The History of Pseudoephedrine and Electronic Tracking in Iowa

History of Pseudoephedrine in Iowa
Pseudoephedrine (PSE) is a common medicine used to treat colds and allergies. It is also a common ingredient, or precursor, used to manufacture methamphetamine, an illegal Schedule II drug under Iowa law. Prior to 2005, pseudoephedrine could be purchased over-the-counter, in any amount. Since PSE is the one ingredient needed in all methods of meth manufacturing, it was readily available to meth cooks.

State Law – 2005
In 2004, the number of meth labs in Iowa hit an all-time high of 1,500 incidents. With the meth epidemic at its worst, the Iowa Legislature passed Senate File 169 early in 2005 and began restricting the sale of pseudoephedrine. This legislation required pharmacies to place PSE “behind the pharmacy counter” and required the purchaser to show a government-issued photo ID. Pharmacies were also limited to selling no more than 7.5 grams of PSE either separately or collectively to a given person during a 30-day period without a valid prescription.

Federal Law – 2005
The subsequent Federal Combat Methamphetamine Epidemic Act of 2005 was also aimed at controlling access to precursors used in the illegal manufacture of methamphetamine. The Federal law states that an adult consumer may purchase no more than 3.6 grams of PSE per day from a licensed pharmacy, and not more than 9 grams in a 30-day period. In the case of the 30-day limit, Iowa law is more restrictive and prevails. The Federal law also requires that all sellers of PSE must maintain written or electronic logbooks containing for each PSE purchase attempt the buyers name, signature, product information, and date/time of each PSE transaction.

Aftermath
After S.F. 169, meth lab incidents dropped dramatically. Between June and December 2005, Iowa meth lab incidents plummeted nearly 80% compared to the same period in 2004, as reported by the Division of Narcotics Enforcement. Meth-related prison admissions, meth-related child abuse cases, and meth-related substance abuse treatment admissions also dropped during the same period. However, even with the decrease in meth cooking in the state, the appetite for meth did not decrease. Eventually, meth cooks began “smurfing” or going pharmacy to pharmacy to buy their limit of pseudoephedrine at each pharmacy in order to obtain enough to manufacture meth. Though meth lab incidents remain about 73 percent below 2004 levels, their numbers began to rise again in 2008 and have increased moderately every year since.
Electronic Tracking – 2010

In order to curb the smurfing trend, all pharmacies in the state needed to be connected, in real-time. In 2009, the Iowa Legislature authorized the Office of Drug Control Policy (ODCP) to establish a real-time electronic pseudoephedrine tracking system. This central repository was to “monitor and control” the sale of Schedule V products containing any detectable amount of pseudoephedrine, its salts, or optical isomers, or salts of optical isomers; ephedrine; or phenylpropanolamine. All pharmacies dispensing such products behind-the-counter (without a prescription) are required to report all such sales, in real-time, to the electronic central repository. The statewide system was fully implemented, with 100% pharmacy participation, on September 1st, 2010.

NPLEx

Iowa’s Pseudoephedrine Tracking System utilizes the National Precursor Log Exchange (NPLEx). It is a system funded by pseudoephedrine manufacturers and is distributed to participating states by the National Association of Drug Diversion Investigators (NADDI) at no cost. The software company that designed the software is Appriss Inc., a Louisville, Kentucky company. Pharmacies may enter PSE sale transactions into the system in two ways: via logging in to the web-portal or by integrating their point-of-sale system with NPLEx.

The system is a real-time tracking system, but because of the robust information contained within the system, it is used by virtually all Iowa pharmacies as a stop-sale system. That is, transactions are immediately added to the system and the system directs the pharmacist to prevent a sale from taking place if the daily or monthly limits are exceeded. Currently 17 states require real-time electronic tracking of pseudoephedrine sales. Blocking sales in real-time prevents a large amount of smurfing and consequently a substantial amount of meth production. It was expected that meth labs would rise in the short-term following implementation of electronic tracking, because more labs would be found with the help of the electronic system.

