

The Implications of the Opioid Epidemic on Select Elementary Schools in Crisis Regions of the
Northeast: A Multiple Case Study Investigation

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DEDICATION

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ABSTRACT

In response to the growing opioid epidemic, this multiple case study investigation explored multiple schools in opioid crisis regions of the Northeast. Select elementary schools in Massachusetts, Maine, and New Hampshire partook in the study. There was a total of 76 participants ranging from district administrators, teachers, counselors, mental health providers, and consultants. Children exposed to parental drug-addictive behaviors or born addicted to opioids may have cognitive, social-emotional, and behavioral needs all teachers will be responsible for accommodating. Additionally, students in kindergarten through second-grade classrooms are experiencing adverse childhood experiences in their environments and community because of opioid exposure. Consequently, the adverse experiences are impacting the schools. In addition to the schools added responsibility to meet students' basic unmet needs, student attendance is poor, student and parents' inappropriate behaviors are increasing, and academic achievement is impacted. Teachers are experiencing vicarious trauma and stress. Evidence collected from this study suggests that there is a lack of organizational systems, preparation, consistency, and proactive plans to support the schools, administrators, teachers, and students impacted by the epidemic in the select elementary schools in crisis regions of the Northeast.

CHAPTER 1. INTRODUCTION

Background of the Study

As every community continues to battle the current opioid crisis, children born addicted to opioids and children living in a home devastated by opioids will be in classrooms across the country. Children exposed to parental drug-addictive behaviors or born addicted to opioids may have cognitive, social-emotional, and behavioral needs all teachers will be responsible for accommodating. The goal of this research is to investigate three elementary schools located in the opioid crisis regions of the Northeast and explore the differences in programs, experiences of teachers, and the impact on special education in these schools. The study will also explore the critical role awareness will play in ensuring that school districts can become more proactive in preparation for the massive influx of students affected by this societal emergency. All teachers should be prepared and educated on the educational and social-emotional needs of children traumatized by the devastation of opioid addiction, not simply those in special education. The proper education and interventions should be a requirement for all teachers, administrators, and staff members within a school district.

The inclusion of all children in the general education classroom, regardless of disabilities, is an expectation for schools across the country mandated by federal and state legislation. According to the Individuals with Disabilities Education Act (IDEA), all children regardless of their disability are entitled to a free appropriate public education in their least restrictive environment. IDEA ensures that all students are educated with age-appropriate peers in the general education classroom to the greatest extent possible. All teachers regardless of their background and expertise are expected to accommodate, differentiate instruction, and provide

interventions for all students with a variety of abilities, and this includes children who have been exposed to or born with opioid addiction. To ensure successful interventions, all teachers should be expected to understand the cognitive and social-emotional learning needs of children born into homes affected by addiction, especially during the opioid crisis.

The research outlined within the forthcoming chapters will investigate the impact of the opioid epidemic in the public schools and will examine and explore what various public schools are currently doing to meet the challenges and needs of children exposed or addicted to opioids. Furthermore, the research will focus on understanding the current impact of the opioid epidemic in the classroom, differentiate the various resources available in high impacted school districts, and gain an understanding of the impact on special education. Additionally, as stated above, the research intends to create an awareness that districts will need to educate teachers and provide resources on the potential educational implications of the opioid epidemic in the classroom. The intent is also to uncover resources that schools may already be providing and highlighting the impact of those resources.

The literature review will uncover the history of the opioid epidemic, current trends in opioid abuse, and the developmental and educational needs of children directly born into this epidemic. The combined analysis of trends is a robust prediction that children impacted by the opioid epidemic will have special education needs, such as social-emotional, behavioral, and cognitive disabilities in classrooms across the country. Additionally, based on the evidence and the analysis of trends for the specific period examined, in 2019 the Southeastern United States and New England are predicted to have a significant number of children in their schools directly born into this epidemic. The available literature establishes that there is a direct relationship between infants born with neonatal abstinence syndrome (NAS) and the need for special

education services once these children are in school (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014). Literature has suggested that children born or living in a household battling addiction would potentially be equally in need of special education services once they are in school (Herranz, Vilchez, Ledo & Sierra, 2014; Nunes et al., 2000).

Exposure to opioids in the womb can lead to neonatal abstinence syndrome (NAS). NAS is a condition that results from being born addicted to opioids. Children prenatally exposed to opioids show lower academic performance than non-exposed infants and can be afflicted with weaknesses in language and deficiencies in cognition (Beckwith & Burke 2015). Furthermore, research indicates that this exposure contributes to the high incidence of neurodevelopmental, cognitive, and behavioral problems (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014). According to the Center for Disease Control and Prevention (2013), one-third of heroin users are women, and two-thirds of those users are women of childbearing age. There is an increasing number of women who become pregnant that are addicted to heroin and other opioids. The frequency of neonatal abstinence syndrome in the United States has nearly doubled from 2009-2012 and has grown fivefold since 2000. The swift rise in NAS parallels the upsurge in opioid use in the United States, especially among women of childbearing age (Jones et al., 2015). Evidence and the various literature also suggest that children in families fighting opioid addiction will have special education needs that the school will be responsible for addressing. These children may be experiencing trauma, neglect, abuse, or abandonment. Trauma, neglect, abuse, and abandonment all warrant increased chances of emotional, behavioral, and cognitive disabilities which would require educational interventions (Herranz, Vilchez, Ledo & Sierra, 2014; Nunes et al., 2000). With the increasing trends of

children born into this growing epidemic, there is an increased need for awareness and instruction on the special education requirements these children will require to be successful in classrooms across the country.

