

Response to the Juvenile Heroin Abuse Epidemic: Recommendations for Parental Education Programs
Conducted by Local Law Enforcement

A Seminar Paper

Presented to

The Graduate Faculty

University of Wisconsin – Platteville

In Partial Fulfillment

Of the Requirement for the Degree

Master of Science in Criminal Justice

By

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August 2014

Acknowledgments

I want to thank my wife, Linda, for all of her support through this process. Even during deployment overseas, I continued to work through this program to accomplish my goal with her strong, unshakeable support. I also want to thank my dad, Dan, for his influence on my life not only through his military service, but also through his desire to seek higher education. I am truly blessed by the Lord above for the outstanding people He has placed in my life.

Abstract

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Statement of Problem

Drug abuse by juveniles is on the rise across the United States, especially with the injectable opiate Heroin. Heroin abuse by juveniles has dramatically increased between 1996 and 2006 (Branson, Harrell, Subramaniam, Clemmey, & Fishman 2012). With the average illicit substance using juvenile first experimenting with heroin at 14.8 years of age, concerns of how to address this growing epidemic with our nation's youth is becoming a primary focus of law enforcement agencies and school districts across the country (National Institute of Drug Abuse, 2014). While municipalities are attempting to combat this epidemic through juvenile drug courts and court-ordered programs, there is still a significant percentage of juvenile offender recidivism. Substance abuse programs and monitoring programs, such as probation and parole, have helped reduce the number of violent juvenile offenders that abuse opiates. However, the best proactive approach is parental education. Parents must be informed of the dangers of heroin abuse and the warning signs that their children display as soon as possible to provide the best possible outcome.

Methods of Approach

The main method of approach was a thorough review and analysis of secondary data consisting of related empirical, statistical, and theoretical findings. The findings were utilized to determine the current needs of law enforcement agencies and, based on these needs, generate proposed recommendations for more effective proactive agency, school and parental education programs. Information on juvenile substance abuse and associated behaviors, recidivism rates, existing treatment

methods, and suggested improvements to treatment programs were gathered from peer reviewed scholarly journals, various text books, as well as multiple internet sources. These sources included, but were not limited to the following: National Criminal Justice Resource Service, the Federal Bureau of Investigation's Uniform Crime Reports, Waukesha County Government website, Milwaukee County Government website, State of Wisconsin Government website, and US Department of Justice-Bureau of Statistics.

Findings

Through the review of numerous drug educational programs, it is imperative to remember that not every program will benefit every single community. The ability for local policing agencies to take bits and pieces to mold and develop their own relevant drug education program for parents of at-risk youth is vital in combating drug abuse at early stages. The more informed parents of young children are about the dangers of heroin and the growing number of heroin-related juvenile deaths, the better chances the child will learn coping and refusal skills to avoid choosing to experiment with illegal drugs. One aspect of the recommendations that can be very beneficial is developing a 'petting zoo' of drug paraphernalia and actual narcotics for parents to observe only. This will ensure they understand what drug-related items actually look like in person, rather than through pictures. Another recommendation that can prove to be extremely useful is have subject matter experts such as district attorneys, Drug Recognition Experts and psychologists to present information to parents of at-risk youth about signs, symptoms and dangers of substance abuse. Further research is still needed to better identify potential risk factors for adolescent drug abuse, specifically in the mental health field. However, law enforcement will continue to struggle with catching up with the ever changing juvenile drug scene.

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Section I: Introduction

Statement of Problem

In 2013, the state of Wisconsin experienced a record 227 heroin-related deaths, which is nearly ten percent higher than the previous year. Most concerning of all is that a significant number of these heroin overdose deaths involved juveniles. Heroin abuse by juveniles has dramatically increased between 1996 and 2006 (Branson, Harrell, Subramaniam, Clemmey, & Fishman, 2012). With the average illicit substance using juvenile first experimenting with heroin at 14.8 years of age (National Institute of Drug Abuse [NIDA] 2014), concerns of how to address this growing epidemic with our nation's youth is becoming a primary focus of law enforcement agencies and school districts across the country.

Purpose of Study

As juvenile drug abuse trends continue to climb, law enforcement agencies are scrambling to develop proactive programs to reduce juvenile drug use and criminal activity. Utilizing data from the Uniformed Crime Report, drug courts throughout the state of Wisconsin and peer reviewed research in the field of adolescent drug abuse, key factors can be identified that are linked to juvenile substance abuse. Once these triggers are identified, programs for parental education can be developed by local law enforcement agencies. With these programs in place, law enforcement agencies can use them to develop their own educational programs for parents to assist them in better responding to juvenile drug abuse.

Current drug trends are showing a dramatic increase in heroin use by juveniles while the use of prescription medications, such as Oxycontin and Methadone, are declining since heroin is far cheaper to purchase and presents the same effects (NIDA, 2014). Since the US justice system is more of a reactive force, steps need to be taken to develop programs at the local agency level to help prevent youth from

experimenting with illicit substances through educational programs. After conviction, programs need to be readily available for treatment of these juveniles to lessen, if not reduce all together, the recidivism rates. There is even potential to reduce the amounts of heroin-related drug overdose deaths, as well as growing numbers of Len Bias cases. Leonard, or “Len” Bias was a very prominent college basketball star that was drafted in 1986 to the National Basketball Association. Unfortunately, Bias died from a cocaine overdose and the parties responsible for supplying the illegal drug were charged with reckless homicide. Since then, cases involving drug overdose deaths where the suppliers are arrested and charged with homicide are known as Len Bias cases (Wisconsin Legislative Counsel Staff, 1998). The purpose of this project is to provide recommendations to include program implementation for law enforcement agencies for parental education, as well as educating school-aged children on the dangers of heroin addiction.

Methods of Approach

The main method of approach will be a thorough review and analysis of secondary data consisting of related empirical, statistical, and theoretical findings. Information on juvenile substance abuse and associated behaviors, recidivism rates, existing treatment methods, and suggested improvements to treatment programs will be gathered from peer reviewed scholarly journals, various text books, as well as multiple internet sources. The review will be utilized to generate proposed recommendations for more effective proactive agency, school and parental education programs.

With the review of current drug trends, recidivism rates and law enforcement responses to the heroin epidemic, recommendations submitted in this paper will focus on development, implementation and improvements on existing parental education programs of heroin-related juvenile substance abuse. With more stringent drug laws associated with heroin possession and/or paraphernalia, as well as the availability of in-patient treatment programs, the chances of reduced recidivism levels of heroin-related

violent and non-violent crimes could potentially decrease. Even with the little known and rarely researched topic of juvenile heroin use, a proactive approach of educating parents early enough in their children's lives by their local law enforcement agency of the signs/symptoms of drug use, then there are significant possibilities that juvenile substance abuse can be caught early, are addressed through treatment and heroin-related juvenile crimes can be reduced.

