In criminal cases, medical examiners wield tremendous influence because their opinions and determinations on a cause of death are often heavily relied upon by police in the investigation process, as well as by prosecutors, juries, and judges during court proceedings. A medical examiner who performs a fetal autopsy plays a pivotal role in ensuring that police and prosecutors are relying on evidence that is supported by accurate and reliable medical science. This is particularly important in the context of pregnancy loss, given that there are many misconceptions about pregnancy risks and harms that are unsupported by scientific evidence.

The American College of Obstetricians and Gynecologists ("ACOG") recommends fetal autopsy as an important diagnostic component that can provide useful information in determining the causes of stillbirth. The information obtained can be medically instructive for future maternal care and help direct more successful pregnancy outcomes, both for the individual who has experienced the loss and for all birthing people as medical reporting data is leveraged for improved overall prenatal care.

While laws, regulations, and customs regarding stillbirth cases requiring examination by a medical-legal officer vary by jurisdiction, practitioners conducting these examinations should be aware of the legal ramifications their diagnostic reports can have on an investigation into a bereaved mother, in addition to the ways in which prosecutors have weaponized forensic science to criminalize women on the basis of pregnancy outcomes.

Medical examiners should take care to conduct evaluations and administer reports in a manner that maintains strict professional standards, including with respect to causality, and that is sensitive to the potential use of such reports for purposes of criminal prosecution. In doing so, medical examiners should consider the following guidelines:

1. **Understand how fetal death reports may be used against bereaved mothers to criminalize pregnancy loss.**
   
   Increasingly in many states, the wide application of existing criminal drug laws, the recognition of personhood status of fertilized eggs, embryos, and fetuses, and new laws explicitly criminalizing behavior tied to pregnancy subject pregnant women to arrest, criminal charges, or revocation of their probation when they, or their fetus or newborn, test positive for criminalized substances during pregnancy, following a miscarriage or stillbirth, or if they admit to using drugs at any point during their pregnancy.

   » Fetal personhood laws in many states have expanded the existing statutory code such that every mention of a "child" or "person" includes a fertilized egg, embryo, or fetus. Prosecutors have used these laws to subject pregnant women to criminal charges, including homicide, child abuse, and child endangerment, among others, when a woman is suspected of engaging in conduct carrying a perceived risk of harm...
to the fetus during a pregnancy.

A post-mortem report listing maternal substance use as a causal or contributing factor in a fetal death may be used against the mother in a criminal prosecution. Given that the report may be used as inculpatory evidence in a criminal prosecution, the medical examiner should take extra care in drafting the report, including applying a higher standard of evidence. The CDC has stated, “the medical examiner or coroner may wish to devote some thought to the degree of ‘proof’ necessary to properly certify death . . . He or she may wish to consider that the proof required in a criminal proceeding is of a higher degree of positivity than that required in a civil proceeding.”

2. **Recognize the deep systemic biases associated with substance use and pregnancy and counter these biases through factual reporting.**

Despite entrenched misunderstandings about specific and unique harm caused by prenatal exposure to criminalized, controlled substances, medical research does not support the finding of a direct causal relationship between prenatal exposure to criminalized drugs and miscarriage or stillbirth. No criminalized substances have been found to be abortifacients. The risks associated with prenatal exposure to criminalized substances have been found to be comparable to or less than those associated with legal substances much more commonly used, like anti-depressants, alcohol, or caffeine.

If a pregnant woman, or her fetus or newborn, tested positive for a substance, it does not mean that the fetus or newborn was harmed or even affected by that substance. As the U.S. Department of Justice has stated, “[d]rug tests detect drug use but not impairment. A positive test result, even when confirmed, only indicates that a particular substance is present in the test subject’s body tissue. It does not indicate abuse or addiction; recency; frequency, or amount of use; or impairment.”

When making a determination about fetal death, the practitioner should adhere to the strict professional standards relating to cause-of-death reporting described by the CDC in its Handbook on Death Registration and Fetal Death Reporting. These standards are intended to ensure the report provides “an etiological explanation of the order, type, and association of events resulting in death” and reflects the medical examiner’s “best medical opinion.”

3. **Consider the influence a medical examiner’s report can have on juries, judges, and prosecutors, and recognize the importance of the language used in creating a report.**

Medical examiners, in determining cause of death, “serve effectively as ultimate decision makers.” Reports from medical examiners are often relied upon heavily by the triers of fact—judges and juries—in a criminal case. The same is true for prosecutors, who often “work closely with death investigators and law enforcement to determine the cause of death and whether the state should seek charges.” The language used in a medical examiner’s report can have a profound effect on how triers of fact perceive and evaluate evidence, and how prosecutors shape the facts of the case. For example, the difference between labeling a condition as “associated with” versus “contributing
Many historical methods deployed in the evaluation of still versus live birth, such as the lung float test, are problematic as forensic indicators and should not be relied upon as a basis for concluding that a fetus was born alive or stillborn.
to" versus "causing" a fetal death carries significant implications for a prospective criminal prosecution.