NPLEx has proven to be an effective prevention and enforcement tool for the State of Iowa, connecting all pharmacies in the state that sell PSE over-the-counter. The system is real-time for retailers and law enforcement. It is web-based, which means no additional software or hardware is required to participate. NPLEx is offered free-of-charge to all states, authorized agencies, retailers, and is seamless across state lines and different chains.
The Impact of Electronic Pseudoephedrine Tracking in Iowa

Impact on Pharmacies
When pharmacists enter a purchaser’s ID and product information, Iowa’s Pseudoephedrine Tracking System (NPLEx) allows the sale or tells the pharmacist that the purchase would put the person over their daily or monthly limit. Pharmacies have the ability to keep all their own records electronically, print their own store reports, and capture signatures electronically (which eliminates the need for any type of paper logs). The system also provides pharmacies 24-7 tech support and software upgrades.

In a survey provided to all pharmacies participating in NPLEx, 62.3% of responding pharmacists report the system is both effective and easy-to-use. Another 25.7% agree it is effective but find it difficult to use. In regard to pharmacist workload, 53.9% said NPLEx has moderately increased their workload. While 32.3% reported no change in their workload, nearly 10% of pharmacists report a moderate or substantial decrease in their workload.

Pharmacists report finding these electronic tracking features helpful in enhancing the quality of health care they provide:

- Real-time information – 50.7%
- Ability to query system for their own sales – 19.7%
- Being alerted to potential illegal sales and/or diversion of PSE – 36.7%
- Ability to prevent illegal sales and/or diversion – 43.2%
- All of the above – 36.2%

Pharmacists Feedback (survey excerpts)

- “In my opinion, it has stopped PSE abuse and meth labs throughout northwest Iowa.”
- “This is a very easy to use system.”
- “Great to know right away whether patient has reached their maximum pseudoephedrine allotment for the month. Easy to use.”
- “NPLEx has been a great tool! It’s easy to use and saves time.”
- “The NPLEx system has enabled us to more confidently dispense pseudoephedrine because we can check in real time to see if the patient has been pharmacy hopping. It also has minimized the amount of paper records we have to keep around the pharmacy.”
- “NPLEx has significantly cut down on the time our pharmacy spends ‘policing’ people trying to buy excessive amounts of PSE from multiple pharmacies in a small area. It’s a step in the right direction in combating the battle against meth.”
- “Using NPLEx has decreased the amount of pseudoephedrine we dispense to our patients. When it rolled out last year it dramatically decreased the amount of weekend sales to people you knew without a doubt were using it to manufacture methamphetamine.”
• “It is significantly better than the paper logbook.”
• “I think it is useful. It does increase workload somewhat, but it is no problem.”

Impact on Law Enforcement
NPLeX gives law enforcement on-demand and real-time access to pharmacy logs from across the country via a website accessible from any computer with internet connectivity. It also provides law enforcement with automated tools that give them the ability to monitor suspicious buying patterns or specific individuals who attempt to exceed the legal limits imposed by federal or state law. The system notifies law enforcement when a particular person makes, or attempts to make, a pseudoephedrine purchase. Officers may also run specific reports on individuals or pharmacies. A store report consists of transaction summaries, transaction details, and compliance details. An activity report consists of a specific person’s ID information, pharmacy information, product, and activity type (purchase, attempt, block, return, or inquiry).

In a survey provided to all law enforcement users of Iowa’s Pseudoephedrine Tracking System (NPLeX) in Iowa, 93.6% of users reported they are satisfied or very satisfied with the features available in NPLeX. Law enforcement officers report using the system to investigate suspects, watch buying patterns, identify co-conspirators, obtain information needed for search warrants, and provide trend analysis.

The following percentages of law enforcement users report using these pseudoephedrine tracking system features:
• Person Search – 100%
• Activity Report – 92.9%
• Store Report – 92.8%
• Watch – 96.4%

Law Enforcement Feedback (survey excerpts)
• “The NPLeX system works! Having the watch on the suspect saved our Task Force time as well as expense in locating the suspects.”
• “It’s been great. It allows me to keep track when suspects are purchasing without me going to the store to check logs.”
• “The system removes a lot of the leg work and saves you time.”
• “On numerous occasions, NPLeX has been a tremendous help in obtaining search warrants. The system has also been very helpful in identifying subjects who have previously been unknown.”
• “Over the past year I have used NPLeX on numerous occasions and have started three cases from the information found on it.”
• “Helps monitor subjects and purchase limits easily. Saves a lot of manpower by having access to these store records instead of driving to each separately.”

