Mandated Reporting of Substance-Exposed Newborns

in an Era of Changing Marijuana Laws

by Jess Cochrane

August 31, 2013

in partial fulfillment of the requirements of the Master's in Public Health degree

Tufts University School of Medicine

Adviser: Marcia Boumil

Abstract

This qualitative analysis examines the intersection of two separate sets of policy: Mandated reporting of child abuse & neglect, and the state-level regulation of marijuana, or cannabis. Through policies and laws created to address the needs of infants who are born exposed to controlled substances, substance-exposed newborn (SEN) initiatives provide the focal point at which these two regimes come together. In Massachusetts, where marijuana use by adults has been decriminalized and approved for medicinal use, mandated reporting practices, which require certain professionals to report instances of child abuse or neglect, have not been updated to reflect these recent cannabis law reforms. This report is based on original qualitative research, assessing the gaps in implementation of marijuana reform as they relate to SEN policy, mandated reporting practices, and procedures of the civil child welfare system (DCF) in the Commonwealth of Massachusetts.

Table of Contents

Statement of the Problem

State mandated reporting laws require certain social service professionals to file a report with state child protective services (CPS) agencies when the reporter knows or suspects that a child is experiencing abuse and neglect. In recent years, grounds for mandated reporting of civil child abuse or neglect have been expanded or interpreted to cover a woman's use of illegal drugs during pregnancy,[1] mainly through policies designed to identify "substance-exposed newborns" (SENs) via screening and toxicology testing of pregnant women and neonates.[2] Though drug use during pregnancy does not categorically result in harm to a fetus or newborn,[3] SEN policies have been developed in response to clinical concerns associated with certain prenatal substance exposure, including Neonatal Abstinence Syndrome (withdrawal) resulting from opiate exposure, or Fetal Alcohol Spectrum Disorder resulting from severe alcohol abuse.[4] In Massachusetts, mandated reporters must file a "51A report" when they have "reasonable cause to believe a child is suffering physical or emotional injury resulting from…physical dependence on an addictive drug at birth."[5] In practice, it is common for hospital labor & delivery staff in the Commonwealth to file a 51A report when an infant tests positive for any illegal drug, regardless of whether the child is physically dependent or suffering discernible harm from the exposure.

Yet mandated reporting laws and SEN identification policy are rarely considered by those who advocate for reform of state controlled substances laws. Voters in the Commonwealth in 2008 enacted a law that "decriminalized" possession of one ounce or less of marijuana,[6] though it remains prohibited under federal law.[7] In 2012, Massachusetts became the 18th U.S. jurisdiction to establish a program making marijuana legally available for medicinal use by patients suffering from debilitating illnesses.[8] Though most adults who possess marijuana for personal use are now subject to minimal state scrutiny (simple marijuana possession is no longer

included in a CORI check, nor can it be used as a basis for denial of financial aid or adoption[9]), parenting adults, and especially women who give birth in a hospital, still face 51A reports. With a 51A report comes the possibility that the Department of Children and Families (DCF) will look unfavorably upon their use of marijuana and use it to support a finding of child abuse or neglect, threatening custody of their children. Qualified patients who legally use medicinal marijuana are not protected from a 51A report and subsequent DCF investigation.

When this ALE began, the Massachusetts Department of Public Health had just begun its process of drafting regulations for the new medical marijuana initiative. Qualified patients whose doctors provide a written recommendation for medicinal marijuana use can legally consume cannabis to treat a variety of serious symptoms, though many aspects of the program's implementation are still to be determined. Regulations were finalized in May 2013,[10] laying out the process for opening dispensaries, which are slated to open in the summer of 2014.[11] The medical marijuana regulations do not directly address any issues related to pregnancy or child protective services, though the question will inevitably arise as more patients become registered with the program and expect their legal rights—including parental rights—to be protected from any state interference associated with their legal use of cannabis. Both the 2008 and the 2012 laws enacted by voters contain broad language purporting to protect individuals who comply with decriminalization[a] and medical marijuana[b] laws from arrest, prosecution, and civil sanction.

[a] From Mass. Gen. Laws ch. 94C § 32L (effective January 1, 2009): "Except as specifically provided in 'An Act Establishing A Sensible State Marihuana Policy,' neither the Commonwealth nor any of its political subdivisions or their respective agencies, authorities or instrumentalities may impose any form of penalty, sanction or disqualification on an offender for possessing an ounce or less of marihuana."

Because their marijuana use is no longer strictly illegal, patients who use cannabis (especially for medicinal purposes) will rightly become more comfortable disclosing marijuana use to their doctor, as they will assume that the decriminalization and/or medicinal marijuana laws will no longer result in punitive sanctions. As the rest of this report describes, however, such an assumption is misguided given the current set of laws, regulations, and policies. Even self-disclosure of maternal marijuana use in the prenatal care or labor & delivery settings continues to be treated by many providers and by DCF as grounds for a 51A report and subsequent child welfare investigation.

---

[b] From 2012 Mass. Legis. Serv. Ch. 369 § 4 (effective January 1, 2013): "A qualifying patient or a personal caregiver shall not be subject to arrest or prosecution, or civil penalty, for the medical use of marijuana provided he or she:

(a) Possesses no more marijuana than is necessary for the patient's personal, medical use, not exceeding the amount necessary for a sixtyday supply; and

(b) Presents his or her registration card to any law enforcement official who questions the patient or caregiver regarding use of marijuana."

Organizational Context

This project was developed and completed under the supervision of Farah Diaz-Tello and Lynn Paltrow, attorneys at National Advocates for Pregnant Women (NAPW) in New York City. NAPW is a non-profit organization that engages in systemic advocacy as well as direct representation on behalf of women who are prosecuted for their alleged use of drugs during pregnancy, under laws ranging from criminal child abuse or chemical endangerment, to delivery of drugs to a minor, to feticide when the pregnancy ended in miscarriage or stillbirth. NAPW also assists in the representation of parents facing civil findings of child abuse or neglect on the basis of drug use, which is the topic of this ALE.

NAPW's Mission Statement:

> NAPW is dedicated to securing the human and civil rights, health and welfare of pregnant and parenting women, and furthering the interests of their families. NAPW seeks to ensure that women do not lose their constitutional and human rights as a result of pregnancy, that addiction and other health and welfare problems they face during pregnancy are addressed as health issues, not as crimes; that families are not needlessly separated, based on medical misinformation; and that pregnant and parenting women have access to a full range of reproductive health services, as well as non-punitive drug treatment services.
>
> In the last twenty years, over 200 pregnant women or new mothers have been arrested in a concerted effort to deny women liberty. At least nineteen states now address the issue of pregnant women's drug use in their civil child neglect laws, and many of these states make it possible to remove a child from the mother based on nothing more than a single positive drug test. These cases and statutes are having a devastating effect on public health efforts, as well as women's reproductive rights, drug policy reform efforts, and efforts for racial equality.

A critical piece of NAPW's work involves building and maintaining coalitions across movements that affect matters of reproductive justice. One such group with which NAPW continues to collaborate is the drug policy reform movement, consisting of law enforcement officials, politicians, clinicians, public health experts, and community activists working to shift our nation's strategies regarding controlled substances away from punishment and incarceration and towards expanded access to addiction recovery services and evidence-based drug education. Having identified a policy area where the mission of NAPW directly intersects with the mission

of the drug policy reform movement—that of SENs and mandated reporting—this project focused on Massachusetts, one of a growing number of jurisdictions in which drug policy reformers have seen victories in liberalizing cannabis laws. By exploring the impact of mandated reporting and SEN policies in a state where marijuana has been decriminalized and recently approved for medicinal use, this ALE provides insight for stakeholders in both movements that will inform reform strategies to be implemented in the future.