Limitations

There are limitations to the recommendations proposed for a parental drug education program. First, these are recommendations only and a more thorough process is needed to completely develop and implement an educational program such as this. Secondly, since this program is not actually being used in a community, it is difficult to show how effective the program could potentially be. This is especially true without a longitudinal study. Lastly, human learning is based on many factors, as can be explained with various learning theories and conditioning. The recommended program may work for some parents in one community and not for others. Again, without actual implementation, it is difficult to show if the recommendations could be used universally in every community.

Section II: Literature Review

The following literature review is broken down into multiple sections, which consist of a brief but in-depth explanation of what heroin is, how it is commonly used and the effects of long-term use. Also included in this section are statistics on juvenile heroin use, diagrams that display visual representations of these trends, as well as programs from various locations that have been implemented and shown to be successful in educating parents on the signs, symptoms and ways to address the growing use of heroin by adolescents in the United States.

Definition of Heroin

One of the most addictive and highly lethal of any narcotic, heroin is an opiate drug that is derived from morphine. Morphine is a naturally occurring opioid which is derived from the seed pod of the poppy plant. Poppy plants are found mostly in South America, with variations also located in Southeast Asia. While commonly in a white or brown powdery form which are more pure, Heroin can also be found in a black, sticky substance call 'black tar heroin' (Heroin, 2013). Black tar heroin is mostly made in Mexico and is funneled illegally into our country. This highly addictive substance can be injected directly into the blood stream, inhaled or snorted, and smoked. Usually, the purer forms of heroin are snorted or smoked, as many addicts prefer not to intravenously inject this drug (Heroin, 2013). The impure forms tend to be dissolved or diluted using a spoon with a filter to liquefy the substance before being placed in a needled syringe. Not all injections are intravenous; sometimes, addicts will inject into muscle tissue or directly under the skin to allow for an even longer 'high'.

Once heroin is in the body, the drug will bind to and activate receptors in the brain called mu-opioid receptors or MORs (National Institute of Drug Abuse, 2014). The NIDA explain that naturally occurring chemicals in our body called neurotransmitters bind receptors throughout the brain and body to regulate pain, hormone release and feelings of well-being. When the MORs are activated, the

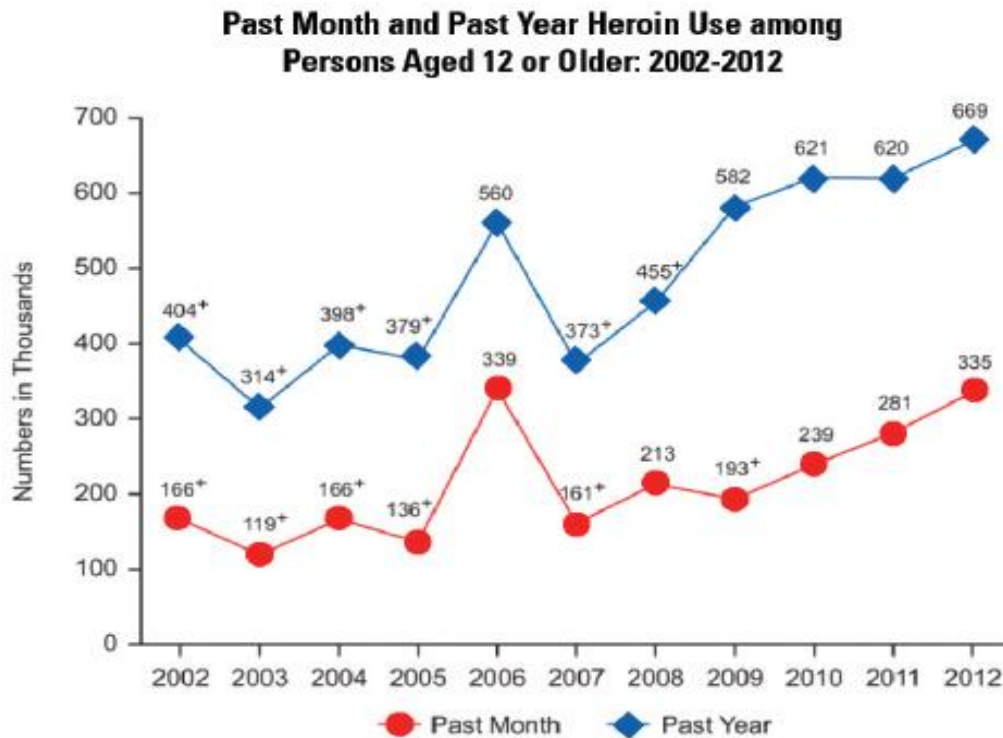
stimulated reward area of our brains release dopamine which causes an immediate feeling of pleasure. While dopamine is released throughout the body, the ingested heroin is converted to morphine inside the brain itself. This is where the user will feel an intense 'rush', followed by flushing of the skin, dry mouth, constricted pupils and other immediate symptoms of narcotic use (NIDA, 2014). Heroin use will also cause the user to feel drowsy for several hours while their mental function, heart function and breath function all slow down, sometimes to the point of the user's life being placed in a dangerous situation (NIDA, 2014). Constant activation of the opioid receptors through exterior means, such as ingesting heroin or other narcotics, can have severe long-term health problems.

Often times, first time users or users that have been abusing heroin for years can easily overdose on this narcotic. An extremely large dose of heroin will cause the user's heart rate to decrease rapidly, as well as their respiratory function, which causes the user to become unresponsive. If intervention by medical professionals is not quick during an overdose, it is quite common that the user will die from a heroin overdose. However, medical advancements have led to the development of an opioid receptor antagonist that can counteract the effects of an overdose. This miracle drug is called Narcan. According to the National Institute on Drug Abuse's 2014 edition specifically on this illicit narcotic, Narcan works by "rapidly binding to opioid receptors, preventing heroin from activating them" (p. 5).

Regardless of the method of consumption, many severe and potentially fatal medical complications arise from heroin use. Obviously, the most common medical complication is that of addiction, which is quickly followed by infection of the heart lining, liver and kidney disease, bacterial infections, nausea and vomiting (NIDA, 2014). For the intravenous injection users, there are extremely high risks of collapsed veins, infectious diseases such as hepatitis and HIV due to shared needles, as well as abscesses and possible amputation of severely infected limbs with frequent injection sites (NIDA, 2014). Even with these horrific medical complications, the use of heroin by persons as young as 12

years of age is on the rise. Figure 1 shows how since 2002, a sharp increase in heroin consumption is sweeping across the nation in the hundreds of thousands (NIDA, 2014). While heroin abuse is alarming to begin with, the thought of prepubescent children and teenagers using, abusing and dying from this drug needs to be a primary focus of law enforcement agencies across the nation. With a very brief explanation of what heroin is and what its physiological effects can be on the human body, the epidemic of adolescent heroin abuse will be discussed in the next section.

