hills Disaster Hotline: (310)550-4680
- Radio: 1500 AM
- T.V.: Channels 10 and 35
- Twitter: www.twitter.com/beverlyhillsoem
- Facebook: www.facebook.com/cityofbeverlyhills
- Nixle: Text BEVHILLS and 90210 to 888777

The City will also provide emergency preparedness information at the following sources:

- "Make A Kit. Make A Plan. Be Informed" banners displayed on City streets and at City facilities
- public service announcements on the City's cable channels 10 and 35
- radio messages delivered by Health and Safety Commissioners on the City's 1500 AM radio station
- information on City website, facebook and twitter pages
- press releases to local press
- information booth at the Senior Health Fair on September 10th ,10am to 2pm at Roxbury Park
- information booth at the Farmer's Market on September 23, 10am-2 pm

Commissioners are asked to refer Community members to the above places for information or they may call the Office of Emergency Management at 310-285-1025.

FISCAL IMPACT

Costs for the banner installation and the other minimal costs of outreach for National Preparedness Month are covered under the Office of Emergency Management annual budget. Community banners are being reused from previous years. Most materials or information distributed have no associated costs.

Pamela Mottice Muller



**CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT**

MEMORANDUM

To: Health and Safety Commission
From: Mackenzie Millan, CERT Program Coordinator
Date: September 24, 2012
Subject: Reinstatement of the Beverly Hills CERT Intern Training Program

Introduction

This report serves to provide information on the reestablishment of the City of Beverly Hills Community Emergency Response Team (CERT) training.

Discussion

The nationwide CERT training was designed to help individuals take care of themselves, their families, their neighborhoods, their schools, and their businesses should an emergency or disaster occur. The CERT training educates people about disaster preparedness and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. After taking the training, individuals are better prepared to respond to and cope with the aftermath of a disaster. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace following an event when professional responders are not immediately available to help.

In the year 2000, Beverly Hills implemented CERT training as a joint effort between the Fire Department and the Office of Emergency Management. The program had strong volunteer leadership and support from the community. CERT was then administered and taught through the City's Fire Department as part of their community outreach program. Due to budget reductions in FY 09/10, the Fire Department eliminated the CERT training. However, based on the need of this community and popular demand for the training, CERT has begun the process of being reinstated in Beverly Hills.

The Office of Emergency Management has hired an intern who will coordinate the reinstatement of the CERT program. The goal is to organize one refresher course a year (a class for the maintenance of skills) for those who have previously participated in CERT training and one training session for new participants. Once developed, this training and refresher can be provided each fiscal year.

This will be accomplished in the following ways:

- meet with those heavily involved with the former CERT training,
- meet with CERT coordinators of different Los Angeles communities,
- take inventory and organize current CERT supplies and decide supplies needed in future,
- decide the branding for the Beverly Hills CERT program (national vs. BH),
- update course curriculum (PowerPoints),
- create marketing campaign,
- devise registration and application process,
- develop volunteer instructor base and
- outreach to those who have previously taken the course.

Fiscal Impact

The Beverly Hills City Council has approved \$10,000 to fund the restarting of the CERT program. This allotment will cover the salary costs of the participating fire department staff to teach one training course and one refresher course (approx. \$8,000) and also pay for supplies needed. In addition, the fire department has received a grant to hold one additional training session.

Recommendation

This memo is for informational purposes only. Your input and assistance in the reestablishment of this training is appreciated.



CITY OF BEVERLY HILLS
POLICY AND MANAGEMENT

MEMORANDUM

TO: Health and Safety Commissioners
FROM: Pamela Mottice-Muller, Director of Emergency Management
DATE: September 24, 2102
SUBJECT: City Council Liaison Meeting

The Chair and Vice Chair will provide information on the liaison meeting between Councilmembers Gold and Brucker held on September 12, 2012, which discussed last year's commission accomplishments and future work plan items. The memo provided to the City Council Liaison is attached.

Also Chair Setian will share and seek support for the "Safe Tree" to be placed by the ice skating rink during the Holiday season. The tree will be decorated with yellow lights to remind people "To Be Safe During the Holiday Season".



CITY OF BEVERLY HILLS STAFF REPORT

Meeting Date: September 24, 2012
To: Honorable Mayor & City Council
From: Pamela Mottice Muller, Liaison to Health and Safety Commission
Subject: HEALTH AND SAFETY COMMISSION
Attachments: 1. NONE

INTRODUCTION

The Health and Safety Commission was established by the City Council in August 2007. A seven-member commission was appointed in the fall of 2007 with the goal to strive to maintain and improve the overall health and safety of the community. In January 2008 the Commission held its first meeting. Because this is a Commission that interacts with multiple departments and stakeholders, the Beverly Hills School District and City Departments appointed liaisons to work with the commission. This memorandum provides a review and summary of the mission, vision statement, motto, goals, objectives, accomplishments, and work plan items for the Health and Safety Commission.

DISCUSSION

The following is a summary of the mission, vision statement, motto, goals, objectives and work plan items. Also included are highlights from projects completed by the Commission during FY 2011-2012 and work plan items for FY 2012-2013.

MISSION STATEMENT

The Health and Safety Commission shall strive to maintain and improve the overall health and safety of the community.