Goals and Specific Aims

1. *SEN Reporting: Hospital Policies and Practices*

The project included a qualitative assessment of the policies and practices of Massachusetts hospitals' prenatal and obstetrics care providers regarding drug testing based on suspicion of maternal marijuana use. It sought to understand several facets of the issue, including protocols for screening pregnant women for substance use using an interview protocol; criteria for ordering toxicology testing of pregnant women as well as their newborns; and any procedure for obtaining informed consent for toxicology testing of mother or child.

2. *DCF Policies on SEN 51A Reports*

The project sought to qualitatively assess the procedures used by the Massachusetts Department of Children and Families (DCF) in screening, assessing, and/or investigating 51A reports filed by hospital providers in SEN cases.

3. *Clinical Evidence on Prenatal Marijuana Exposure*

An important component of the project was a comprehensive evaluation of available clinical evidence regarding the impact of prenatal marijuana exposure (PME) on a developing fetus. The investigation considered studies examining the impact of PME on pregnancy outcomes (such as low birth weight, preterm birth, congenital anomalies, and infant mortality) as well as longitudinal studies assessing developmental, behavioral, and cognitive outcomes among children who were exposed prenatally to marijuana.

Please refer to **Appendix A** for the Logic Model developed for this project.

Methods

To complete the assessments defined in the previous section, four methods were utilized.

1. Key Informant Interviews

Preliminary research identified several organizations and individuals with work experience relevant to one or more aspects of the project. These potential key informants were categorized as either clinical or policy experts. The clinical group included physicians, social workers, researchers, and midwives. The law and policy group included family law attorneys, DCF employees, and medical marijuana patient advocates. All of the professionals identified as potential key informants have worked specifically in Massachusetts on issues related to SEN, medical marijuana, child protective services, or mandated reporting.

After obtaining approval from the Tufts University School of Medicine IRB, these individuals were contacted and asked to participate in semi-structured interviews lasting 45-60 minutes. Those who responded were scheduled to meet with the researcher to hold the interview. The interviews consisted of questions about the informant's experience in SEN cases and their understanding of SEN identification and reporting policies, and varied depending on whether the informant was categorized as a "clinical" or "law and policy" professional (see **Appendix B** for full semi-structured interview protocols). Five clinician interviews and four law & policy interviews were recorded and later transcribed.

2. Statutory, Regulatory, and Policy Research

The bulk of the information gained during this project consisted of research into statutes, regulations, policies, and policy guidelines.

Mandated Reporting: Beyond a close reading of the text of the Commonwealth's mandated reporting statute,[12] its legislative history and subsequent case law were thoroughly reviewed. CAPTA, the federal law[13] that provides funding for state CPS agencies conditioned upon meeting certain abuse and neglect reporting requirements was analyzed. In addition, all available regulations and policy guidance produced by Massachusetts DCF were reviewed and analyzed,[14] along with a Practice Guide for legal practitioners working on child protection cases.[15]

SEN Policy & Guidelines: All available national guidelines and best practices for the identification and treatment of substance-exposed newborns were reviewed, with particular attention paid to protocols addressing prenatal marijuana exposure. Included were several iterations of guidelines published by special committees of the American Council of Obstetrics and Gynecologists (ACOG),[16] as well as a clinical report issued by the American Academy of Pediatrics Committee on Substance Abuse and Committee on Fetus and Newborn.[17] On the state level, SEN guidelines included materials published by the Massachusetts Department of Public Health's Bureau of Substance Abuse Services, and by the state's Fetal Alcohol Spectrum Disorder (FASD) prevention initiative. During the course of the ALE, the Department of Public Health released a comprehensive set of guidelines, constituting a "Community Standard"[18] for maternal and newborn screening for alcohol and substance use.

Massachusetts Cannabis Laws: Finally, the project investigated the relatively new Massachusetts law "decriminalizing" possession of small amounts of cannabis.[19] It examined the history of the 2008 ballot initiative and agency and court documents[20] guiding its implementation following enactment. Several opinions of the Supreme Judicial Court interpreting the marijuana decriminalization law[21] were instructive in evaluating its impact on certain functions of non-

criminal state agencies. In addition, this research monitored the Massachusetts Department of Public Health's process of drafting regulations for the Commonwealth's nascent medicinal marijuana program, enacted in November 2012 by a second marijuana-related ballot initiative.[22] The medical marijuana law does not address any issues related specifically to parenting or DCF.

3. Clinical Research on Prenatal Marijuana Exposure

Using keyword searches in all major databases containing peer-reviewed medical journals, more than 40 articles were identified as evaluating the clinical impact of prenatal marijuana exposure. The majority of this literature reports findings from two long-term ongoing cohort studies in North America: the Ottawa Prenatal Prospective Study (OPPS),[23] which began in 1978, and the Maternal Health Practices and Child Development Project (MHPCD)[24] in Pittsburgh, which began in 1982. This analysis also included studies carried out since 1988 with additional cohorts of pregnant mothers from the United Kingdom, Brazil, Denmark, Jamaica, and various U.S. cities.

The articles examined the correlation between prenatal marijuana exposure (PME) and two types of outcomes: (1) pregnancy and neonatal outcomes, such as gestational weight, height at birth, head circumference, prematurity, or infant mortality; and (2) developmental, behavioral, or cognitive outcomes, such as hyperactivity, inattention, depression, memory, and school performance, measured at various points after the child's birth.

4. Behavioral Science Research

Finally, a limited number of studies published in peer-reviewed social and behavioral science journals were reviewed. These studies investigated race and class bias in health care

providers' decisions to test and report patients who used drugs during pregnancy,[25] and explored the theoretical underpinnings of mandated SEN reporting—in other words, the alleged correlation between drug use during pregnancy and propensity to abuse or neglect one's child.[26] A series of studies from researchers at the University of California, San Diego,[27] expounded on the behavioral incentives created by mandated SEN reporting that may hinder access to prenatal care and substance abuse treatment.

Findings & Discussion

1. SEN Reporting: Hospital Policies and Practices

Because this project did not attempt to complete a survey of all hospital policies on SEN reporting—nor did it collect systematic data on the implementation of those policies—these findings cannot be conclusive of any concrete policy trends. Still, key informants and policy guidelines provide insight into general procedures for identifying pregnant women who use drugs in the prenatal care and hospital delivery settings, as well as the reporting of SEN cases to DCF through the 51A process.

The Massachusetts Department of Public Health issued recommendations and a "Community Standard" for hospital policies designed to identify and assist in the treatment of SENs. Please see **Appendix C** for the full guidelines document. It recommends that providers screen *all* pregnant women for substance abuse using a standardized oral interview protocol, such as SBIRT or the 5 P's,[28] at initiation of prenatal care, at 28 weeks of pregnancy, and at delivery.[29] In accordance with national standards of perinatal care,[30] DPH does not recommend performing toxicology testing on all pregnant women. This option is quite costly and is not likely to efficiently identify pregnant women with addiction problems. On the other hand, neither does DPH advise providers to order toxicology testing based only on suspicion of illegal drug use—a method susceptible to racial and class-based profiling.[31] Instead, the Community Standard directs hospitals to develop a set of objective criteria to use, in conjunction with self-disclosure via screening, in deciding when to order toxicology testing for a pregnant woman.[32] Among the risk factors suggested by DPH that might trigger a urine toxicology screening are:

- Minimal or no prenatal care
- Unusual behavior (e.g., disorientation, somnolence, loose associations, unfocused anger)
- Physical signs of substance abuse or withdrawal
- Smell of alcohol or chemicals

- Recent history of substance abuse or treatment in the past 5 years and/or currently on Medication Assisted Therapy (MAT). (Participation in MAT does not always equal sobriety).