The objective of this research is to investigate teacher preparation through direct exploration of Northeast school districts located in opioid crisis regions of the United States. Through anecdotal investigations, various published and news reports, schools seem to be reactive in their solutions rather than proactive and are providing drug education programs earlier, while making Narcan (drug used to prevent opioid overdose) available in the nurse's office (Feely, 2016; Rayno, 2015; Roberts, 2015; Chapter 52- Massachusetts Acts of 2016). However, there is little evidence that districts are preparing for when the increase of children who have experienced trauma enter the schools with significant educational and social-emotional needs because of drug exposure. An objective is to relate the importance of proactive initiatives to better prepare teachers for the arrival of the many children born with special education needs because of NAS and for those children living with the family devastation of addiction. The Northeast is a region of the country experiencing rapidly increasing NAS births and a high number of children born into families devastated by addiction. Therefore, the Northeast will have one of the highest needs for special education services, general education interventions, and other school supports as a direct result of this epidemic.

Statement of the Problem

The Opioid Epidemic will affect American schools and the nation's educational system. Although schools are addressing the epidemic reactively, there appears to be a minimal number of proactive measures to ensure teachers are educated and prepared for the growing social, emotional, behavioral, and cognitive needs of the youngest victims of the opioid epidemic.

According to the National Institute on Drug Abuse (NIDA), every 25 minutes, a baby is born suffering from opioid withdrawal, or NAS. Babies exposed to opioids *in utero* have an advanced risk of developing educational disabilities once school aged, according to a study by the Centers for Disease and Control (CDC) and a longitudinal study conducted by Dr. Margaret Fill (2017). Specifically, New England has been hit particularly hard by the opioid epidemic. With the trends doubling every three years of children born prenatally exposed to opioids we could see the numbers of NAS births skyrocket. For example, 2009-2012 infants born with NAS reached 2.5 births out of every 100 deliveries in New England (CDC, 2015). If trends continue to double every three years, as predicted, in 2019 New England could have at least ten infants born with NAS out of every 100 births. The need for special education services because of the opioid epidemic is not limited to children born with neonatal abstinence syndrome but also to any children born into a family that is battling addiction. According to Herranz, et al. (2014) and Nunes et al. (2000), many children involved with a family dealing with the addiction of opioids will require special education interventions as well. The children of opioid abusing parents are at risk for a wide variety of adverse outcomes, including emotional, social, and behavioral problems as well as challenges in cognitive and academic functioning. The risk for poor emotional and behavioral outcomes has been found to be higher among children living with a parent with a history of substance abuse. The children of opioid abusing parents are more than twice as likely to have a drug use problem themselves by young adulthood as compared to their peers. Studies suggest there are developmental disabilities in children and adolescents living with addicted parents or foster care because of parental addiction even if the children were not born exposed to opioids *in utero* (Herranz, Vílchez, Ledo & Sierra, 2014; Nunes et al., 2000).

The Significance of the Problem

Statistically, there is not a region untouched by this widespread crisis. The significance of the problem in the schools will most likely be affected through special education staffing needs, financial problems, teacher training, and curriculum needs. As a comparison and example, the special education referrals in the area of the countries overwhelmed by the crack cocaine crisis of the mid to late 1980s increased significantly from 1989 to 1991. The increase was drastic, and those districts were unprepared to service the needs presented to them. Specifically, in Los Angeles and Miami, there was a 50% increase in special education referrals from 1989-1991 and New York City had a 26% increase from 1989-1991 (Schipper, 1991). These increases in special education referrals were credited to the increase of infants born addicted to crack cocaine. The opioid epidemic is much more prevalent than the crack crisis of the late 1980's and includes a much more extensive geographic location.

Specifically, in the Northeast United States, there is a documented high increase in NAS births. The New England region has the second highest rate of prenatal exposure in the nation with 13.7 per 1,000 births (Massachusetts Commonwealth Interagency Task Force, 2017). For example, according to New Hampshire Health and Human Services (2018), New Hampshire is experiencing one of the most significant public health emergencies in its history, and the documented rate of NAS births per 1,000 live hospital births reached 24.4 per 1,000 in 2015. Additionally, in 2016, New Hampshire Health and Human Services Division for Children, Youth, and Families stated that it had 504 reports of children born drug-exposed which is an increase of 37% from 2014. In just two years, the number of New Hampshire children born drug exposed increased dramatically, and these numbers continue to increase each year. According to the Massachusetts legislation Chapter 55 Report (2017), ambulance trips due to a probable opioid-related overdose increased as much as by 110% in two years, from 2013-2015.

Additionally, according to Massachusetts Commonwealth Interagency Task Force on Newborns with Neonatal Abstinence (2017), reported prenatal opiate exposure in Massachusetts increased from 2.6 per 1,000 hospital births in 2004 to 14.7 in 2013 which is an increase of more than 500%.

Consequently, with the projected increases in special education services as a result of drug-exposed births, there is a probable increase in fiscal responsibilities of school districts to have the resources to accommodate the special education needs of drug-exposed children adequately. The school would also benefit from prioritizing social-emotional learning. Most teacher preparation programs do not provide training to preservice teachers on the social-emotional and cognitive needs specifically for children exposed to drugs, and currently this is not a fiscally funded priority of most school districts. Social-emotional learning would need to be funded more aggressively, and teachers would need training to accurately and successfully implement new programs and curriculum.