Impact on the Public
Some have expressed concern that current restrictions on PSE sales limit access to health care products by law-abiding citizens. In reality, NPLeX blocked only 2.37% of total PSE purchase attempts in its first year. Legitimate users of PSE products are allowed to buy a sufficient amount of pseudoephedrine for each 30-day period, if taken as directed on the package. Allergy sufferers may also obtain a prescription for any amount of pseudoephedrine their doctor feels they need if it is in excess of what the law
provides. In addition, since original restrictions were put in place in 2004, manufacturers have produced alternative cold and allergy medicines, that can provide at least interim relief, and can be purchased over-the-counter, but cannot be used in the manufacture of methamphetamine.

Since implementation ODCP has received fewer than ten complaints about the new electronic tracking system. The majority of calls taken involve a problem with a pharmacy’s internal system or concerns about stolen IDs, which were never substantiated. In every complaint, the situation was resolved with the pharmacy or directly with the member of the public. In some cases, consumers just tried to purchase too early or were unknowingly purchasing too much in the past. In reality, NPLEx is stopping them from buying over their limit and unknowingly breaking the law. Ultimately, NPLEx is making Iowa a safer place to live, work, and raise a family.
The Future of Pseudoephedrine and Electronic Tracking in Iowa

Measures of Effectiveness
Reducing meth lab incidents is only one way to measure the success of Iowa’s electronic pseudoephedrine tracking system (NPLEx). We must be careful not to expect electronic tracking alone to immediately reduce meth lab numbers. In fact, it was anticipated law enforcement will find more meth labs and more meth cooks than they knew about before NPLEx. By restricting the overall amount of pseudoephedrine meth cooks in Iowa are able to purchase, it’s possible the total number of meth labs seized may increase, but the total about of meth produced in those labs may decrease.

To date, Iowa has had no issues with false identification. At the request of the Iowa Division of Narcotics Enforcement and the Midwest High Intensity Drug Trafficking Area (HIDTA), a sample of ID information was taken from NPLEx and compared to Department of Transportation ID records. Ninety-eight percent came back as identical, valid IDs, and the remaining two percent involved entry errors that would have had no effect on the transactions. NPLEx is currently in the process of connecting to the National Law Enforcement Telecommunications System (NLETS) in order to confirm all drivers’ license/identification information at the time of the transaction.

In the first sixteen months of NPLEx in Iowa, 1,199,423 purchases were successfully completed. This number included 1,248,585 boxes of PSE products, which contained a total of 2,432,556 grams of pseudoephedrine. A total of 29,588 attempted illegal purchases were blocked; or 2.47% of the total number of attempted purchases. A total of 305 meth labs were reported in Iowa in 2010 and 399 were reported in 2011. ODCP conservatively estimates NPLEx may have prevented as many as 600 more meth labs during the past 16 months.

<table>
<thead>
<tr>
<th>Successful purchases</th>
<th>1,199,423</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blocked purchases</td>
<td>29,588</td>
</tr>
<tr>
<td>% of attempts blocked</td>
<td>2.47%</td>
</tr>
<tr>
<td>Boxes Sold</td>
<td>1,248,585</td>
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<tr>
<td>Boxes Blocked</td>
<td>32,700</td>
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<tr>
<td>% of boxes blocked</td>
<td>2.62%</td>
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<tr>
<td>Grams Sold</td>
<td>2,432,556</td>
</tr>
<tr>
<td>Grams Blocked</td>
<td>78,168</td>
</tr>
<tr>
<td>% of grams blocked</td>
<td>3.13%</td>
</tr>
</tbody>
</table>
78,168 grams of PSE
\[\times 92\% \text{ maximum theoretical yield}\]
Equals 71,915 grams of meth possibly prevented

71,915 grams of meth
\[\div 453.59237 \text{ grams per pound}\]
Equals 158.5 pounds of meth possibly prevented

71,915 grams of meth
\[\times \$130 \text{ per gram}\]
Equals $9,348,950 worth of meth possibly prevented

Ave. of 56 grams per meth lab incident
71,915 total grams \[\div 56 \text{ grams per lab}\]
Equals a theoretical high of 1,284 lab incidents possibly prevented

**One-Pots and DTOs**
A fairly new trend that may be contributing to an increase in meth labs is the advent of one-pot and shake-n-bake labs. In 2009, there was only 1 one-pot lab in the state. In 2010, there were 56. And in 2011, drug agents reported 109 one-pots. These methods generally use less pseudoephedrine and produce meth in smaller quantities, but are no less dangerous than other production methods. They involve putting the toxic and caustic chemicals in a plastic bottle and often shaking it, which can cause an extremely high amount of pressure to build up in the container causing it to rupture. The biggest danger with this method is the fact that it is fast and portable. The remnants can easily be transported in a vehicle and disposed of in neighborhoods and ditches. Aside from its environmental impact, it especially poses a hazard to children and other unsuspecting Iowans who come into contact with the waste or are impacted by flash fires from these cooks. The new one-pot and shake-n-bake methods of producing meth are also reportedly producing purer meth.