Additional risk factors listed by DPH as potentially associated with substance use are:

- History of physical abuse or neglect
- Intimate partner violence
- Mental illness
- Previous child with Fetal Alcohol Effects or Syndrome or alcohol related birth defects
- Previous child with Neonatal Abstinence Syndrome
- Fetal Distress
- Unexplained Placenta Abruptio
- Unexplained Intrauterine Growth Restriction (IUGR)

These factors are similar, though not identical, to the list of maternal or neonate risk factors identified by the American College of Obstetricians and Gynecologists and the American Academy of Pediatrics as indicating a substance exposure.[33] Neither the DPH guidelines nor any national guidelines make clear any distinction between exposures that result in clinical problems for mother or infant and those that result in a positive test in the absence of discernible impact on health or wellbeing.

As indicated in the DPH Community Standard as well as ACOG's policy statements, there is no uniform procedure for obtaining informed consent for toxicology testing. The Community Standard notes that hospital staff should attempt to obtain consent for toxicology testing from a pregnant patient, but that it is not required by law. It advises that some health insurance providers may require the patient's written consent in order to provide reimbursement for toxicology testing. DPH recommends that hospitals define the actions to be taken when a patient refuses to give her consent for toxicology testing of either herself or her newborn. A hospital may address refusal to consent by: (1) notification of a hospital social worker and further discussion with the patient; (2) automatically testing the newborn without parental consent; or (3) filing a 51A report with DCF.[34]

Though the DPH Community Standard states that a 51A report must be filed when an infant's toxicology test is either positive or presumed positive based on the mother's positive result, it does not differentiate between positive results for different controlled substances. It provides no direct guidance to hospitals on the specific issue of newborns who are exposed in utero to cannabis.

Importantly, the Community Standard does not recommend confirmatory drug testing based on the initial positive result. Unlike individuals applying for federal employment or those facing possible termination on the basis of a drug test,[35] pregnant women and newborns who are drug tested in a hospital do not have the benefit of procedural safeguards requiring that an initial positive result be confirmed using a secondary method. Clinical key informants indicated that a positive toxicology result (usually a urine immunoassay) that forms the basis for a 51A report is not generally confirmed before the report is filed. This is a key finding, as studies have called into question the validity of positive results from urine immunoassays, particularly when the urinalysis is performed on a newborn. One study found that neonatal urine testing has a 47% rate of false positives for THC, the active ingredient in marijuana.[36] These concerns are compounded by the tendency of common household products[37] and over-the-counter medications[38] to cause false positives in urine screens more generally.

Failure to confirm a positive toxicology test result can lead to serious unwarranted consequences for families. For example, in April 2010, Elizabeth Mort, a Pennsylvania mother, had her newborn daughter removed from her custody by the state's CPS agency after she gave birth and falsely tested positive for opium (Mort had eaten a poppy seed bagel before the test, which triggered the false positive).[39] The threshold detection level established by the hospital's drug testing policy was 300 nanograms, while the cut-off concentration under the Federal

Workplace Drug Testing Act requires 2,000 nanograms to declare a result to be positive.[40] This case, which was settled in July 2013,[41] underscores the dire consequences of failure to properly confirm presumptively positive drug test results in the SEN context.

Notwithstanding any methodological issues, a provider who has decided to order toxicology testing on the urine and/or meconium of a newborn has the discretion to decide the appropriate course of action following a positive result. Accounting for all relevant circumstances, the provider must assess the medical risk of the exposure and any apparent effects in the neonate, and recommend a course of treatment for both mother and child. Although hospital and DCF policies often broadly interpret the 51A statute to require reporting of any test result that is positive for an illegal substance, some providers do exercise discretion in choosing whether to file a 51A report if the positive result is for marijuana alone. For example, doctors who routinely provide prenatal care for pregnant women dealing with addiction to narcotics are less likely than others to consider a positive drug test result for cannabis to be grounds for filing a 51A report of child abuse or neglect. When a provider is accustomed to high-risk pregnancies involving serious risk factors such as drug or alcohol dependence, severe malnutrition, or HIV/AIDS, this "status quo" among their patients may result in a more permissive attitude toward pregnant women who use only cannabis. This attitude is likely not an official policy, but a practical outcome of working with a population that is dealing with more serious and pressing clinical concerns.

On the other hand, providers who work in more routine prenatal care or labor & delivery settings are more likely to see maternal cannabis use as a red flag. In settings where most patients experience low-risk pregnancy and delivery, disclosure of marijuana consumption can be alarming to some doctors and hospital social workers. Because most hospitals in the

Commonwealth have not yet implemented universal screening protocols for assessing substance use among all pregnant women, there is little uniformity in when and how a pregnant patient's marijuana use is revealed to her doctor. Even when universal screening *does* form part of a hospital's policy, doctors may be reluctant to fully implement screening of all women.[42] The reluctance may be due to inexperience in discussing issues around drug use, inadequate referral or treatment resources available, or personal factors leading the provider to feel uncomfortable or unprepared in conducting an oral screening.[43]

An additional layer of variability in provider decisions to file a 51A report stems from the ambiguity around the issue of whether a neonate who tests positive for cannabis exposure—without any clinical manifestation of harm—does indeed trigger a *mandated* report via 51A. All materials released by DCF, DPH, and many hospitals state or indirectly imply that the answer to this question is *yes*. Nevertheless, the plain language of the 51A statute clearly mandates a report when the SEN is born "physical[ly] dependen[t] on an addictive drug."[44] There is no evidence that marijuana results in a neonatal abstinence syndrome such as that caused by alcohol or opiate abuse.[45] The legislature, in enacting the 51A statute, did *not* specify that a report is required when a newborn is born merely exposed to just any illegal drug. To the contrary, the references to physical dependence and addiction appear to exclude marijuana from the group of substances requiring a SEN-related 51A report, since it is not possible for a newborn to be physically addicted to marijuana. DCF's interpretation of the statute—that it mandates a report in cases of neonatal marijuana exposure alone—is contrary to its plain meaning and not supported by scientific evidence, and is the source of great confusion among clinicians, social workers, and policymakers alike.