Drug-exposed children with emotional, behavioral and cognitive disabilities will often be placed in general education or inclusionary classroom, so, all teachers will require adequate professional development and training on the specific needs of children with disabilities. As inclusionary settings continue to be a significant initiative under the Individual with Disabilities Act (IDEA) and the least restrictive environment is prioritized in the United States, the teachers and staff present in any classroom must be included in the special education and disability training. Teachers without the proper education and training will be much more likely to have difficulty teaching and providing services for the children in need as a direct result of the opioid epidemic.

Purpose of the Study

The purpose of this study is to understand the impact the opioid epidemic has on the classroom and special education. The study should create an understanding of the importance of teacher preparedness in educating students that have affected by the opioid epidemic. The foundation of this information creates a picture of what needs to be done in preparation for the increase of students born into this crisis by creating an agenda of what districts and/or teacher preparation programs may need to do to properly train and prepare teacher and administrators.

The Sequence of Events and the Purpose of the Study Based on Literature

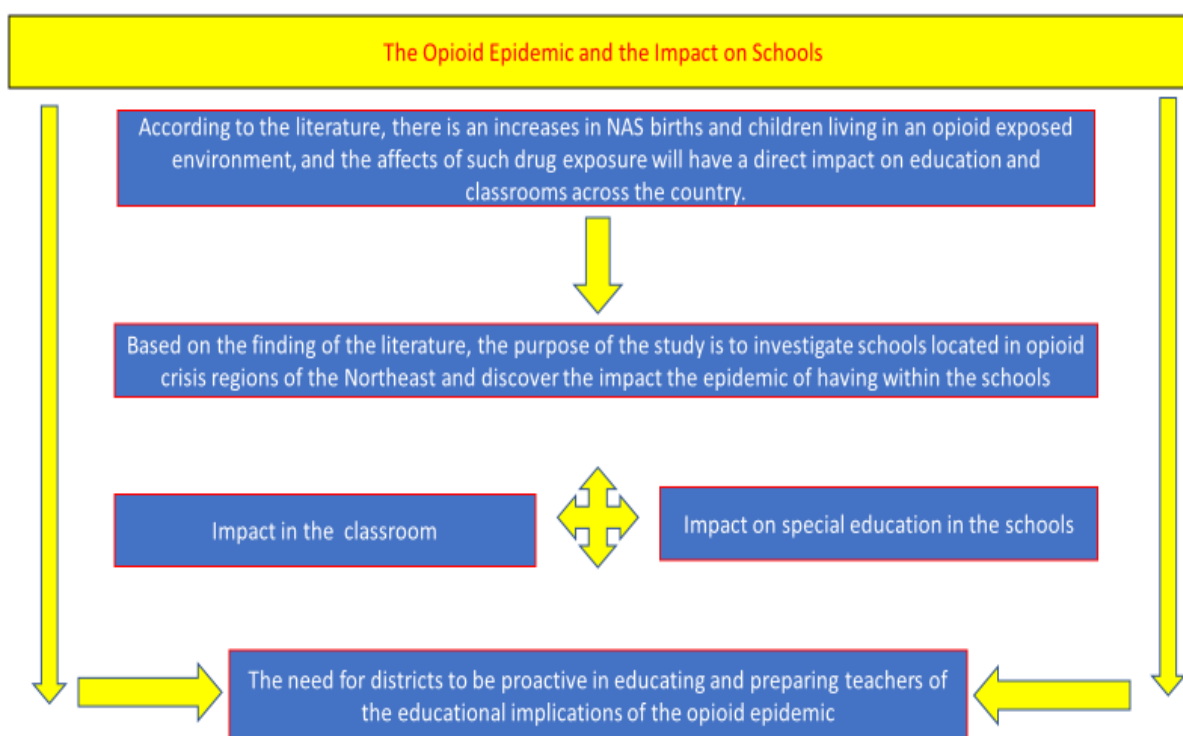


Figure 1. Model of purpose

The model of purpose (Figure 1) illustrates the importance of this research and the educational impact of the opioid epidemic on public schools based on the literature. The graph

describes the importance of the problem, the magnitude of the situation, and the underlining need for this research.

As illustrated in the model, a need exists to establish an awareness between the opioid epidemic and the impact it will have in the classroom and the need for districts to be proactive in educating and preparing teachers of the educational implications of this crisis. Literature suggests that there was a series of events, such as health care prescribing habits, addiction trends, and NAS birth rates, that evolved to create this crisis that will affect districts and schools across the country. Further exploration of the underlying causes of the crisis will be incorporated into the study in order to mitigate the ramifications this epidemic has created.

This study will also explore the opiate prescribing habits of each state and how these habits have affected the number of infants born with NAS in each. Such exploration and analysis will reveal that states with the higher number of opioids prescribed by health care providers (Paulozzi, Mack, and Hockenberry, 2014) resulted in higher rates of NAS births (Patrick, Davis, Lehman, and Cooper, 2015). Several studies have concluded that NAS leads to deficits in cognitive and motor ability, attention deficit hyperactivity disorder, lower IQ, behavioral problems, inattention, hyperactivity, and speech, language, and communication disorders. Other studies provide adequate evidence that opioid exposure during pregnancy results in developmental and cognitive deficiencies. These disabilities would qualify the children for some classroom interventions or special education services once the infant reaches school age (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Nygaard, Moe, Slinning & Walhoyd, 2015; Ornoy et al., 2010; Yaun et al., 2014).