Figure 1: Heroin use among adolescents 2002-2012



Source: National Survey on Drug Use and Health: Summary of National Findings, 2012.

Source: High school and youth trends (n.d.). In *National Institute of Drug Abuse*. Retrieved March 5, 2014, from www.drugabuse.gov

Adolescent Heroin Use

News headlines include stories involving young, prominent high school or college-aged students suddenly passing away due to an overdose on heroin. Many of these incidents are due to recreational use of this powerful opiate drug and are often accidental. Even with the limited data of adolescent substance abuse, there has been data collected from drug treatment facilities where juveniles have sought treatment and refuge from this addiction. The Treatment Episode Data Set, or TEDS report (2007), stated that “of the approximately 132,000 adolescent substance abuse treatment admissions in 2007, slightly more than 1,600 reported heroin as a primary, secondary or tertiary substance of abuse” (p. 1). Of these admitted adolescents, the average age was 14.8 years old with the age of first heroin use being 16.3 years (2007). Also, the vast majority of these adolescent heroin users were Caucasian males, with a small percentage of Hispanic males and slightly less than half of all admitted juveniles were female (2007). It was interesting to note that the TEDS report stated 33 percent of these teens were referred to substance abuse programs through the criminal justice system, which explains that these children were involved in some form of criminal activity that led to a conviction (2007). The TEDS report also showed that the common route of administration of heroin was through intravenous injection, or 48 percent of the admitted juveniles while 32 percent preferred inhaling the crushed, powdery form of this narcotic (2007).

Similar information about characteristics of heroin abusing teens was observed by the 2004 research conducted by Gordon, Mulvaney and Rowan. They highlighted that juvenile heroin use increased dramatically from the early 1990’s to the early years of the new millennium (2004). Utilizing 97 adolescents admitted for heroin dependence in various inpatient facilities in multiple states, as well as the national Monitoring the Future (MTF) survey, the authors observed heroin abuse by teens doubled in the 1990’s before leveling out in 2001 with 0.9% of all ninth and twelfth grade students using this illicit narcotic (Gordon et al., 2004). The authors also discovered a 258% increase from 1994 to 2001

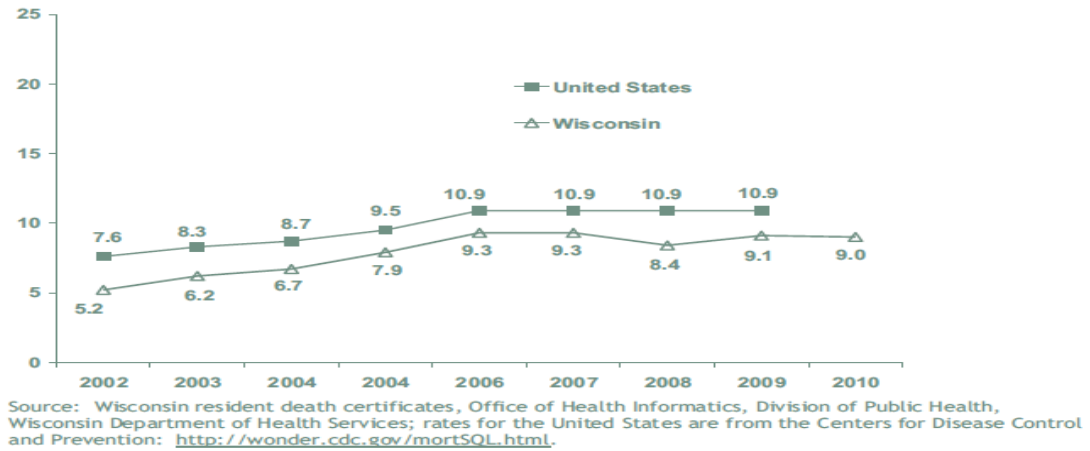
in the number of heroin-related emergency room visits by users falling into this group (2004). The sample group of this research showed predominantly young, white males with an average age of 16 and from middle-class homes were the primary abusers. Gordon et al. determined these patients were from middle-class families due to payment for treatment being 78% covered by private health insurance with an additional 20% being paid privately (2004). With limited information on juvenile heroin abuse research, Gordon et al. did provide further insight than the previously mentioned TEDS report. The authors learned that the average duration of heroin abuse by the 97 adolescents in this sample was 13.37 months. The researchers also discovered that the predominant white male heroin user average six bindles of heroin use per day compared to female patients that used roughly four bindles per day (2004). Furthermore, 53.6% of these patients admitted to using heroin intravenously, while only 42.3% stating they inhaled the drug with 4.1% smoking it (2004). Gordon et al. did mention how their data was different from TEDS reports in that the author's research was obtained from privately-funded inpatient treatment facilities, whereas TEDS reports obtained their data from publicly funded treatment programs (2004). However, Gordon et al. research showed an alarming explanation of how female heroin abuse in on the rise due to the ease of intranasal administration rather than intravenous injection. Society is apparently making heroin use "chic" for adolescent girls that are struggling with eating disorders to obtain their desired, albeit unhealthy, body figure (2004).

In 2012, the Wisconsin Department of Health Services conducted a study on alcohol and drug use that included, but was not limited to, heroin abuse on a state-wide level. According to the data collected, Wisconsin rates of illicit drug consumption, abuse and deaths caused by drug overdoses were about the same, if not lower, than the national average (Wisconsin Department of Health Services 2012). Figure 2 included in this paper also shows a visual representation of these findings, per the National Survey on Drug Use and Health (2012). Another discovery recovered from the collected data

showed that between 2005 and 2010, drug-related deaths involving heroin more than doubled (Wisconsin Department of Health Services 2012). Figure 3 also shows this increasing trend.