2. DCF Policies on SEN 51A Reports

a. Screening of 51A Reports

According to the latest available data, DCF received child maltreatment reports, usually called 51A reports, involving 119,192 children in 2010.[46] Of those, 84% were alleged victims of *neglect*, while only 18% were alleged victims of physical abuse, and 6% of sexual abuse.[47] All 51A reports, whether mandated or not, immediately undergo screening by DCF within 24 hours.[48] The screening's purpose is to identify the child who is the subject of the 51A and the child's caretaker(s), and to determine whether an emergency response is needed.[49]

At this initial stage, the DCF screener has several immediate responsibilities. The 51A must be recorded in the Department's Central Registry,[50] and the screener must consult with the reporter, check for prior cases regarding the individuals or families involved, and identify all family members of the subject child and anyone else living in the child's home.[51] The screener may also choose to make "collateral contacts" with individuals known to the family in order to complete the screening.[52] Even if a 51A report is screened out or ultimately found "unsupported," the names and identifying information regarding individuals named in any 51A report may be kept indefinitely in the Central Registry "to assist in future risk and safety assessments of children and families."[53]

At the initial screening, any report alleging abuse or neglect by an adult who is clearly not a caretaker will be screened out, though the matter may be referred to the District Attorney, if appropriate,[54] and/or be treated as a request for services and information rather than a report of child abuse or neglect.[55] Around 40 percent of 51A reports each year are determined to fall outside the mandate of the 51A statute and immediately screened out.[56] As there is no express

policy for handling these reports, it is not clear whether 51A reports filed on the basis of a marijuana-exposed newborn are generally screened out. Anecdotal evidence indicates that most such reports are screened in, but this likely depends on the information provided by the mandated reporter, and whether any other concerns are mentioned in the report. In December 2012, DCF issued a policy memorandum allowing screeners the discretion to screen out 51A reports involving SENs where the only reported concern is maternal use of medication-assisted treatment for opioid addiction or a validly-prescribed medication (for example, buprenorphine, suboxone, or methadone).[57] As of January 2013, when a DCF screener can verify that the mother whose newborn is the subject of a 51A report is currently in substance abuse treatment and that the SEN case is the result of authorized medical treatment, and there is no other protective concern reported in the 51A, the report may be "screened out." The new policy does not eliminate the mandated reporter's obligation to file a SEN-related 51A in such cases, and has no effect on SEN cases involving mothers who use marijuana medicinally under a doctor's legal recommendation.

Cases that are not screened-out at this initial phase are instead screened in for a 51B response, which the legislature has specified must include a written evaluation, a safety and risk assessment, and a determination of whether the allegations in the 51A report are substantiated or unsubstantiated.[58] This has historically been termed a 51B investigation. Since 2008, however, DCF has engaged a new procedure called "differential response," part of the pilot family engagement program called Integrated Casework Practice Model (ICPM).[59] The differential response, which was fully operational by late 2009, refers to a two-tiered protocol for screened-in 51A reports—the traditional 51B investigation, along with a new Initial Assessment.[60] According to DCF's 2012 Child Maltreatment Report, the differential response has the purpose

to "engage families more quickly in an initial assessment when the reported concern does not warrant the formal investigation of an allegation."[61] DCF states that IAs are generally conducted into "moderate or low risk" allegations.[62] Data for the year following the implementation of differential response (2010, the only publicly available Mass. data on ICPM) indicates that IAs made up 30% of screened-in 51A cases.[63] 51A reports of neglect filed by medical professionals have one of the highest screen-in rates, with 71% resulting in an investigation or assessment.[64]

Reports involving allegations of severe physical abuse, sexual abuse, and severe neglect are automatically screened-in for investigation.[65] According to official DCF policy, certain other kinds of reports are automatically screened in for investigation, including those reporting a newborn testing positive for controlled substances and/or diagnosed with withdrawal or fetal alcohol syndrome.[66] Again, it is not completely clear whether this means that 51As filed on the basis of marijuana exposure alone are always screened in, as some key informants did not believe that DCF normally initiates an investigation or assessment on this basis. When screened in, however, these reports are often deemed to contain "moderate or low-risk"[67] allegations of neglect, and screened-in for assessment. Additionally, all reports are screened as either emergency or non-emergency.[68]

While the new terminology implies that the investigation and the assessment are distinct procedures, the difference may be of little practical importance. Though the responsibilities of DCF are more stringent when conducting an investigation, the range of possible outcomes after a screened-in investigation and a screened-in IA remains the same, and is decided by the DCF employee based on the information gathered during the screening.[69] Perhaps because the differential protocol is new, or perhaps because IAs and investigations are perceived as virtually

identical by families who experience them, it is not clear that case workers employ substantially different methods in carrying out IAs versus investigations.

b. CPS Investigation (51B)

A report that is screened in for the traditional non-emergency investigation (51B)[70] response requires that a DCF employee conduct a home visit within three days of the screening decision to view the child identified in the report and assess the state of all children in the household.[71] In the course of an investigation, DCF consults with the reporter as well as any collateral contacts "necessary to obtain reliable information which would corroborate or disprove the reported incident and the child's condition."[72] If a collateral contact is also a mandated reporter, he or she is required to provide any requested information to DCF notwithstanding any statutory or common law privilege of confidentiality.[73] A DCF employee must visit all individuals living in the household at least once, and attempt contact with any parent living outside the home.[74] If caretakers do not allow DCF to conduct the home visit, DCF may seek police assistance to enter the home and view a child named in a 51A when it has reason to believe the child faces immediate danger of serious physical harm.[75]

The purpose of an investigation is determine whether the allegations of the 51A are supported or unsupported. A supported 51B investigation means that DCF had reasonable cause to believe that a reported incident of abuse or neglect by a caretaker did occur.[76] The purpose of a 51B investigation is *not* to determine whether the 51A allegations rose to the level of child abuse or neglect. In SEN cases resulting in 51A reports that are screened-in for investigation, the only question posed during the investigation is whether the drug test result was, in fact, positive.

Unless there is reason to believe that the newborn's test result was falsely positive, a 51A SEN report will usually be supported.

c. Initial Assessment (IA)

Once again, it is not fully clear that a 51A report screened-in for IA is, in practice, treated much differently from a 51A report screened-in for investigation. However, at least in theory, a report that is screened in for an initial assessment has the purpose of evaluating the involved child's safety risk and the strengths of the family, and to determine whether DCF or other community involvement is necessary.[77] During the assessment phase, a DCF social worker is required to evaluate the social service needs of the involved family and make collateral contacts.[78] However, if the family refuses to sign required releases allowing a collateral contact, the DCF regulations for assessment dictate that the worker refrain from making that contact.[79] At the completion of an initial assessment, DCF makes a finding of indicating either "concern," or "minimal or no concern."[80]

Regardless of whether a 51A report is screened-in as an investigation or an initial assessment, DCF has wide discretion to decide how to proceed. A supported investigation, or an assessment finding either "concern" or "minimal or no concern," can lead to opening a new case for DCF services, a referral for the family to voluntarily receive services, a decision that no services are required for the family, or maintenance of ongoing services provided to the family.[81] Most of these are also possible outcomes when an investigation is unsupported.[82] Though the responsibilities of DCF during investigations are more thorough than its responsibilities during an assessment, both responses require substantial investigation into the family's life and both

allow the DCF investigator the same wide range of options after evaluating a family's need for services.

3. Clinical Evidence on Prenatal Marijuana Exposure

This section reviews existing peer-reviewed clinical and public health research regarding marijuana use during pregnancy and its effects on pregnancy outcomes, neonatal characteristics, and cognitive and developmental performance of offspring at various stages throughout childhood and adolescence. The majority of this literature reports findings from two long-term ongoing cohort studies in North America: the Ottawa Prenatal Prospective Study (OPPS),[83] which began in 1978, and the Maternal Health Practices and Child Development Project (MHPCD)[84] in Pittsburgh, which began in 1982. This analysis also includes studies carried out since 1988 with additional cohorts of pregnant mothers from the United Kingdom, Brazil, Denmark, Jamaica, and the U.S. Please see **Appendix D** for the full listing of studies reviewed in this analysis.