MOTTO

Enhancing the Health and Safety of Our Community.

VISION STATEMENT

To inspire greater citizen participation and awareness regarding health and safety issues that affect our community.

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GOALS

- To Create a "Community Culture of Awareness and Preparedness".
- To Encourage Good Decision Making and Battle Complacency on Health and Safety Matters.
- To Serve as Ambassadors to the Community on Health and Safety related Resources and Information.

ACCOMPLISHMENTS FY 2011-2012

Dr. Debra Judelson and Kar'en Setian have served as the Chair and Vice Chair from July 1, 2011 to June 30, 2012. During the time the Health and Safety Commission accomplished the following:

- Planned and held a Community Emergency Management Stakeholder Summit, which included over eighty-five leaders from the business, government, non-profit, faith/community based, volunteer organizations, medical and school communities.
- Rejuvenated the AM Radio Station 1500 on the AM dial posting new emergency and traffic information and maintaining current information. Updated software program to receive better City-wide coverage.
- In conjunction with the Police Department, continued to provide support and insight on the Neighborhood Watch Zone Program.
- Attended multiple Neighborhood Watch events including holding a very successful first *National Night Out*. Encouraged the event to continue for a second year. This law enforcement event is held nationwide every August 7.
- Provided input and support on the reinstatement of the City's Community Emergency Response Team (CERT) training and program.
- Two Commissioners became certified, with other community volunteers, in becoming a trainer for future CERT classes.
- Developed multiple *Health and Safety Messages of the Month* that were provided to the community using various methods.
- Studied and provided suggestions on the way the City provides emergency and disaster related information to the Community including the use of emergency sirens.
- Represented the Health and Safety Commission message at a variety of City events and speaking engagements.
- Provided input and supported the recommendation to the City Council that the City join the *Healthy Eating, Active Living City Initiative*.
- Various Commissioners participated in the following events: Police Departments DUI checkpoint, 405 closures, LA Marathon, Every 15 Minutes Steering Committee, Baker to Vegas Run, became *CERT* and *First Observer* Trainers.
- Heard and provided input on the Wood Roof Replacement Ordinance Outreach plan.
- Recommended to City Council liaisons to maintain Commission as a seven member Commission.
- Provided input and updates on the City's new website.
- Heard from the Fine Art Commission on the Fine Art fund.

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- Provided guidance to a project which outreaches to businesses to provide services and goods in times of disasters.
- Provided suggestions on ways to improve *Earth Day* and suggested additional vendors/booths to participate.
- Heard public comment on the dangers of using fabric softeners, the issues that still exist with dialing 911 with cell phones, toxic dumping, BH CPR, support of re-instating the CERT program and disaster preparedness tips and a kit.
- Heard presentations and provided input on a variety of Public Works related topics such as the City's Water Quality report, emergency roll off bins, 2011 CCR, backflow and cross connection hazards and information on pharmaceuticals in the water supply.
- Heard presentation and suggested outreach on a trench cave-in accident.
- Heard a presentation provided by Public Works on toxic waste dumping. Provided suggestions, recommendations and heard comments from the community on this issue.
- Heard update and provided input on implementation of tobacco ordinance.
- Participated in a variety of Community events such as Fire Service Day, Farmers Market, Woofstock, Police Pancake Breakfast, and Earth Day.
- Heard a presentation and provided input on the City's social media program.
- Decided to modify the Health and Safety awards to be given out as warranted.
- Participated in the Shakeout Drill.
- Served as a member of the BHUSD FAC.
- Heard a report from High School Principal on the effectiveness of a previously recommended leadership program.
- Received a presentation by the City Attorney on the Brown Act, Form 170 and other related Commission matters.
- Provided subject matter suggestions on a new Cable program that will highlight Health, Safety and Preparedness information.
- Heard information on selling alcohol to minors Police Department Sting Operation.

WORK PLAN ITEMS FY 2012 TO FY 2013

Under the direction of Chair Setian and Vice Chair Gail Millan, the Health and Safety Commission's Work Plan Items for FY 2012 to 2013 are as follows:

- The Health and Safety Commission will support the re-instatement of the Community Response Team Program (CERT) and Neighborhood Watch Program (NHW).
- Develop Health and Safety messages to distribute to the Community in a variety of ways.

The Commission's work plan was approved by the City Council as part of the budget adoption.

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OTHER AREAS OF FOCUS

The Commission will concentrate on the following platform:

- Don't drink and drive / no distractions or texting when driving / making good decisions.
 - A variety of outreach is planned including exploring outreach in conjunction with the Police Department

The Commission will focus on the following projects:

- Working with the Cable Office, develop education cable programming. The first two shows will focus on:
 - Behind the Scenes of the Every 15 Minutes Program
 - No distractions when driving / no texting
- Supporting a Disaster Exercise
- Continue to revitalize the AM Radio Station

The Commission will also say good-bye to Dr. Aronberg and David Siedel. Dr. Aronberg has agreed to work on the medical surgery center project and David Siedel has agreed to work on the implementation of the CERT program. Two new commissioners will be introduced into the Commission in October 2012.

FISCAL IMPACT

Any expenses incurred were taken from the current general fund.

RECOMMENDATION

None.

Pamela Mottice Muller