Figure 2: Drug-related deaths, Wisconsin and the US (2002-2010)

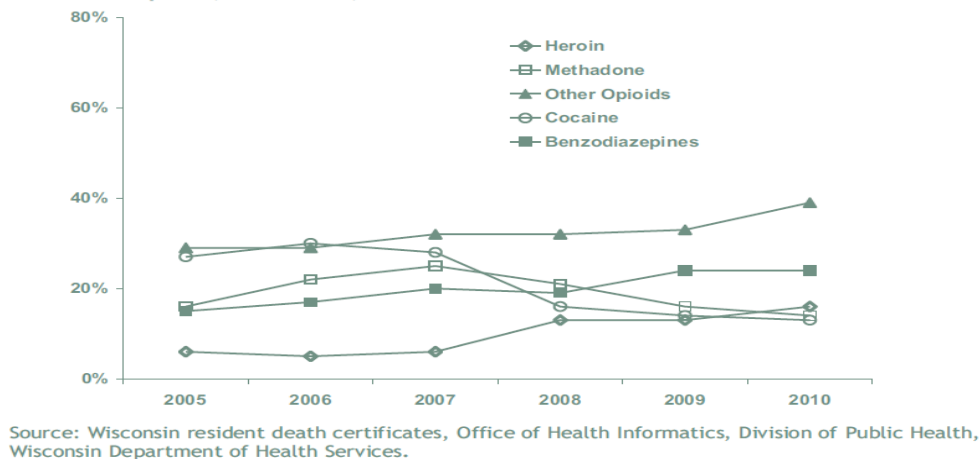
Figure 14. Drug-related deaths, age-adjusted rate per 100,000 population, Wisconsin and the United States, 2002-2010



Wisconsin Department of Health Services, Division of Public Health and Division of Mental Health and Substance Abuse Services. *Wisconsin epidemiological profile on alcohol and other drug use, 2012* (P-45718-12). Prepared by the Office of Health Informatics, Division of Public Health, in consultation with the Division of Mental Health and Substance Abuse Services and the University of Wisconsin Population Health Institute. September 2012.

Figure 3: Drug-related deaths in Wisconsin (2005-2010)

Figure 15. Proportion of drug-related deaths involving opioids, cocaine and/or benzodiazepines, Wisconsin, 2005-2010



Wisconsin Department of Health Services, Division of Public Health and Division of Mental Health and Substance Abuse Services. *Wisconsin epidemiological profile on alcohol and other drug use, 2012* (P-45718-12). Prepared by the Office of Health Informatics, Division of Public Health, in consultation with the Division of Mental Health and Substance Abuse Services and the University of Wisconsin Population Health Institute. September 2012.

Current Educational Programs on Adolescent Heroin Use

While law enforcement agencies and school districts are trying to be proactive in preventing adolescent drug use, it is inevitable that children will be pressured into illicit drug use. Because of this problem, many educational programs have been developed since the 1980's. One of, if not the most well-known program is the Drug Abuse Resistance Education project, or D.A.R.E. Developed in Los Angeles, California in 1983, the D.A.R.E. project is one of the most well-known drug education program being utilized by over 75 percent of school districts nationwide, as well as in 43 countries around the globe. D.A.R.E. spread rapidly throughout school districts due to the 1986 Drug-Free Schools and Communities Act passed by the United States Congress. By 1994, D.A.R.E. was the most widely used drug education program in the country while spreading internationally. D.A.R.E. is a curriculum taught by law enforcement professionals in a school setting for 17 lessons. Each lesson consists of teaching adolescents to avoid peer pressure, learning affect refusal skills, building self-esteem and educating them on the consequences of drug and alcohol abuse. However, many researchers have studied the D.A.R.E. project and their research has shown that the program is largely ineffective. One such example of research conducted by West and O'Neal in 2004 where, via a meta-analysis, determined that there was marginal success rates of D.A.R.E. participants when compared to their control group.

Another program of interest is the "Choose to Refuse" Heroin and OxyContin Prevention Education Program, or CTR, which was created and implemented in the state of Massachusetts by the Juvenile Justice Staff of the Essex County District Attorney's office (O'Brien & Lawrence, 2006). According to O'Brien and Lawrence, the district attorney's office observed that much of their criminal case load consisted of events where heroin and/or OxyContin was being used by the arrested party. Realizing they had a growing epidemic of drug abuse on their hands, the juvenile justice staff developed the CTR program. The CTR program's mission is to "deliver a clear message to young people in the county regarding the legal, social and health issues related to using these substances, and uses multiple

teaching techniques” (O’Brien & Lawrence, p.5). CTR uses various teaching techniques that are derived from the Inoculation Theory, which is based on “inoculating an individual with knowledge about a potentially harmful situation and arming that individual with the appropriate refusal techniques can prevent that individual from being harmed” (O’Brien & Lawrence, p. 5). The techniques described by the authors are taught through various methods, which includes question and answer situations, role-play simulations, the use of multi-media in presenting topic-related information and even homework assignments. CTR has great potential in that it is built around a research-based theory, focuses on multiple languages, social situations and lifestyles of the citizens of Essex County, as well as allows cultural and learning adjustments in a classroom setting. ‘Chose to Refuse’ is such an adaptable program that it can be used outside of Massachusetts and incorporated into school districts across the country, just as the D.A.R.E. program was. However, there are limitations which include a lack of training program for further development of facilitators and no developed follow-up system to the six session program (O’Brien & Lawrence, 2006). Most importantly, if the developers of CTR want to show their program is effective, the authors recommend the development of a formal outcome evaluation to determine if CTR actually reduced heroin and OxyContin use for students 13 to 18 years of age (2006).

The last notable program for review is the Communities That Care, or CTC, prevention system. Fagan, Hanson, Briney and Hawkins conducted research to determine the effectiveness of the Communities that Care program in 24 communities (2011). The authors explain that CTC is conducted in five phases, which include assessing community readiness for prevention efforts, forming a prevention coalition, using data to assess prevention needs, choosing prevention policies and programs to address these needs, as well as implementing new policies and programs while monitoring the impact of said programs (2011). Communities were found to have implemented multiple programs to address the rising level of adolescent drug use, which included parental education programs and in-school programs. Fagan et al. compared the 12 communities two years following the implementation of CTC and learned

the CTC sites were far more likely than the control group to monitor the quality of the implemented programs, which led to a higher amount of parents and children being educated on drug abuse (2011). However, a drawback to this program was learning parent training classes were only offered once or twice a year to a small number of families (Fagan et al., 2011). While the program definitely allowed the CTC communities to implement more programs geared towards the children, parents were mostly left uninformed.

Public Campaigns for Drug Education

Since 1971, the federal government has created initiatives that focus solely on eradicating drug use. President Richard Nixon was quoted saying that drug abuse was “public enemy number one” and since, the Office of National Drug Control Policy, or ONDCP, was developed to address the growing issue. During the Vietnam War, a large percentage of servicemen were becoming addicted to heroin while in theater. While this epidemic continued to spiral out of control, the federal government under President Nixon created the Drug Enforcement Administration in 1973, which is now one of the largest federal agencies that combat illegal narcotics entering our country. Drug abuse and the flow of illicit drugs into the country continued to climb even with these efforts. In 1982, Vice President George H.W. Bush, who had been the director of the Central Intelligence Agency, began pushing to have the CIA involved with counterdrug operations on US soil and abroad. During this time in history, First Lady Nancy Reagan conducted her ‘Just Say No’ national campaign from 1982 to 1989. This campaign focused on educating the nation’s youth about the dangers of drug abuse and how to stand up against drugs by refusing to experiment with them with various methods of saying “no”. However, even with increased public awareness of the war on drugs through ‘Just Say No’, there has never been any direct relationships between reduced drug use and Nancy Reagan’s campaign.