Several factors complicate the task of assessing the clinical impact of prenatal marijuana exposure. The relationship between prenatal marijuana exposure and outcome measures such as low birth weight, gestational age, child hyperactivity, depression, school performance, IQ, and behavioral problems is potentially confounded by many demographic factors, such as socioeconomic status, race, maternal age, maternal education, prenatal care, tobacco exposure, alcohol exposure, polydrug exposure, home environment, school attendance, and more. While some researchers attempted to control for these and other factors, others did not include confounding factors in their analyses. Studies varied in their classification of frequency of use (i.e., amount of daily joints, or ADJ, versus "light" or "heavy" marijuana use) and in their

reliance on self-reports or on confirmed toxicology results. Though pregnancy outcomes can be measured using fairly straightforward methods (birth weight, birth length, head circumference, gestational age), a wide variety of instruments were used to assess cognitive performance.

Finally, most studies performed in the United States (including OPPS and MHPCD) are at least partially funded by the National Institute on Drug Abuse (NIDA), a federal government agency that has a policy of funding only research focused on the negative consequences of marijuana use.[85] NIDA has refused to fund or supply some FDA-approved research protocols proposing to study the benefits of marijuana,[86] effectively stifling scientific inquiry and manipulating the range of possible findings in this field.

a. Studies on Pregnancy & Neonatal Outcomes

At least six articles report finding a significant association between prenatal marijuana exposure and reduced length of gestation,[87] lower birth weight,[88] and/or shorter birth length.[89] Most of these were published prior to 1990. However, the results do not always hold true when stratified by race[90] or by trimester exposure.[91] At least ten articles contradict these findings, reporting that prenatal marijuana exposure is not associated with preterm birth,[92] low birth weight,[93] growth measurements,[94] or congenital anomalies,[95] or risk of infant mortality.[96] When associations were found, the significance of these findings was often eliminated after adjustment for confounding effects of tobacco and other factors.[97] Only international studies were able to minimize simultaneous prenatal exposure to tobacco or other drugs, and thereby isolate the effects of marijuana exposure; these studies reported no adverse outcomes for prenatally exposed infants.[98] In sum, this body of research does not tend to support the hypothesis that marijuana exposure in utero is associated with unfavorable neonatal consequences.

b. Studies on Cognitive & Developmental Outcomes

Cognitive and developmental outcomes of interest have included sleep arousal, academic performance, intelligence measures, neurophysical outcomes, delinquency and behavioral issues, psychosis-like symptoms, depression, memory, attention, and impulsivity. A wide variety of instruments have been used to measure these dimensions among children prenatally exposed to marijuana and control groups at various intervals throughout a child's life.

One longitudinal study found that prenatally-exposed three-year-olds had significantly lower sleep efficiency, more awake time after sleep onset, and more frequent arousal after sleep onset, compared with three-year-olds not exposed while in utero.[99] Second-trimester exposure to heavy maternal marijuana use (more than 1 joint per day) was associated with lower IQ scores in six-year-olds, while confounding factors eliminated the significance of the relationship for those exposed during the first and third trimesters.[100] Prenatal marijuana exposure also predicted increased measures of inattention and higher rates of hyperactivity in six-year-olds.[101] Still, other articles contradict these findings and report no association between prenatal marijuana exposure and cognitive or verbal outcomes at ages three,[102] four and five,[103] and five and six.[104]

The likelihood of intervening factors attributable to cognitive and developmental outcomes increases as children grow older and are exposed to more environmental and social factors. At age 10, exposure to marijuana prenatally has been correlated with academic performance,[105] depressive symptoms,[106] and hyperactivity, inattention, and reported delinquency or behavioral problems,[107] though some of these articles hypothesized numerous mediating factors,[108] such as home environment, regularity of school attendance, aggression in the home, and maternal IQ, race, and socioeconomic status.[109] A small association between

prenatal marijuana exposure and psychosis-like symptoms in 12-year-olds was eliminated completely upon adjusting for tobacco and alcohol exposure.[110]

By age 14, the impact of prenatal marijuana exposure on academic achievement could no longer be directly related back to prenatal marijuana exposure, as mediating factors of depression, inattention, and early initiation of adolescent marijuana use intervened in this relationship.[111] No effect on IQ was found for older teenagers, though some persistent negative cognitive effects have been reported.[112] Physical growth during pubescence was not found to be associated with prenatal marijuana exposure.[113]

The oldest age group, young adults ages 18 to 22, were found to make significantly more errors in studies on neuropsychological response and reaction time,[114] though all participants performed the tasks with more than 85% accuracy and there were no between-groups differences in reaction time.[115] Differential brain activity patterns were observed in regions associated with visuospatial short term memory,[116] but more research is needed before drawing conclusions on the significance of these observations.

It is difficult to definitively interpret this body of evidence, given the small effect sizes and the multitude of possible moderating factors originating in either demographic or environmental differences. In several studies, researchers reported that only a small amount of variation in cognitive or developmental measures could possibly be explained by marijuana exposure, and averages of both exposed and unexposed groups were well within the normal range.[117] Huizink & Mulder (2006) produced a comprehensive summary of the methodological issues in this body of research,[118] concluding that any effects observed are "subtle" and likely due to concurrent exposure to alcohol and/or tobacco. Still, there is a tendency among researchers to attribute any differences between groups to the exposure of interest; in the case of

marijuana, that bias may be amplified by the prejudicial stance of government funders with regard to marijuana's impact, and its illegal status. Societal stigma toward illicit drug users, especially drug-using parents, is likely to further influence the attitudes and conclusions of researchers.

Limitations

The conclusions reported in the previous section are subject to several qualifications and limitations of the project's scope. First and foremost, this research is qualitative in nature and cannot be used to support quantitative claims about trends in hospital policies or SEN reporting. All of the professionals who participated as key informants were contacted and voluntarily responded to offer their participation; this created a self-selected sample of informants whose views may not reflect the full range of knowledge, attitudes, and practice among similarly situated professionals who did not participate.

Secondly, the researcher had limited access to primary data from the Department of Children and Families. Only publicly-available documents were examined for this report, along with secondhand or indirect information about policies and practice, as experienced and related to the researcher by key informants. Though several employees were solicited to participate as key informants, no DCF personnel were involved in the research or preparation of this report.

Finally, the conclusions drawn using peer-reviewed clinical studies on the impact of prenatal marijuana exposure are preliminary in nature. Because marijuana continues to be prohibited by federal law, with Congress having determined in 1973 that it has no medicinal value, its availability for medical research purposes is extremely limited. The studies that are available assessing the impact of marijuana exposure in general are by no means extensive or methodologically ideal, and their use to support bold conclusions in either direction may be imprudent at the present time.

Conclusion

The risk of harm to parents, children, and the trust they have in medical providers, social services, & child protective services must not be greater than the actual harm caused to a neonate or child by their mother or other caregiver's use of medical or recreational marijuana. Without more evidence that a child is in danger of actual abuse or neglect, a newborn testing positive for marijuana exposure cannot reasonably compel a mandated 51A report. It is an inefficient use of limited CPS resources to screen, investigate, and implement service plans for 51A reports filed solely because an infant tests positive for marijuana. The continuation of this practice undermines the patient-provider relationship, unnecessarily intrudes on the privacy and autonomy of family life, and is at odds with recent changes to state law regarding marijuana.

Implications & Recommendations

—*Clarify DPH Community Standard to directly address cannabis-exposed infants*. Urge policymakers to adopt a plain-meaning interpretation of the 51A statute's applicability to mere cannabis exposure and ensure that providers are educated that a 51A report is not mandated in this context. Eliminate reporting obligation for babies born to legal medical marijuana patients. Amend the Community Standard to require confirmatory testing of positive specimens before filing a SEN-related 51A report.