The areas of the country with the highest numbers of NAS births (based on 2012 birth trends) are the Southeastern United States and the Northeast. The numbers are quite high (2.5

births per 100), and these figures do not include the number of drug-exposed children that are living in opioid abusing households. Research also suggests that children living in a drug-exposed environment may also need classroom interventions to be successful, but exact numbers are unclear (Herranz, Vilchez, Ledo & Sierra, 2014; Nunes et al., 2000).

This study will focus on the current impact the opioid epidemic is having on classrooms and the impact it's having on teachers in the Northeast, and it will investigate what type of proactive measures schools are taking to prepare teachers and staff on the educational and social needs drug-exposed children have as a direct result of this horrible epidemic. The study should expose if there is a need for increased awareness and preparedness of school on educating teachers and providing proper services for children affected by the opioid epidemic.

In conclusion, the opioid epidemic will affect the American schools and educational system. Based on news reports and news articles, schools are addressing the epidemic reactively. There seem to be minimal proactive measures in place to ensure our teachers are educated and ready for the growing social, emotional, behavioral, and cognitive needs of the youngest victims of the opioid epidemic (Feely, 2016; Rayno, 2015; Roberts, 2015; Chapter 52- Massachusetts Acts of 2016). The highlighted importance is in the investigation of the opioid epidemic and the possible impact in the classroom, impact on special education, and the understanding and needs for districts to be proactive in educating and preparing teachers of the educational implications of the opioid epidemic.

Research Questions

The research questions investigate how the opioid epidemic is affecting schools in opioid crisis regions of the Northeast and more specifically how prepared teachers are to educate students living with the internal and external consequences of the current epidemic. These

external consequences include isolation and separation from parents, foster care, criminal involvement, neglect, and abuse. The internal consequences include trauma, failures, and disappointments. Internal and external consequences of this epidemic will disrupt classrooms and learning and, therefore, will require interventions, accommodations, modifications, and special education services. The following are the research questions of this study:

1. How is the opioid epidemic impacting Kindergarten through second-grade classrooms located in opioid crisis regions of the Northeast?
 - a. How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering the school?
 - b. How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?
2. How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?
 - a. How are schools located in opioid crisis regions supporting the needs of students affected by the opioid crisis?
 - b. How have special education services and referrals been affected or changed as a result of the opioid epidemic?

Theoretical Framework

The theoretical framework for this case study investigation serves as the guide that supports the study. Eisenhart defines a theoretical framework as “a structure that guides research by relying on a formal theory... constructed by using an established, coherent explanation of certain phenomena and relationships” (1991, p. 205). The theoretical framework, Adverse Childhood Experience (ACE) Pyramid, serves as a guide for this research in understanding the

phenomenon of the opioid epidemic and the relationship it has with the educational needs of the students born affected by this epidemic. Specifically, the bottom three tiers (Adverse Childhood Experiences, Disrupted Neurodevelopment, and Social, Emotional, and Cognitive Impairment) frame this research (CDC, 2014)

The framework guides the research by highlighting that adverse childhood experiences can lead to disrupted neurodevelopment and social, emotional, and cognitive impairments. Specifically, social, emotional, and cognitive impairments can lead to special education services and accommodations in the classroom. These needed special education services are a direct result of adverse life experiences from the opioid epidemic. The theoretical framework illustrated below validates the research questions of this study, the problem, the significance of the study, and helped determine the most effective research design and plan for analysis.

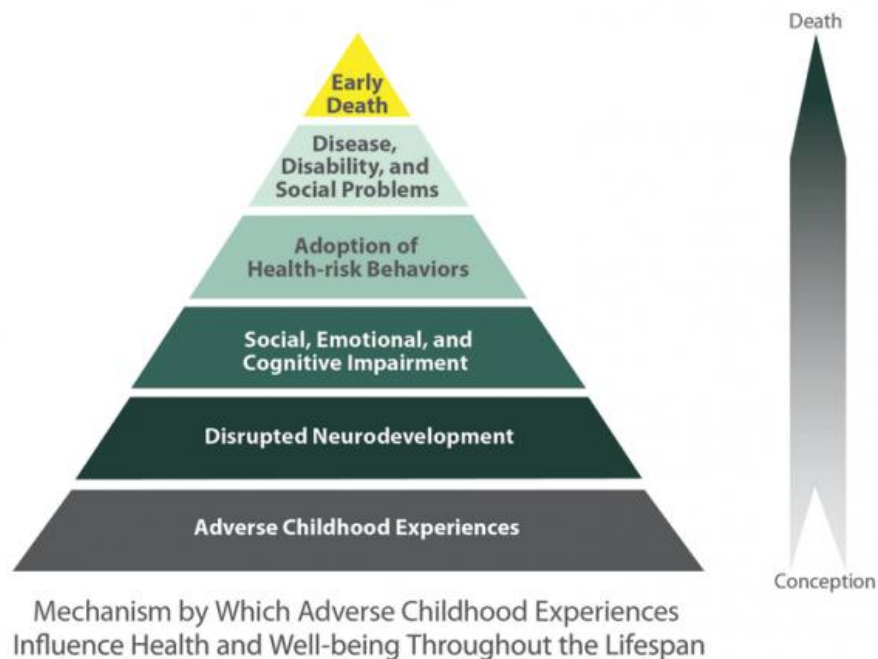


Figure 2. Theoretical framework

Theoretical Framework Narrative

The Adverse Childhood Experience (ACE) Pyramid (2014) is the theoretical framework of this study. The ACE Pyramid is a broad graphic to understand the theory behind the research problem and the need for the research. The ACE Pyramid was derived from the CDC-Kaiser Permanente Adverse Childhood Experiences Study (2014). The pyramid illustrates the “mechanism by which adverse childhood experiences influence health and well-being throughout the lifespan” (CDC, 2014). Specifically, the bottom three tiers (Adverse Childhood Experiences, Disrupted Neurodevelopment, and Social, Emotional, and Cognitive Impairment) frame the study’s purpose, the research questions and the literature reviewed.