Where the physical examination fails to provide a conclusive causal link between a condition and the fatal outcome, care should be taken to produce a report based on factual findings and evidence-based diagnosis with scientific foundation, and to refrain from drawing legal conclusions. Acknowledgment of diagnostic uncertainty is often the appropriate conclusion in cases of fetal death.

A practitioner’s "best medical opinion" in a case of fetal death should reflect the latest scientific research on the causal relationships in question and should be articulated with a heightened standard of care in line with medical and forensic ethical principles, in light of the possible legal repercussions for the bereaved mother. Critically, the absence of a conclusive causal link should be accompanied in a forensic pathologist’s report by an express acknowledgement of the diagnostic uncertainty. As noted in Knight’s Forensic Pathology: “Unless the pathologist has incontrovertible criteria of post-natal survival, e.g. well expanded lungs, food in the stomach, or vital reaction in the stump of the umbilical cord, [s]he is legally bound not to diagnose live birth.”

4. Avoid using the “lung float test” and other similar tests, that have historically been used to determine whether a fetus was born alive, but that have been widely discredited by the scientific community.

Many historical methods deployed in the evaluation of still versus live birth are problematic as forensic indicators and should not be relied upon as a basis for concluding that a fetus was born alive or stillborn. For example, the “lung float test” has been widely criticized by both the legal and forensic scientific community, and should not be relied upon when making a determination as to whether a fetus was born alive. It is undisputed that air can be introduced into the lung tissue as a result of postmortem changes entirely unrelated to taking in a breath. Nevertheless, prosecutors continue to rely on this test to prove that a fetus was born alive and to prosecute the mother on that basis.

Given this, medical examiners should be extremely cautious in presenting any evidence of air in the lungs, as it may be misinterpreted by law enforcement, juries, and judges when investigating and making determinations in pregnancy-based criminal cases. If such evidence is presented, it should “include clear characterizations of the limitations of the analysis, including associated probabilities where possible.”

Microscopic examination of lung inflation to determine live birth versus stillbirth, while commonly deployed in forensic evaluation and relied upon by courts, is also problematic for similar reasons as articulated above with respect to the “lung float test.” For example, the lungs may be inflated due to a passive inrush of air during vaginal birth, rather than from breathing. Any analysis of lung inflation should be presented in concert with the numerous uncertainties inherent in using such a test.

Utilizing a fetus’s gestational age or weight at autopsy to offer an opinion regarding live birth versus stillbirth is also not valid. Stillbirth can come late in pregnancy, even at full term. Seminal research in perinatal pathology has demonstrated that 28% of perinatal deaths occurred in fetuses who weighed more than 2500 grams and 30% were at a gestational age of more than 36 weeks which is nearly full-term.
5. Understand the role that cognitive bias can play in determining a cause of death.

Medical examiners should take care to ensure that their findings are based on objective, scientific, or medical evidence—not additional information that they may learn in a particular case. In 2009, the National Research Council published a report on the influence of forensic science on the criminal justice system, which recognized that “forensic science experts are vulnerable to cognitive and contextual bias.” With regard to medical examiners, context bias refers to the risk that non-scientific contextual information about a case can impact a medical examiner’s findings.

For example, in 2011, Hillary Tyler experienced a stillbirth in her hotel room. The medical examiner who performed an autopsy on the fetal remains could not conclusively determine the cause or manner of the death and listed both as “undetermined” in his initial report. The medical examiner was subsequently informed by detectives that Tyler had confessed the fetus was born alive and she had drowned it. This "confession" was obtained during an interrogation of Tyler before she had received any medical care—she was suffering from preeclampsia, had lost a large amount of blood, and required a blood transfusion and several medications. She later recanted her statements. Based on this information, however, the medical examiner concluded in his final report that the cause of death was “bathtub drowning” and the manner of death was “homicide.” Tyler was convicted of second-degree murder.

In most forensic disciplines, non-medical information gleaned from law enforcement investigators, witnesses, or through confessions would be ruled entirely irrelevant. Death investigations, however, often necessitate consideration of a wide range of information. It is important that medical examiners understand that such information, even from their law enforcement colleagues, may not be reliable—investigators and witnesses can be wrong, confessions can be forced, and even physical evidence can be misinterpreted. As exemplified by Tyler’s case, it is critical that a medical examiner’s findings not be influenced by non-medical information that is not supported by medical evidence, or that has no bearing on the scientific findings. In particular, information from law enforcement can be “unreliable, difficult to ascertain, and conducive to conjecture” and therefore should not be relied upon when making scientific determinations.

When background information is considered in a fetal death investigation, care should be taken to consider the full scope of the pregnant woman’s relevant history, particularly those characteristics associated with increased risk of stillbirth. The National Health Institute identifies a number of factors that increase stillbirth risk, spanning the spectrum of medical and non-medical maternal characteristics and reproductive history. Such factors include a pregnant woman’s age; socioeconomic status; prior instances of stillbirth; pregnancy with twins, triplets, or other multiples; use of assisted reproductive technology; being overweight or obese; being diabetic; and having high blood pressure before pregnancy, among other factors and pre-existing conditions. Additionally, a number of common infections have been associated with stillbirth, including influenza, chlamydia, herpes simplex, listeriosis, cytomegalovirus, Lyme disease, group B streptococcus, and E. coli, among others.