—*Monitor implementation of medical marijuana under DPH and encourage interagency collaboration*, not only with DCF, but with the Department of Housing and Community Development (DHCD), the Department of Education (DOE), and any other state agencies whose activities may be affected by the new medical marijuana initiative in the Commonwealth. Ensure that qualifying patients who treat symptoms with legally-recommended marijuana do not face outdated and unwarranted barriers to accessing and using their medication.

—*Advocate for a conduct-based standard for DCF screening of 51A reports*. Urge DCF to adopt a policy of screening-out 51A reports that are based solely on newborn exposure to marijuana, when there is no additional allegation of abuse or neglect. Encourage DCF to clarify that the 51A statute does *not* require mandated reporters to file these reports when no other concerns about the parent's ability to care for her child are present.

—*Include CPS agencies and child welfare policy stakeholders in dialogue of drug policy reform*. It is a disservice to all involved for these two systems to continue operating in parallel but not collaboratively. As we move toward a model of legal regulation and away from criminal prohibition, a successful drug policy reform movement must adapt its strategies to incorporate reform of prohibitionist civil law, including child welfare policy and practice. Child welfare practitioners must similarly learn how to adjust their policies and practices in the wake of changes to drug laws, while continuing to fulfill their mission of protecting vulnerable children and families.

—Continue to *zealously represent parents facing civil abuse or neglect findings based on marijuana use*. Employ strategies rooted in the best available clinical evidence on risk of harm and advocate for a more robust peer-reviewed evidence base. Advocate for conduct-based standards that evaluate the risks posed by a parent's behavior, instead of per-se rules that rely on a positive drug test as a proxy for parental abuse or neglect potential.

References

[1] See Child Welfare Information Gateway, *Parental Drug Use as Child Abuse* (2012), *available at* http://www.childwelfare.gov/systemwide/laws_policies/statutes/drugexposed.cfm.

[2] See Price, A., Bergin, C., Luby, C., et al. (2012). Implementing Child Abuse Prevention and Treatment Act (CAPTA) Requirements to Service Substance-Exposed Newborns: Lessons from a Collective Case Study of Four Program Models. *J. Pub. Child Welfare, 6*, 149-171.

[3] Testimony of Dr. Carl Hart, Ph.D., *discussed in* Matter of Jones v. Jones, 2012 N.Y. Slip Op. 50257(U) (N.Y. Fam. Ct. Kings Cty. 2012). Retrieved from http://law.justia.com/cases/new-york/other-courts/2012/2012-ny-slip-op-50257-u.html

[4] Hudak, M. L., & Tan, R. C., American Academy of Pediatrics Committee on Drugs & Committee on Fetus & Newborn. (2012). Neonatal drug withdrawal. *Pediatrics, 129*(2), e540-e560. doi: 10.1542/peds.2011-3212

[5] Mass. Gen. Laws ch. 119 § 51A (West 2012).

[6] Mass. Gen. Laws ch. 94C §§ 32L-32N (West 2012).

[7] Controlled Substances Act, 21 U.S.C. § 812 (West 2012)

[8] An Act for the Humanitarian Use of Medical Marijuana, 2012 Mass. Legis. Serv. Ch. 369 (H.B. 3885) (West).

[9] *See supra* note 6.

[10] 105 Code Mass. Regs. 725.000 *et seq*. (2013).

[11] Jolicoeur, L. (2013, August 22). 181 apply to open Mass. medical marijuana dispensaries. *90.9 WBUR*. Retrieved from http://www.wbur.org/2013/08/22/dispensary-applications

[12] *See supra* note 5.

[13] Keeping Children and Families Safe Act of 2003, Pub. L. 108-36, 117 Stat. 800 (codified as amended at 42 U.S.C. § 5101 *et seq.* (West 2012).

[14] 110 Code Mass. Regs. 4.00 *et seq*. (2013).

[15] McManus, J. & Stolk, R.L. (Eds.). (2012). *Child Welfare Practice in Mass.* (1st ed. 2d Supp.) §§ 2.1.1. *et seq*.

[16] American College of Obstetricians & Gynecologists, Committee on Ethics. (2005). Maternal Decision Making, Ethics, and the Law. *Committee Opinion, 321*(106), 1127-1137. Retrieved from http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Ethics/Maternal_Decision_Making_Ethics_and_the_Law

American College of Obstetricians & Gynecologists, Committee on Ethics. (2008). At-Risk Drinking and Illicit Drug Use: Ethical Issues in Obstetric and Gynecologic Practice. *Committee Opinion, 422*. Retrieved from https://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Ethics/At_Risk_Drinking_and_Illicit_Drug_Use_Ethical_Issues_in_Obstetric_and_Gynecologic_Practice

American College of Obstetricians & Gynecologists, Committee on Health Care for Underserved Women. (2012). Opioid Abuse, Dependence, and Addiction During Pregnancy. *Committee Opinion, 524*. Retrieved from http://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Health_Care_for_Underserved_Women/Opioid_Abuse_Dependence_and_Addiction_in_Pregnancy

[17] American Academy of Pediatrics. (2013). Prenatal substance abuse: Short- and long-term effects on

the exposed fetus. *Pediatrics, 131*(3), e1009-e1024. doi: 10.1542/peds.2012-3931

[18] Massachusetts Department of Public Health. (2013). *Guidelines for Community Standard for Maternal/Newborn Screening For Alcohol/Substance Use*. Boston, Mass. Retrieved from www.mass.gov/eohhs/docs/dph/quality/hcq-circular-letters/2013/dhcq-1305586-sen-guidelines.doc

[19] *See supra* note 6.

[20] Connolly, Honorable L. M. (2008). *Possession of Marihuana after January 2, 2009*. Boston, MA. Retrieved from http://www.mass.gov/courts/courtsandjudges/courts/districtcourt/trans1005possession-of-marihuana.pdf

[21] *See* Commonwealth v. Cruz, 945 N.E.2d 899 (Mass. 2011); Commonwealth v. Keefner, 961 N.E.2d 1083 (Mass. 2012); Commonwealth v. Palmer, 985 N.E.2d 832 (Mass. 2013); Commonwealth v. Pacheco, 985 N.E.2d 839 (Mass. 2013); Commonwealth v. Jackson, 985 N.E.2d 853 (Mass. 2012).

[22] *See supra* note 8.

[23] National Institutes of Health, Research Portfolio Online Reporting Tools. (n.d.). *Project information: 1R01DA004874-01, "Prenatal Cannabis & Cigarette Exposure – Long Term Effects."* . Retrieved from website: http://projectreporter.nih.gov/project_info_history.cfm?aid=3210667&icde=0

[24] National Institutes of Health, Research Portfolio Online Reporting Tools. (n.d.). *Project information: 1R01DA017786-01A1.* Retrieved from website: http://projectreporter.nih.gov/project_info_history.cfm?aid=6875272&icde=0

[25] Chasnoff, I. J., Landress, H. J., & Barrett, M. E. (1990). The prevalence of illicit-drug or alcohol use during pregnancy and discrepancies in mandatory reporting in Pinellas County, Florida. *New Eng. J. Med., 322*(17), 1202-1206.

Kerker, B. D., Horwitz, S. M., & Leventhal, J. M. (2004). Patients' characteristics and providers' attitudes: Predictors of screening pregnant women for illicit substances. *Child Abuse & Neglect, 28*, 209-223.

Veda Kunins, H., Bellin, E., Chazotte, C., Du, E., & Arnsten, J. H. (2007). The Effect of Race on Provider Decisions to Test for Illicit Drug Use in the Peripartum Setting. *J. Women's Health, 16*(2), 245-255.