Another anti-drug campaign with federal oversight is the current 'Above the Influence' campaign, or ATI. While this campaign is no longer supported by the federal government and is now a non-profit organization, ATI was re-launched in 2010 by the National Youth Anti-Drug Media Campaign. Since that time, ATI has tracked the impact of the program with results of 85 percent of teenagers in the US are aware of the campaign, with 75 percent of teenage respondents stating that the ATI message is focused on "someone like them" (ATI, 2012 p. 1). ATI partners with dozens of other youth-serving programs throughout the nation to provide outreach programs, webinars, workshops and the commercial ads seen on basic and cable television. Some of these partners include the Boys and Girls Club of America, Partnership at Drugfree.org and many others. Because of the national-level attention ATI, independent empirical research was conducted to determine the campaigns effectiveness outside of what ATI had determined. In fact, three separate published studies concluded that youth exposed to ATI were less likely to associate with drugs and had stronger anti-drug beliefs (ATI, 2012). ATI has shown to be such a successful nationwide campaign that the program received awards for prolonged effectiveness for at least five years (ATI, 2012).

Lastly, the state of Wisconsin has implemented their own informational campaign to combat the growing epidemic of heroin abuse in the state. According to the Wisconsin Department of Justice's website, their data received from 56 county coroners, which represents every county in the state, has shown a 50 percent increase of heroin-related deaths from the year prior. The total was 199, which is quite different from the average of 29 heroin-related deaths each year from 2000 to 2007. In February 2014, the Wisconsin Heroin Working Group, or WHWG, prepared an assessment of information and data obtained from various law enforcement agencies across the state from January 2003 to January 2014. The intent was to evaluate the long-term developments, as well as current trends, in heroin trafficking, heroin movement within the state and current trends of abuse (WHWG, 2014). The overall study showed that since 2008, heroin abuse in Wisconsin has steadily increased and is expected to

continue, as well as opiate-based prescription pill abuse, which is what the authors explain is the gateway to heroin use (WHWG, 2014). During this study, the Wisconsin DOJ realized steps needed to be taken to inform the public of the growing heroin epidemic and implemented 'The Fly Effect' in late 2013. 'The Fly Effect' is a multimedia campaign geared towards educating teens, young adults and others on the dangers of heroin use. The theme of the campaign was inspired by a nursery rhyme about how an old lady swallowed a fly and how the effects of the act spiraled out of control with undesirable consequences (Wisconsin DOJ website). The campaign's website is interactive for the users, explains potential outcomes of heroin use, as well as provides stories from parents of children who succumbed to heroin overdoses and resources for treatment facilities. However, there is currently no empirical data that has shown the effectiveness of this fairly new program.

Current Educational Programs for Parents

Each of the reviewed programs or campaigns have positives and negatives regarding their methodologies and implementations to help educate and prevent adolescent drug abuse. However, each of these programs has one vital flaw: they only focus on the child and not the parents. A child's parents or guardians are the first line of defense against juvenile drug abuse. While hundreds of programs exist to address adolescent drug use after the child is already abusing, there are very limited educational programs for parents to learn about illicit drugs and early warning signs of abuse. One example of a program directed towards parents is the Parent360 program, which is one of five key programs that make up Police and Communities Together, or PACT360. According to their website, pact360.org, the program is funded through the Bureau of Justice Assistance and has been implemented in over 30 communities across the nation, as well as internationally. Specifically, Parents360 is a community education program that is directed at parents through a presentation called "Parents: You Matter". Presenters of the program work closely with local law enforcement, educators and substance abuse counselors to provide the most up-to-date information to parents. The intent is for parents to

recognize the dangers of drug use and allow their children to come to an educated source with questions about drugs and alcohol. These presentations consist of a PowerPoint containing numerous slides with generalized information and graphs. Also included are numerous pictures of actual illicit drugs and the administration methods, too include common insulin needles and tourniquets. With the information in simple terminology, the presentation provides parents with the opportunity to understand what these drugs are, how they are used, the affects they have on the human body and ways of helping them to educate their children about the dangers of drugs. Surprisingly, the information contained in the presentation is also very useful in educating new police officers, medical personnel and educators. However, while Parents360 is an excellent example of the local community working with parents to educate them, this is only one program that focuses on parents and only a minute amount of programs are available for adults raising children.

Developing a Parental Drug Education Program

Like any project, many things must be considered when developing and implementing a parental educational program about illicit drugs. In April of 2012, PACT360 published an implementation guide for interested communities to incorporate the program. While this is only one example, the steps taken to develop and implement the program are basic and can be used as a template for implementation of any type of community-based program, especially ones that focus community efforts toward reducing juvenile drug use through educational means. Like the old adage goes, it takes a village to raise a child and educating the adult community of the effects of drug addiction is a part of that philosophy.

The first steps consist of locating similar-minded individuals and developing a group that share the same desire to make a difference in the community and work together to achieve their goals. This aspect of develop is vital because it will make up the foundation of the support group behind the

program. Reaching out to local police departments, associations such as the Parent Teacher Association, local school boards with principals and teachers, substance abuse treatment professionals, as well as church congregations are ways of not only finding more interested parties, but free solicitation of the idea to implement a new program. This process will lead to learning what is already being done to address the issue in the community and will assist in determining the scope of the program if what is already in place is not addressing the desired topic or topics. Also, if programs already exist in the area, it is wise to work alongside these established groups rather than to compete with them, as focus will be lost on the topic at hand (PACT360, 2012). Networking is a vital task when attempting to develop a program from the ground, up. These resources include locations for presentations and meetings, electronic measures such as website development and computers, as well as budgeting for expenses.

The second step of this process consists of presenting the proposed program to organizations that will assist in the presentation to the community. Typically, the most sought after organization for resources and support is the local law enforcement agency. Many of these agencies are already actively engaged in efforts to curb drug abuse in their jurisdictions through numerous methods, such as partnering with The Partnership of Drugfree.org or D.A.R.E. programs. These departments also have federal funding for such programs, which can also be used to assist in the implementation of proposed community programs such as PARENT360 or similar programs.