Adverse Childhood Experiences Study is a research study conducted by the American health maintenance organization Kaiser Permanente in collaborations with the Center for Disease Control. The CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study is a significant investigation of childhood abuse and neglect and later-life health and well-being. The study has established an association between adverse childhood experiences with health and social problems across the lifespan.

According to the CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study (2014), a household member that has a problem with drinking or an alcoholic or a household member that misuse drugs qualify as an adverse childhood experience. Specifically, in understanding the framework as it related to the research the three bottom tiers (Adverse Childhood Experiences, Disrupted Neurodevelopment, and Social, Emotional, and Cognitive Impairment) of the pyramid would be addressed. Adverse life experiences of children born affected by the opioid epidemic begin at conception, leading to disrupted neurodevelopment resulting in social, cognitive, and health impairments. The disruption in neurodevelopment results in social, cognitive, and health impairments will directly affect the child’s educational

experiences and the need for academic, social, emotional, and behavior interventions once the school age.

The theoretical framework of this study and the combined collection of literature are intrinsically linked. The theoretical framework can be used as a guide for logically developing and understanding the different, yet interconnected, parts of the literature review. The framework reinforces the literature in chapter two which establishes that there is a direct relationship between infants born with neonatal abstinence syndrome (NAS) and the need for special education services once these children are in school (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014). Additionally, the literature also reinforces the theoretical framework by indicating that children born or living in a household battling addiction would potentially be equally in need of special education services once they are in school (Herranz, Vélchez, Ledo & Sierra, 2014; Nunes et al., 2000). The theoretical framework has established an association between adverse childhood experiences with health and social problems across the lifespan. Specifically, within this study, the adverse life experience is the exposure to opioids, and the health and social problems are social, emotional, cognitive, or behavioral impairments that will warrant special education services or accommodations with the classroom once school age.

In conclusion, the framework organizes the theory behind the research and the need for an investigation into school districts located within opioid crisis regions. The theoretical framework illustrates an understanding of the importance of teacher preparedness in the education of children living with adverse childhood experiences and highlights the need that teachers should be educated in social, emotional, and cognitive impairments of children suffering such adverse life experiences.

Definition of Terms

For this study, the following definitions were used:

Drug-Exposed: Children either born addicted to drugs or live in a home affected by drug addiction.

Neonatal Abstinence Syndrome (NAS): Occurs when a baby is exposed to drugs in the womb before birth. A baby can then go through drug withdrawal after birth. NAS is caused when a woman takes opioids during pregnancy. Research shows NAS can lead to deficits in cognitive and motor ability, lower IQ, behavioral problems, inattention, hyperactivity, speech, language and communication disorders, emotional and social disturbances (Beckwith & Burke, 2015; Fill, 2015; McGlone & Mactier, 2015; Nygaard et. al (2015); Ornoy et. al., 2010; Yaun, et al., 2014).

Opioids: Opioids are a class of drugs that includes the illegal drug heroin, synthetic opioids such as fentanyl, and pain relievers available legally by prescription, such as oxycodone (OxyContin), hydrocodone (Vicodin), codeine, morphine, and others. These drugs are chemically related and interact with opioid receptors on nerve cells in the body and brain.

Opioid Crisis Regions: Opioid crisis regions are regions identified by having higher than the national average overdose deaths. An illustration below depicts opioid crisis regions due to significantly higher overdose death (CDC, 2015).