[26] Hogan, T. M. S., Myers, B. J., & Elswick, R. K. (2006). Child abuse potential among mothers of substance-exposed and nonexposed infants and toddlers. *Child Abuse & Neglect, 30*, 145-156.

[27] Roberts, S. C. M., & Pies, C. (2010). Complex calculations: How drug use during pregnancy becomes a barrier to prenatal care. *Maternal & Child Health J., 15*.

Roberts, S. C. M., & Nuru-Jeter, A. (2010). Women's perspectives on screening for alcohol and drug use in prenatal care. *Women's Health Issues, 20*.

Roberts, S. C. M., & Nuru-Jeter, A. (2011). Universal screening for alcohol and drug use and racial disparities in child protective services reporting. *J. Behav. Health Sci. & Res., 39*.

[28] *See* American College of Obstetricians & Gynecologists, Committee on Ethics. (2008). At-Risk Drinking and Illicit Drug Use: Ethical Issues in Obstetric and Gynecologic Practice. *Committee Opinion, 422*. Retrieved from https://www.acog.org/Resources_And_Publications/Committee_Opinions/Committee_on_Ethics/At_Risk_Drinking_and_Illicit_Drug_Use_Ethical_Issues_in_Obstetric_and_Gynecologic_Practice

[29] *See supra* note 18.

[30] 2012 Guidelines for Perinatal Care, 7th Ed. AAP, Elk Grove, IL, published by the American Academy of Pediatrics and the American College of Obstetrics and Gynecology (ACOG).

[31] *See supra* note 25.

[32] *See supra* note 18.

[33] *See supra* note 28.

[34] *See supra* note 18.

[35] SAMHSA Mandatory Guidelines for Federal Workplaces Drug Testing Programs, 73 Fed. Reg. 71858 (Nov. 25, 2008).

[36] Barakauskas, V. E., Davis, R., Krasowski, M. D., & McMillin, G. A. (2012). Unresolved Discrepancies between Cannabinoid Test Results for Infant Urine. *Clinical Chemistry, 58*(9), 1364-1367.

[37] Cotten, S. W., Duncan, D. L., Burch, E. A., Seashore, C. J., & Hammett-Stabler, C. A. (2012). Unexpected interference of baby wash products with a cannabinoid (THC) immunoassay. *Clinical Biochemistry, 45*, 605-609. doi: 10.1016/j.clinbiochem.2012.02.029

[38] Vincent, E. C., Zebelman, A., & Goodwin, C. (2006). What common substances can cause false positives on urine screens for drugs of abuse? *Clinical Inquiries, 55*(10), 893-897.

[39] Second Amended Complaint and Demand for Jury Trial, *Mort v. Lawrence County Children & Youth Servs.*, No. 2:10-cv-01438-DSC (W.D. Pa. Nov. 11, 2011), *available at* http://docs.justia.com/cases/federal/district-courts/pennsylvania/pawdce/2:2010cv01438/193963/58/0.pdf?ts=1376380861

[40] *See supra* note 35.

[41] Mom settles suit: Poppy seed bagel led to false positive in hospital drug test. (2013, July 3). *The Christian Science Monitor*. Retrieved from http://www.csmonitor.com/The-Culture/Family/2013/0703/Mom-settles-suit-Poppy-seed-bagel-led-to-false-positive-in-hospital-drug-test

[42] Seib, C. A., Daglish, M., Heath, R., Booker, C., Reid, C., & Fraser, J. (2012). Screening for alcohol and drug use in pregnancy. *Midwifery, 28*, 760-764. doi: 10.1016/j.midw.2011.08.003

[43] *Id.*

[44] Mass. Gen. Laws ch. 119 § 51A(a)(iii) (West 2012).

[45] *See supra* note 4.

[46] Massachusetts Department of Children & Families. (2012). *2010 Child Maltreatment Statistics*. Boston, Mass. 4. Retrieved from http://www.mass.gov/eohhs/docs/dcf/reports/report-child-maltreatment-2010.pdf

[47] *Id.*

[48] 110 Mass. Code Regs. 4.21 (2012).

[49] *Id.*

[50] *Id.* at 4.23.

[51] *Id.* at 4.24A.

[52] *Id.* at 4.22.

[53] Mass Gen. Laws ch. 119 § 51F (West 2012).

[54] 110 Mass. Code Regs. 4.22 and Commentary (1) (2012).

[55] *Id.* at 4.21(3).

[56] *See supra* note 46 at 5; 110 Mass. Code Regs. 4.25 (2012).

[57] *See supra* note 18.

[58] Mass. Gen. Laws ch. 119 § 51B (West 2012).

[59] McManus, J. & Stolk, R.L. (Eds.). (2012). *Child Welfare Practice in Mass.* (1st ed. 2d Supp.) § 2.4.1.

2008 Mass. Acts c. 176, § 135.

[60] *See supra* note 46 at 2.

[61] *Id.*

[62] Massachusetts Department of Children & Families, (2009). *Fact sheet: Integrated casework practice model*. Retrieved from website: http://www.mass.gov/eohhs/docs/dcf/icpm-general-fact-sheet.pdf

[63] *See supra* note 46 at 2.

[64] *See supra* note 46 at 24.

[65] *See supra* note 46 at 4.

[66] DSS Policy #86-015R, *as cited by* McManus, J. & Stolk, R.L. (Eds.). (2012). *Child Welfare Practice in Mass.* (1st ed. 2d Supp.) § 2.3.1.

[67] *See supra* note 46 at 4.

[68] 110 Mass. Code Regs. 4.25 (2012).

[69] *See supra* note 46 at vi.

[70] Mass. Gen. Laws ch. 119 § 51B (West 2012).

[71] 110 Mass. Code Regs. 4.27(1) (2012).

[72] *Id.* at 4.27(2).

[73] Mass. Gen. Laws ch. 119 § 51B(m) (West 2012).

[74] 110 Mass. Code Regs. 4.27(2) (2012).

[75] McManus, J. & Stolk, R.L. (Eds.). (2012). *Child Welfare Practice in Mass.* (1st ed. 2d Supp.) § 2.4.1.

110 Mass. Code Regs. 4.26(3) & 4.27(3) (2012).

[76] McManus, J. & Stolk, R.L. (Eds.). (2012). *Child Welfare Practice in Mass.* (1st ed. 2d Supp.) § 2.5.1.

110 Mass. Code Regs. 4.32(2) (2012).

[77] 110 Mass. Code Regs. 5.01 (2012).

[78] 110 Mass. Code Regs. 5.01(3) (2012).

[79] *Id.*

[80] *See supra* note 46 at 6.

[81] *See supra* note 46 at vi.

[82] *Id.*

[83] National Institutes of Health, Research Portfolio Online Reporting Tools. (n.d.). *Project information: 1R01DA004874-01, "Prenatal Cannabis & Cigarette Exposure – Long Term Effects."* . Retrieved from website: http://projectreporter.nih.gov/project_info_history.cfm?aid=3210667&icde=0

[84] National Institutes of Health, Research Portfolio Online Reporting Tools. (n.d.). *Project information: 1R01DA017786-01A1.* Retrieved from website: http://projectreporter.nih.gov/project_info_history.cfm?aid=6875272&icde=0

[85] Harris, G. (2010, Jan. 19). Researchers find study of medical marijuana discouraged. *The New York Times*. Retrieved from http://www.nytimes.com/2010/01/19/health/policy/19marijuana.html?_r=0

[86] *Id.*

[87] Fried, P.A., Watkinson, B., & Willan, A. (1984). Marijuana use during pregnancy and decreased length of gestation. *American Journal of Obstetrics & Gynecology, 150*(1), 23-27.