Next, training sessions for the presenters of program material must be provided to ensure these individuals are subject matter experts. Practicing the presentation multiple times will ensure the presenter knows the material thoroughly and can answer any potential questions about the material. After the presenters are identified and trained, the next step is to promote the project to the community. Posting flyers, using local media such as newspapers and websites, and providing literature to local organizations such as faith-based groups or school-related associations are the best ways to

inform the public of what the program has to offer. Working closely with the local law enforcement agency is always the best option, especially when the program focuses on drug-related topics. Once all of these steps have been accomplished, the final step is to deliver the presentation to the target audience. From there, presenters need to complete event reports to document the number of persons the program was presented to, as well as audience evaluations on things to improve upon. Constant feedback is very informative in constantly molding a program to be more beneficial to the target audience.

Overall, many attempts to educate and prevent juvenile substance abuse have been made over the course of decades in the United States. Hundreds of programs have been developed and implemented at various levels of government, as well as at the local community level. However, with all of the changes to current programs to keep up with the ever changing drug abuse scene, there has yet to be a definitive program that is proven to completely reduce juvenile drug abuse to zero. With new drugs being created through synthetic means and older abused drugs becoming popular again with our nation's youth, concerned parents, educators and others struggle to address the growing epidemic of adolescent drug use. Unfortunately, we find ourselves playing catch up after our youth have died due to a drug overdose.

Section III: Theoretical Framework

While many theories exist on what causes drug-seeking behavior, experts tend to side with learning theories to explain why adolescents choose to use illicit drugs. One of the most widely accepted theory is Bandura's social learning theory from 1977. Other theories include Edwin Sutherland's differential association theory, Robinson and Berridge's incentive sensitization theory and the potential for at-risk youth to show signs of antisocial personality disorder. These theories can then be used to develop an educational program for parents, as there is potential for identifying the factors, such as social or behavioral, that lead to drug-seeking behavior.

Albert Bandura's Social Learning Theory

The programs that have been reviewed regarding drug abuse and prevention all have a theoretical foundation that drug abusing behavior is learned in some fashion. While professionals may not entirely agree on which type of learning theory is the root of drug dependency, all agree that it is a learned behavior nonetheless. One of the most influential learning theories is Albert Bandura's social learning theory, which was presented in 1977 and states that behaviors are learned from the environment around a person by means of observation. By definition, social learning theory states that knowledge is gained by a cognitive process that occurs in social contexts and may occur solely through observation, even in the absence of reinforcement. Additionally, learning also can occur through the observation of rewards and punishments for actions and decisions taken (Bandura, 1977). Bandura is a Stanford psychologist that is renowned for his contributions to personality psychology and social cognitive theory, as well as his development of self-efficacy (Funder, 2010). Much of Bandura's theory is built upon the findings of Julian Rotter's theory of expectancy and locus of control. The focus of Rotter's work was how social learning does not focus on the reward itself, but rather on the individual's belief about the reward and/or punishment (Funder, 2010). In other words, behavioral decisions are made

not only because of the potential outcome but also the individual's beliefs of what might happen.

Bandura took Rotter's views a few steps further by developing the idea of self-efficacy, which consists of two parts. First, efficacy deals with the beliefs of whether or not a person has the skills and potential to carry out a specific behavior (Bandura, 1977). Secondly, if this behavior is performed, then outcome expectations develop in relation to whether or not the outcome will be positive (Funder, 2010). There are a few factors that influence the self-efficacy of an individual. Anxiety about performing the task may lead to a decreased level of self-efficacy, as well as a vicarious experience where the individual watches someone else perform the same task and succeed or fail which can also affect self-efficacy (Funder, 2010). There is also past performance results that can determine a level of self-efficacy in that if there were past successes, then the individual's self-efficacy will be higher and vice versa. The higher levels of self-efficacy a person possess, the more adaptable they are to the situations they encounter (Bandura, 1977). Positive results from these encounters strengthen the behavior while negative outcomes force the individual to change their behavior. Bandura was confident that his idea of self-efficacy influenced nearly every behavior a person contemplated performing (Funder, 2010). It is because of this mindset that Bandura developed his theory of Reciprocal Determinism. Reciprocal determinism states that behavior is affected when personal factors, such as gender and beliefs, and the environment all interact together and influence one another (Funder, 2010). This idea of a constant influence of behavior, personal factors and the environment helps anyone, regardless of race, education, religion, etc. to learn specific behaviors. Albert Bandura's greatest example of this was having children watch adults 'assault' an inflatable clown doll called BoBo (Bandura, 1965). The children, having observed the behavior of the adults punching and kicking the clown, copied this behavior by simply watching.

According to Bandura's reciprocal determinism, which was also expressed in the inflatable clown doll test, is that in order for a behavior to be modeled, the individual has to pay attention to the model, retain the observed information, possess physical traits to carry out the behavior and believe the action

is a worthwhile reward (Funder, 2010). While this example focuses on aggressive behavior, Bandura's theory explains that any behavior can be learned from observation and it is up to the individual observing said behavior to carry out the action only if there are incentives or disincentives for doing so (Funder, 2010). Therefore, reciprocal determinism can be understood as the system which an individual's actions are determined by observation, choice to act on the behavior and the environment in which to carry out the behavior.

The example of the BoBo doll study leads us to Bandura's most influential aspect of his social learning theory. This portion of the theory is called Observational Learning and is defined by its name (Funder, 2010). Learning behavior is done by simple observation, determining if the task can be done, what the reward or punishment may be and conducting the task. If the task was successful, self-efficacy develops a higher level of confidence in the task. If the task fails, then self-efficacy will be lower and there will be doubt in the person's ability to perform the task in the future (Bandura, 1965).

Edwin Sutherland's Differential Association Theory

A second relevant learning theory focuses on criminality of juveniles. In 1947, Edwin Sutherland proposed his differential association theory to explain how criminal activity is learned. Sutherland's theory states that "criminality is learned in interaction with others in a process of communication. Specifically, the hypothesis is that criminality is learned from observations of definitions favorable to law violation" (Cressey 1954). In a group situation, a person can learn the techniques required to commit a criminal act through observations of others, as well as the motives, attitudes and rationalizations behind the acts (Cressey, 1954). Possibly the single most important aspect of Sutherland's theory is that the behavior is learned in a social interaction setting. While his theory focuses on criminal behavior in a generalized sense, differential association theory can be applied to juveniles with drug-seeking behavior. If a group of juveniles choose to experiment with illicit drugs, such as heroin and learn from one another

the methods of obtaining the drug, methods of ingestion and the rationalization to continue abusing the drug, then Sutherland's theory can easily be applied to this example. Matsueda expanded on Sutherland's theory and explained in 1954 that the "crime rate of a group is determined by the extent to which the group is organized in favor of crime versus organized against crime" (p. 4). Therefore, if a group of adolescents have made a rationalized decision to abuse heroin, which is a crime, then their learning from each other will progress from drug experimenting to full-blown drug addiction.