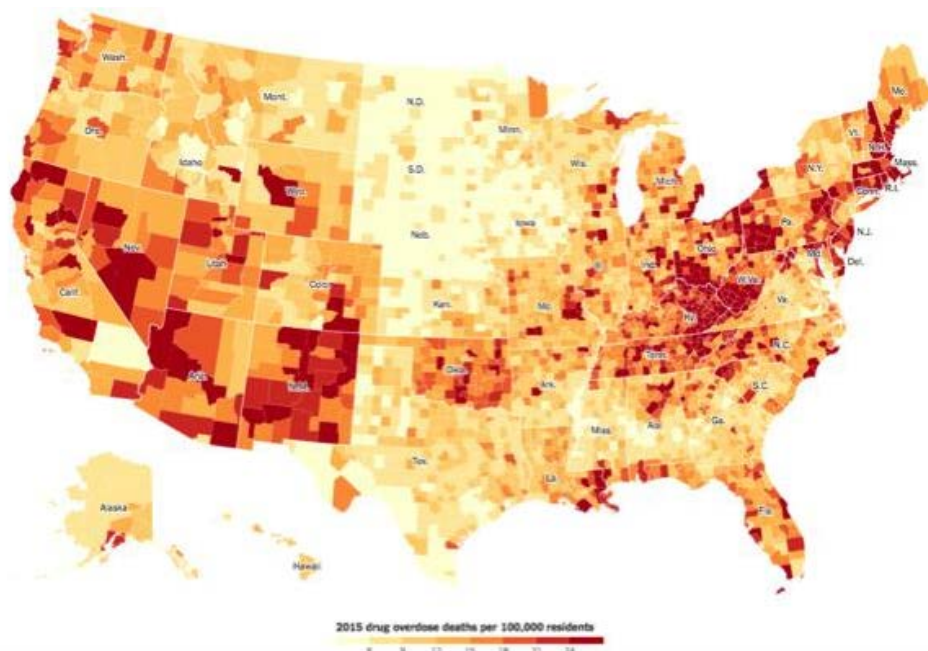


Figure 3. The United States, overdose deaths involving opioids in 2015

The Significance of the Study

Awareness, resources, and preparation are necessary to promote success in school for children directly affected by the opioid epidemic. Providing teachers with the tools and strategies to educate all children in the inclusionary classroom, especially our most vulnerable population, will actively prepare us to better serve these children born into the opioid crisis. With the increased special education needs in the classroom as a result of the opioid epidemic, administrators should be preparing educators and school staff for successful differentiation strategies, Universal Design for Learning, emotional and behavioral interventions, social-emotional learning curriculum and identifying criteria that may help teachers acknowledge student's needs. This research will investigate the impact of the opioid epidemic in the Northeastern United States, examine what districts are currently doing to meet the challenges of the opioid epidemic, and create awareness that districts and teacher preparation programs may need to begin educating preservice teachers and already existing teachers about the potential

educational implications of the opioid epidemic in the classroom. This will ensure a proactive measure to better serve some of the children whose lives have been affected by this epidemic.

Overview of General Procedures

The research design for this study will be a multiple case study according to Yin (2018) and Stake (1995). The case study will be an in-depth investigation into three identified schools located within opioid crisis regions in three different states in the Northeast. The data will be collected through surveys and interviews with teachers, principals, and special education administrators. Pending access, various documents, such as professional development minutes and special education documents and data, will be analyzed within the three schools. Additionally, archival records such as statistical data and organizational records may be analyzed depending on access made available to the researcher. The goal of the combined study is to understand the real-world phenomenon and preparedness of school districts involved in the study. The results should create generalizations in understanding the impact the opioid epidemic is having on special education and classroom teachers located in opioid crisis regions.

The overview of the studies general procedures includes the identification of the areas in the United States that warrant further investigation, such as the Northeast region. The next step will be to identify three opioid crisis cities/towns in the Northeast. Once the cities and towns are identified, and access is granted, a school will be recognized to participate in the case study. Specifically, the school will be identified through recommendations of employees working in the district. Surveys, interviews, and documents will be analyzed to determine the impact of the opioid epidemic in the classroom, preparedness, proactive, and reactive measures of the school to combat the classroom and educational ramifications of the opioid epidemic and to understand teacher preparedness.

Limitations

There are some potential limitations to this study. The investigation is limited to school districts that approve the research. There may be some restrictions in gaining access in the most desired research sites with the highest opioid impact. The investigation is also limited to three schools in crisis regions of the Northeast. There are many more schools that would qualify for this study. Additionally, further investigation may warrant an extended geographic location. Also, given the nature of the study, there may be participant biases. Teachers, administrators, and other staff may be affected by this epidemic creating biases and impact objectivity. The researcher will also be exposed to the environment of the schools in crisis. Listening and engaging with participants while observing the emotions and environmental influences that impact the circumstance surrounding the phenomenon, may impact the objectivity of the researcher.

CHAPTER 2. LITERATURE REVIEW

The United States is in the center of an opioid epidemic. The addiction and abuse of opioids is a global problem that negatively affects everyone. Communities, schools, neighborhoods, and families are suffering because of this crisis. The misuse of opioids also affects the health, social, and economic well-being of all societies. All demographics are involved in this widespread societal emergency. The abuse of opioids is killing Americans daily.

Infants are born addicted to this drug as an outcome of prenatal exposure. Furthermore, babies are born into families that are fighting the battle of addiction. These infants are individuals that are often overlooked in this epidemic. The infants born today in the center of this epidemic will be in schools within the next few years with a broad range of education and psychological needs.

On October 26, 2017, President Donald Trump declared the opioid epidemic a public health emergency stating that “We are currently dealing with the worst drug crisis in American history,” adding, “it has just been so long in the making. Addressing it will require all of our effort” (President Donald Trump, 2017). The efforts do not stop with health care providers, law enforcement agencies, families, advocates, and treatment centers; the efforts need to be extended to school districts across the country.

School districts are suffering, and it will continue to worsen if this country does not take proactive measures to address the implications of the epidemic within the American educational system. Schools all over the country will face challenges because of this epidemic. Teachers, staff, and all others in the inclusion classrooms across the country will need to be educated on the socioemotional accommodations, successful academic practices, and proactive measures to ensure children drug exposed will be providing appropriate accommodations to help ensure the

successes that the child is faced with because of this horrible reality. Educators will need to focus on the development of these children and discover the best practices to ensure their success. As outlined in the theoretical framework and in calibration with the evidence provided in the literature review, adverse childhood experiences lead to disrupted neurodevelopment resulting in social, emotional, and cognitive impairments (CDC, 2014). It is essential that school personnel be prepared, educated, and ready to accommodate these high-risk children that may have special education needs as a result of the opioid epidemic. It is imperative to give every child a chance for the best life and school experience possible.