[88] Zuckerman, B. et al. (1989). Effects of maternal marijuana and cocaine use on fetal growth. New England Journal of Medicine, 320, 762-68.

[89] Day, N.L. et al. (1991). Prenatal marijuana use and neonatal outcome. *Neurotoxicology & Teratology, 13*(3), 329-34.

[90] Hatch, E.E. & Bracken, M.B. (1986). Effect of marijuana use in pregnancy on fetal growth. *American Journal of Epidemiology, 124*(6), 986-93.

[91] Cornelius, M.D. et al. (1995). Prenatal tobacco and marijuana use among adolescents: Effects on offspring gestational age, growth, and morphology. *Pediatrics, 95*(5), 738-43.

[92] Van Gelder, M.M. et al. (2010). Characteristics of pregnant illicit drug users and associations between cannabis use and perinatal outcome in a population-based study. *Drug and Alcohol Dependence, 109*(1-3), 243-47.

[93] Schempf, A.H. & Strobino, D.M. (2008). Illicit drug use and adverse birth outcomes: Is it drugs or context? *Journal of Urban Health, 85*(6), 858-73.

[94] Carvalho de Moraes Barros, M. et al. (2006). Exposure to marijuana during pregnancy alters neurobehavior in the early neonatal period. *Journal of Pediatrics, 149*, 781-87.

[95] Witter, F.R. & Niebyl, J.R. (1990). Marijuana use in pregnancy and pregnancy outcome. *American Journal of Perinatology, 7*(1), 36-38.

[96] Ostrea, E.M., Ostrea, A.R., & Simpson, P.M. (1997). Mortality within the first 2 years in infants exposed to cocaine, opiate, or cannabinoids during gestation. *Pediatrics, 100*(1), 79-83.

[97] Shiono, P.H. et al. (1995). The impact of cocaine and marijuana use on low birth weight and preterm birth: A multicenter study. *American Journal of Obstetrics & Gynecology, 172*(1), 19-27.

Schempf, A.H. & Strobino, D.M. (2008). Illicit drug use and adverse birth outcomes: Is it drugs or context? *Journal of Urban Health, 85*(6), 858-73.

Bailey, B.A. et al. (2012). Infant birth outcomes among substance using women : Why quitting smoking during pregnancy is just as important as quitting illicit drug use. Maternal and Child Health Journal, 16(2), 414-22.

Balle, J., Olofsson, M.J., & Hilden, J. (1999). Cannabis and pregnancy. *Danish Medical Journal, 161*(36), 5024-28.

Fergusson, D.M. et al. (2002). Avon longitudinal study of pregnancy and childhood. *British Journal of Obstetrics & Gynecology, 109*, 21-27.

Van Gelder, M.M. et al. (2010). Characteristics of pregnant illicit drug users and associations between cannabis use and perinatal outcome in a population-based study. *Drug and Alcohol Dependence, 109*(1-3), 243-47.

[98] Carvalho de Moraes Barros, M. et al. (2006). Exposure to marijuana during pregnancy alters neurobehavior in the early neonatal period. *Journal of Pediatrics, 149*, 781-87.

Dreher, M.C., Nugent, K. & Hudgins, R. (1994). Prenatal marijuana exposure and neonatal outcomes in Jamaica: An ethnographic study. *Pediatrics, 93*(2), 254-60.

[99] Dahl, R.E. et al. (1995). A longitudinal study of prenatal marijuana use: Effects on sleep and arousal of age 3 years. *Archives of Pediatric & Adolescent Medicine, 149*(2), 145-50.

[100] Goldschmidt, L. et al. (2008). Prenatal marijuana exposure and intelligence test at age 6. *Journal of the American Academy of Child & Adolescent Psychiatry, 47*, 254-63.

[101] Fried, P.A., Watkinson, B., & Gray, R. (1992). A follow-up study of attentional behavior in 6-year-old children exposed prenatally to marihuana, cigarettes, and alcohol. *Neurotoxicology & Teratology, 14*(5), 299-311.

[102] Day, N.L. et al. (1994). Effect of prenatal marijuana exposure on the cognitive development of offspring at age three. *Neurotoxicology and Teratology, 16*(2), 169-75.

[103] Hayes, J.S. et al. (1991). Five-year follow-up of rural Jamaican children whose mothers used marijuana during pregnancy. *West Indian Medical Journal, 40*(3), 120-23.

[104] Fried, P.A., O'Connell, C.M., & Watkinson, B. (1992). 60 and 72-month follow-up of children prenatally exposed to marijuana, cigarettes, and alcohol: Cognitive and language assessment. *Developmental & Behavioral Pediatrics, 13*(6), 227-36.

[105] Goldschmidt, L. et al. (2004). Prenatal marijuana and alcohol exposure and academic achievement at age 10. *Neurotoxicology & Teratology, 26*(4), 521-32.

[106] Gray, K.A. et al. (2005). Prenatal marijuana exposure: Effect on child depressive symptoms at ten years of age. *Neurotoxicology & Teratology, 27*(3), 439-48.

[107] Goldschmidt, L., Day, N.L., & Richardson, G.A. (2000). Effects of prenatal marijuana exposure on child behavior problems at age 10. *Neurotoxicology & Teratology, 22*(3), 325-36.

[108] Day, N.L., Leech, S.L., & Goldschmidt, L. (2011). The effects of prenatal marijuana exposure on delinquent behaviors are mediated by measures of neurocognitive functioning. *Neurotoxicology and Teratology, 33*(1), 129-36.

[109] O'Connell, C.M. & Fried, P.A. (1991). Prenatal exposure to cannabis: A preliminary report of postnatal consequences in school-age children. *Neurotoxicology & Teratology, 13*(6), 631-39.

[110] Zammit, S. et al. (2009). Maternal tobacco, cannabis and alcohol use during pregnancy and risk of adverse psychotic symptoms in offspring. *British Journal of Psychiatry, 195*, 294-300.

[111] Goldschmidt, L. et al. (2012). School achievement in 14-year-old youths prenatally exposed to marijuana. *Neurotoxicity and Teratology, 34*(1), 161-67.

[112] Fried, P.A. (2002). Conceptual issues in behavioral teratology and their application in determining long-term sequelae of prenatal marijuana exposure. *Journal of Child Psychology & Psychiatry, 43*(1), 81-102.

[113] Fried, P.A., James, D.S., & Watkinson, B. (2001). Growth and pubertal milestones during adolescence in offspring prenatally exposed to cigarettes and marihuana. *Neurotoxicology & Teratology, 23*(5), 431-36.

[114] Smith, A.M. et al. (2004a). Effects of prenatal marijuana on response inhibition: An fMRI study of young adults. *Neurotoxicology & Teratology, 26*(4), 533-42.

[115] Smith, A.M. et al. (2004b). Effects of prenatal marijuana on visuospatial working memory: An fMRI study in young adults. *Neurotoxicology & Teratology, 26*(2), 286-95.

[116] *Id.*

[117] *See supra* note 106.

[118] Huizink, A.C. & Mulder, J.H. (2006). Maternal smoking, drinking or cannabis use during pregnancy and neurobehavioral and cognitive functioning in human offspring. *Neuroscience & Biobehavioral Reviews, 30,* 24-41.