Other Theories of Drug-Seeking Behavior

While there are hundreds of proposed explanations of human behavior, a few are worth mentioning with relation to drug abuse and addiction. First, the incentive sensitization theory was introduced by Robinson and Berridge in 1993. Robinson and Berridge defined sensitization as "hyper-sensitivity to the incentive motivational effects of drugs and drug-associated stimuli" (2008, p. 3137). In other words, sensitization is a form of non-associative learning where there is an increase in a person's response to continuous exposure to a particular stimulus. Therefore, the basis of this theory is repeated exposure to drug activity which make an individual susceptible under certain circumstances will physically change brain cells to develop an incentive-based response to the stimuli, or illicit drug of choice. The authors theorize that if drug-associated stimuli is introduced, it will pair with drug administration and produce sensitization.

The last theory of drug abuse-seeking behavior worth reviewing focuses on psychological disorders rather than learning theories. Washburn, Romero, Welty, Abram, Teplin, McClelland and Paskar conducted a longitudinal study on 1,112 detained juveniles to determine their probability of developing antisocial personality disorder, or APD (2007). This mental disorder affects the way a person thinks with regards to how they perceive situations and relate to others in a dysfunctional, and destructive, manner. People diagnosed after the age of 18 with APD tend to manipulate others, lie, act

impulsively and abuse drugs. Many theories exist on how a person develops APD and one such theory is how, in our adolescence, we develop a conduct disorder, or CD. Juveniles with CD have behavioral and emotional patterns of violence and destructiveness. More often than not, a subject with CD will abuse illicit drugs as an adolescent. In both disorders, the person is susceptible to drug abuse. Washburn et al. discovered that the association between APD and the use of an illicit drug was stronger than the association between CD and APD (2007). The authors also explain substance abuse may increase the risk of being diagnosed with APD because it “increases exposure to deviant peers, increases the need to obtain money for substance use, and can impair decision making” (2007, p. 222).

Application of Learning Theory to Parental Education Programs

With a better understanding of how humans learn, these learning theories can be applied to parental education programs to assist parents and/or guardians in teaching their children the dangers of heroin and other illicit drugs. Parents can take the learning theories of Bandura and Sutherland and can apply them when teaching their children the dangers of substance abuse. For example, if parents create a role-playing scenario with a child at an age of understanding where one parent acts as the bully and/or dealer while the second parent responds with good coping and refusal skills. Once the scenario is completed, the parents and child would then talk through the situation, followed by the child entering into the role-playing scenario. While Bandura’s model involved violence towards an inflatable clown doll, the child still observed the parents actions and copied them. This learning theory can be applied to this scenario as well. If the juvenile observes the proper way their parents use coping and refusal skills when placed into a situation that involves illicit drugs, the child will be able to model appropriate refusal responses and avoid further confrontation.

To take the role-playing scenario a step further, Sutherland’s theory can be applied to a group setting of similar-aged juveniles for further role-playing situations. Under this theory, placing juveniles

into a group setting where they can observe peers performing coping and refusal skills, there is a stronger chance of children learning than with a one-on-one scenario basis. Also, if there is a rationalized group decision that they will stay drug free, each child will learn various types of refusal and coping skills from one another. This will reinforce what they were already taught by parents in individual role-playing scenarios.

Also, Robinson and Berridge's incentive sensitization theory can be used to potentially change the thought process of younger juveniles and their feelings towards drug use. If there is repeated exposure to drug education by informed parents and role-playing scenarios in peer groups, the child will have stronger responses to avoid drug use each time they are presented the stimuli in the scenarios. Positive reinforcement through praise and reward will help the child develop confidence in themselves, as well as the peers in their peer groups that possess the same rationalization towards drugs. Therefore, after numerous repetitions in various scenarios, the child should be able to cope and refuse with ease when they are put in an actual peer-pressured drug-related situation, whether on their own or in a group setting with similar-minded peers.

Section IV: Recommendations

The information reviewed and research conducted on this topic has shed light on many shortcomings of today's drug education programs for both parents and juveniles. While numerous recommendations can be made for juvenile programs, the focus of this research is to expand more on parental education due to current programs leaving out parents and/or guardians. The programs that were reviewed, such as PACT360, Chose to Refuse and Communities That Care, can easily be expanded upon to incorporate further substance abuse education for parents. To begin, parents of at-risk juveniles need to be educated on the illicit drugs that are frequent in the area they reside in. Inner-city families tend to have a wider selection of potentially abusive drugs, while suburban families may only have a select few of abused narcotics. Either way, every parent, regardless of the socio-economic standing, needs to be aware of every single illicit drug that is available to today's youth. This strongly includes heroin, as heroin abuse is on the rise. One recommendation for this is for local policing agencies to establish a continuously updated website through the local government that assists parents in tracking current drug trends. These trends will show what is being found by police officers and sheriff deputies on their local streets. With this information, law enforcement agencies can develop an easy-to-use and understandable presentation of what these particular drugs are, their origin, what they look like, methods of ingestion and signs/symptoms of use. Similarly, policing agencies can have open sessions at the department where parents can come and see these items. This could be considered a drug 'petting zoo', if you will. While the parents will not have direct access to the drug paraphernalia or the drugs themselves, it is far more beneficial for parents of at-risk juveniles to see these items first hand rather than online or in a book. Part of this 'petting zoo' will include common storage containers of heroin, such as small bindles that look like tiny plastic zip bags with various designs on them, the common insulin syringe that is normally used for intravenous heroin injection, homemade tourniquets, small tin 'cookers' that heroin is heated up in, what a burnt spoon looks like, a plastic 'straw' that is used

to ingest powdered heroin through the nostrils by snorting and many other drug paraphernalia items that parents can potentially come across in their home if they suspect their child of using heroin. Parents must be educated on what items to look for and know what they are if they come across them, which is a large issue with uneducated guardians.