Overview of Themes

This review of the literature will incorporate the history of the opioid epidemic, current trends in opioid abuse, and the developmental and educational needs of children directly born into this epidemic, and what schools are doing about the epidemic. The combined research in this literature review indicates that children impacted by the opioid epidemic will have special education needs in classrooms across the country. Based on the evidence and the analysis of trends specifically from 2012, the Southeastern United States and New England will have the most significant number of children in their schools directly born into this epidemic. The research establishes that there is a direct correlation between infants born with neonatal abstinence syndrome and the need for special education services once these children are in school. Evidence also suggests that children in families fighting opioid addiction will have special education needs that the school will be responsible for addressing. With the increasing trends of children born into this growing epidemic, there is an increased need for awareness and instruction on the special education requirements these children will need to be successful in

classrooms across the country. The opioid epidemic will impact schools and education everywhere.

The literature review will be broken down into themes. The history of opioid abuse will be investigated along with the demographic breakdown of prescribed opioids leading to Neonatal Abstinence Syndrome. The likelihood of NAS leading to special education requirements once school age will be investigated along with children living in a home with drug-addicted parents. Lastly, there is a discussion on what is currently happening in schools to fight the opioid epidemic and a discussion on where the United States needs to be in a proactive attempt to battle this problem in the academic arena. Severe educational implications will result from the aftermath of this epidemic and policymakers, leaders, and school administrators must stand ready to address the problem much more proactively.

History of Opioid Abuse

Every day more than 140 Americans die from an opioid overdose (CDC, 2017). The opioid epidemic is a tragic reality that is affecting every community in the United States. The opioid epidemic is an increase in the abuse of and addiction to opiates such as heroin, morphine, prescription pain relievers, and synthetic opioids such as Fentanyl. This abuse is resulting in deaths, overdoses, and disruptions in communities and families across the country. The problem seems to be initially rooted in the over prescribed number of opioids by healthcare professionals. According to the Center for Disease Control and Prevention (2017), the United States is the largest opioid consumer globally. Research indicated that the majority of illicit users first misused prescription opioids. Tragically, this abuse is resulting in deaths, overdoses, and disruptions in communities and families across the country.

Drastic increases in the number of prescribed opioids have contributed to the severity of the current opioid epidemic involving heroin use across the country. One may argue that the increased number of prescriptions written and dispensed along with aggressive marketing by pharmaceutical companies have all contributed to the current opioid epidemic and abuse problem. The following statistics show the severity of prescription misuse (Muhuri et al., 2013; Cicero et al. 2014; Carlson et al., 2016).

- About 29 percent of patients prescribed opioids for chronic pain misuse them
- Between 8-12 percent develop an opioid use disorder
- An estimated 80% of people who used heroin first misused prescription opioids.

Opioids are medications that control and relieve pain while offering an inexpensive means of altering one's mental and physical state. The purpose of opioids is to decrease the intensity of pain signals reaching the brain and affect the area of the brain that controls emotion, which reduces the effects and feelings of pain. Opioid medications include Vicodin (hydrocodone), OxyContin, Percocet (oxycodone), Morphine, and other related drugs and generics produce the same euphoric effects. Opioids can be subscribed to treat pain from an injury, surgery, or dental procedure, etc. (Kuehn, 2007).

Opioids can also cause drowsiness, mental confusion, nausea, constipation, and can decrease respiration. Additionally, opioids affect the brain primarily in the regions involved in reward. Those who abuse opioids may search for ways to intensify their experience by abusing the drug for the mind-altering effects. People can abuse drugs by taking them in ways other than those prescribed. For example, OxyContin is an oral medication used to treat pain through a slow, and steady release of the opioid. People who misuse or abuse OxyContin may snort or

inject it, thereby increasing their risk for serious medical complications, including overdose (NIDA, 2016).

The United States is the largest opioid consumer globally which is why it is at the center at the center of this epidemic. The number of prescriptions for opioids prescribed by health care providers has increased from 76 million in 1991 to nearly 217 million in 2012. The United States is responsible for almost 100 percent of the world total for hydrocodone consumption such as Vicodin and 81 percent for oxycodone such as Percocet (CDC, 2014).

In an attempt to resolve the problem in some areas, health care providers have been forced to limit their prescription written for opiates through state legislation. By 2018, more than 30 states considered 130 bills related to opioid prescribing habits. According to NCSL (2018), 24 states had enacted legislation with some type of limit related to opioid prescribing by December 2017. The temporary problem with this legislation, some might argue, is that limiting opioid prescriptions may result in increased heroin use. Opiate addicts need pain reliever medication, but the prescriptions are harder to obtain than heroin. The efforts to limit opioid prescribing have resulted in restricted prescription opioid access. Limited access to opioid prescriptions has fueled heroin use (Precursors and Chemicals, 2011). The availability and low cost of heroin in the United States are identified as a significant contributor to rising rates of heroin use (DEA, 2014). It is reported that individuals switch to heroin because it is cheaper and easier to obtain than prescription opioids. This evolving problem has led to a global crisis in the transition from opioid pills to heroin (Precursors and Chemicals, 2011). Heroin users start by using prescription opioid pain medications 80 percent of the time (Pollini, Banta-Green, Cuevas-Mota, Metzner, Teshale, & Garfein, 2011). Heroin use and abuse have increased across the United States regardless of sex, age group, and income levels (CDC, 2014).