Crystal methamphetamine smuggled into Iowa by drug trafficking organizations (DTOs) from Mexico and the Southwest U.S. has also grown in recent years. The increase in crystal meth or “ice” is disturbing due to the fact that ice is typically much purer than its powder counterpart. The physical, psychological, addictive, and social impact of this purer form of the drug is expected to be more acute. Meth purity in Iowa is at an all-time high of 89% according to the Iowa Department of Public Safety.

Again, the appetite for meth in Iowa has not decreased. This is not a failure of the law or restrictions, but the realities of this powerfully addictive stimulant. Iowa still has the 10th highest number of meth treatment admissions in the nation (2009 TEDS). The incidence and prevalence of meth use and addiction will continue to be a problem, especially as purity rates continue to climb, one-pots continue to rise, and Mexican DTOs continue to bring in purer meth from the south.
**Prescription-Only Laws**

Some believe making pseudoephedrine a prescription-only drug is the direction needed in the U.S. to prevent meth manufacturing and free up precious law enforcement resources. This alternative may seem appealing, but as with all complex drug abuse problems in our society, there are no simple “solutions.” This is especially true when you consider that cold and allergy medicines containing pseudoephedrine serve legitimate consumer needs and the illegal diversion and abuse of prescription drugs is the nation’s fastest growing drug problem.

Two states, Oregon and Mississippi, have passed laws making PSE available exclusively by prescription. Twenty other states considered similar legislation in 2011, but none of the proposals passed. Meanwhile, seven more states signed on to the NPLEx system, bringing the total number of states utilizing electronic tracking to 17. While Oregon and Mississippi report reductions in meth labs, their prescription-only laws may not be the only contributing factor. For instance, Oregon has experienced a 98% drop in meth labs since enacting the nation’s first PSE by prescription only statute in 2006. States surrounding Oregon also report meth lab reductions of 93% to 99% during the same period. In Mississippi, meth labs have dropped 66% since it enacted its legislation in 2010. However, more recently, Mississippi meth lab reports have begun rising.

**Interstate Connectivity**

One law enforcement user says: “It's (NPLEx is) working great for targets that are purchasing pseudo pills only in the State of Iowa. However, being assigned to an office that borders the State of Nebraska, I still have to obtain records from each store to find the actual amount of purchases made. I wish the State of Nebraska would get NPLEx.” Although Nebraska has signed legislation to join NPLEx since this comment was made, many other states have not done so yet. Iowa still has three border-states not connected, leading to concerns about people smurfing in those states. Since Illinois, Missouri, and now Nebraska have joined NPLEx, it will prevent even more smurfing across borders shared with Iowa. When a person in southern Iowa crosses the border into Missouri to purchase pseudoephedrine, they will be blocked, just as if they would be in Iowa.

**Administrative Rules**

ODCP is currently working with the Iowa Board of Pharmacy to amend administrative rules regarding technical issues with PSE tracking, to align with how the system actually works.
Conclusion

As one of many approaches required to meaningfully address the complex challenges presented by methamphetamine manufacturing, Iowa’s Pseudoephedrine Tracking System (NPLEx) is a very good tool for mitigating some of our current meth threats.

The more states that implement the NPLEx system, the better it will work to prevent border-hopping by meth cooks and those that work for them as smurfs. Increased interstate connectivity would be a good next step in combating meth manufacturing in Iowa and beyond.

While not a silver bullet, electronic pseudoephedrine tracking prevents a sizable amount of potentially hazardous meth lab activity, thereby helping to make our communities safer places for Iowans. This system also helps law enforcement officials conduct more thorough and efficient investigations into meth cooks and their law-breaking accomplices. And, importantly, the NPLEx system assists pharmacists in dispensing legal amounts of cold and allergy medicines to Iowans in need of treatment.

One lesson learned from combating methamphetamine and other drugs is that the target is constantly changing. As the meth problem mutates in Iowa, we must prepare to change our response. All viable strategies must be considered in the search for better ways to protect Iowans from the dangers of meth manufacturing, trafficking and abuse.