A second recommendation for parental education is having subject matter experts provide insightful presentations immediately following the 'petting zoo'. These subject matter experts can, for example, be highly trained law enforcement officers who specialize in understanding signs and symptoms of heroin use. These elite officers and deputies are known as Drug Recognition Experts, or DRE's. The DRE program was developed in the early 1970's by the LAPD, as their officers continued to encounter impaired drivers with trace amounts of alcohol consumption (The International Drug Evaluation & Classification Program). With the assistance of the medical professional community, to include medical doctors and psychologists, they developed a set of standardized tests that are used today to accurately determine suspected drug types that have cause impairment in the motor vehicle operator. Today, DRE's are called upon constantly by various policing agencies during intoxicated driver incidents where the operator of the motor vehicle involved is clearly intoxicated but no signs of alcohol are present. Intoxicated operators by means of prescription medications and/or illicit drugs, such as heroin, are becoming more common. These professionals can provide parents insight into how they understand the physiological changes in the human body caused by heroin, as well as the observable symptoms. These symptoms of heroin use include pinpoint pupil constriction, slower breathing, dry mouth with flushed skin, as well as nodding off suddenly. A DRE officer is a vital tool to use when educating parents of at-risk juveniles in a program setting.

Another underused, but highly useful subject matter expert are psychologists that are employed by local county governments. An example are the mental health professionals that work for the Waukesha County (Wisconsin) Mental Health facility. These psychologists deal with various mental

health needs, to include drug abuse and addiction. The information they can provide parents of at-risk youth includes signs of drug abuse, as well as inpatient and outpatient treatment opportunities if abuse does occur. Their professionalism will help the parental drug education program expand beyond simply understanding what heroin is and the effects it has on the human body.

Lastly, the use of a school liaison officer for informational presentations is potentially the most useful of all the previously mentioned subject matter experts. School officers work in the trenches, if you will. They are in the schools daily during the school year, as well as at nearly all major sporting events and dances. They are able to observe local youth away from their parents, as well as being able to obtain information through gossip, rumors and basic observation. Many of these officers know which juveniles are experimenting with heroin, other drugs and alcohol, as well as the youth that chose to avoid such behavior. School liaison officers know the local youth better than patrol officers, which is why they are such a vital resource when presenting information to parents.

A third recommendation would be to take parents that have been exposed to this drug education program and have them supervise and guide juveniles in a peer-learning group. Pulling from Sutherland's differential association theory, placing similar-aged adolescents in a group for coping and refusal skills should provide an adequate learning environment for the children. Parents can monitor role-playing scenarios in the group setting and provide information and insight derived from the presentations by subject matter experts, as well as the curriculum of programs such as PACT360 or Communities that care. Not only will this allow youth to learn refusal skills, it will help parents learn to teach their own children the necessary skills to stay drug free.

A fourth recommendation would be for the local policing agency to start a public awareness campaign similar to 'Above the Influence' or 'The Fly Effect' for not only local drug trends, but to inform the public that parental drug education programs are available. While national anti-drug campaigns

have shown some success, not every aspect of the information provided to the public in the campaign is relevant to every area of the country. Local law enforcement teamed up with the county District Attorney's office will have a better understanding of what drug charges are being pursued against juvenile offenders, as well as what drug-related incidents officers are encountering on the street. With technology advancing at historical rates, nearly every human being on the planet is connected to each other through social media and the internet. Many large metropolitan policing agencies, such as Milwaukee (WI) Police Department or Chicago Police Department, have developed their own interactive webpages with smaller jurisdictions starting to do the same. Local communities can then access their policing agency's webpage and learn what current drug-related incidents officers are dealing with. While it may seem similar to a police blotter in the local newspaper, the idea is not to provide names and stories of an arrest. The intent is to have constant updates on what heroin usage trends are occurring in the local community, providing parents with vital information on what to look for in their children if they suspect drug abuse and to advise parents of educational programs through the police department that can address any further questions or concerns regarding suspected drug abuse. Also, simple podcasts posted on the police website about heroin abuse can provide 24 hour access to information for parents when program presentations are not occurring. A department would need to designate one or more officers to this process as an additional duty to ensure updated information on heroin abuse is constantly being posted to ensure the community is receiving the most up-to-date material.

The last recommendation focuses on a mobile education unit for policing agencies. When people think of presentations, often they think of a classroom setting or large auditorium. Some civilian groups go throughout their local community to locate homeless individuals to provide them with the opportunity of food and shelter. Police and sheriff's departments should do the same for our youths. Every agency knows where the local juveniles congregate, which juveniles are drug offenders and which

juveniles are repeat offenders. A small unit of trained officers can be created for this extra duty and their goal would be to travel throughout the jurisdiction to locate delinquent youth and work with them to share the dangers of drug abuse. These officers should not be in official uniforms, as it would create too much friction. Plain clothes officers with unmarked squads would create a more comfortable environment for casual encounters with at-risk youths. If, for some reason, a violation is observed where an arrest needs to be made, a uniformed officer should be requested to make the arrest rather than the unit officers. The intent is to build rapport with these kids, teach and learn from them, followed by taking what the officers learned and implementing that information into the parental education program. Not only will this small unit work with our children, but they will also be able to provide vital data to keep the parental programs up-to-date and relevant.

These are only a small amount of recommendations to assist in parental program education. It is the responsibility of the local community and policing agencies to determine the appropriate program to implement that is relevant to their local community. Unfortunately, there are too many variables to consider to develop an educational program that would be relevant for every community in the country. However, these recommendations can assist law enforcement with providing relevant drug-related information to their community which will assist in keeping parents informed, as well as building rapport with their local population.

In conclusion, all of our efforts to educate our youth on the dangers of drug use, it is inevitable that some will stray towards drug addiction. Still, society must stay vigilant with developing new ways to educate parents of at-risk youth, regardless of their socioeconomic standing and location in our country. Unfortunately, there is no universal drug education program for both parents and youth or public informational campaign that address all of the needs of American citizens. The goal of this research was to explore the illicit narcotic heroin and review the growing epidemic of juveniles abusing, and unfortunately dying, from using this drug. The first section focused on describing what heroin

actually is, where it comes from and what damage ingestion of the narcotic into the human body can do. Next, statistics of adolescent drug use was reviewed starting from the early 1990's to current day. The results were staggering in that over 50% of the juvenile sample of research admitted to experimenting with heroin as young as age 14. From there, current and past drug educational programs such as D.A.R.E. and 'Choose to Refuse' were reviewed, as well as national drug awareness campaigns like 'Just Say No' and 'Above the Influence'. The intent was to determine if there was documented success for reducing juvenile substance abuse through these programs. While the D.A.R.E. program was well documented on its very low success rate, other programs and informational campaigns did show signs of some success. Learning from the successful aspects of prior programs can strengthen police-led drug education programs at a local level. It is imperative to remember that not every program will benefit every single community, as the United States has a diverse population. The ability for local policing agencies to take bits and pieces to mold and develop their own relevant drug education program for parents of at-risk youth is vital in combating drug abuse at early stages. The more informed parents of young children are about the dangers of illicit drugs, especially heroin and the growing number of heroin-related juvenile deaths, the better chances the child will learn coping and refusal skills to avoid choosing to experiment with illegal drugs.

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