Data from the Center for Disease Control (2015), depict the dangerous trend of overdose deaths involving opioids and the opioid. Figure 4 graphically depicts the tragic increase in opioid abuse and deaths from 2000-2014 in the United States.

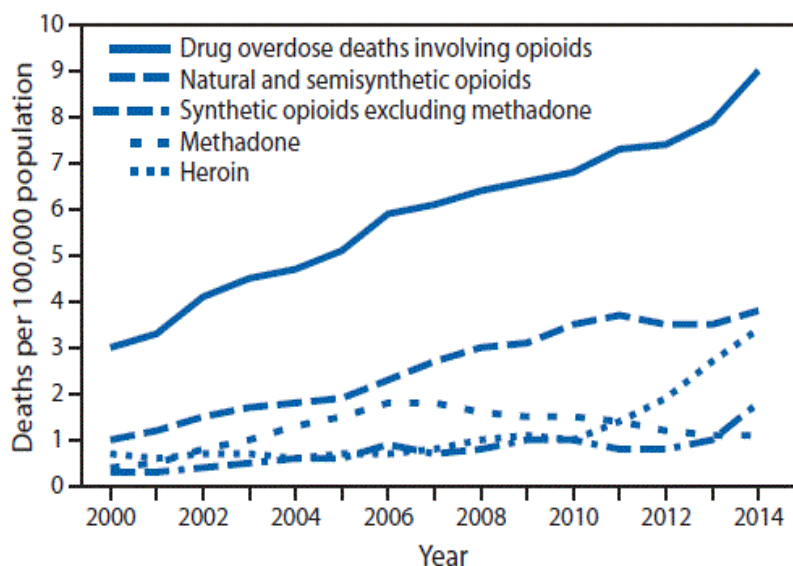


Figure 4. Deaths involving opioids

The history of the opioid epidemic has resulted in many problems in our society that need to be addressed. The challenges that this country is currently facing because of this epidemic will lead to future ramifications in schools, neighborhoods, family structures, hospitals, and law enforcement agencies. These ramifications will be prominent in all communities for years.

Neonatal Abstinence Syndrome

Women of childbearing age are prescribed opioid pain relievers by healthcare providers more frequently. The upsurge of opioids prescribed to women is leading to an outrageous number of women suffering from addiction and abuse of opioids (Hedegaard, Chen, Warner, 2015). Across the United States, women addicted to opiates are becoming pregnant. In return, infants are born with the consequences of becoming dependent on opioids *in utero*.

Neonatal Abstinence Syndrome Statistics

The Center for Disease Control and Prevention (2013) reported that women are more likely to have chronic pain than men. Therefore, women are more probable to be prescribed prescription pain relievers, such as opioids and use them for more extended periods than men. Prescription opioid overdose deaths among women have increased more than 400 percent from 1999 to 2010, compared to 237 percent among men. Heroin overdose deaths among women have tripled in the last few years (Hedegaard, Chen, Warner, 2015).

Neonatal abstinence syndrome (NAS) occurs when heroin or other opioids pass through the placenta to the fetus during pregnancy. Exposure to heroin and other opioids during pregnancy may lead to the unborn baby to become dependent along with the mother. Some of the various short-term symptoms of NAS include excessive crying, seizures, fever, irritability, tremors, slow weight gain, diarrhea, vomiting, and possibly death. Long-term effects are cognitive, developmental, and behavioral disorders. NAS involves hospitalization and treatment with medication (often morphine) to relieve symptoms. Medication is slowly tapered off until the baby adjusts to being opioid-free. Many infants exposed to methadone during pregnancy typically require treatment for NAS as well (O'Donnell, Nassar, Leonard, Hagan, Mathews, Patterson, 2009).

One-third of heroin users are women, and two-thirds of those users are women of child-bearing age. There are a disturbing number of women who become pregnant that are addicted to heroin and other opioids. The frequency of neonatal abstinence syndrome in the United States has nearly doubled from 2009-2012 and has grown fivefold since 2000. NAS births have increased nationally over 400% since 2000 (Ko et al., 2017). The swift rise in NAS parallels the

upsurge in opioid use in the United States, especially among women of childbearing age. NAS is a rapidly growing public health problem that continues to grow (Jones, 2013).

Distribution of Neonatal Abstinence Syndrome

Increase heroin and opioid abuse from 2000-2012 resulted in a fivefold increase in infants born suffering from symptoms of opiate withdrawal. In New England alone, the Center for Disease Control (2012), reported that two to three babies are born addicted to opioids per every 100 newborns. Statistics show that every 25 minutes a newborn baby is born from opiate withdrawal. There is a link between each state's opioid prescribing habits and the increased number of infants born with neonatal abstinence syndrome. The combined analysis of the distribution of opioid prescriptions and the rate of occurrence of children born with NAS is startling. The distribution results of opioid prescription, leading to the presence of NAS, will eventually be linked to increased educational needs per state of children born with NAS.

There is a direct link between the number of opioid prescriptions per state and the occurrence of neonatal abstinence syndrome per state. Patrick, Davis, Lehman, and Cooper, (2015) and Paulozzi, Mack, and Hockenberry (2014) conducted research that connects with the other. Patrick, Davis, Lehman, and Cooper (2015) analyzed United States data on healthcare prescribing in 2012. The information examined came from the National Prescription Audit (NPA). NPA provides approximations of the numbers of prescriptions distributed in each state based on a sample of 57,000 pharmacies, which distribute nearly 80% of the prescriptions in the United States. All opioid prescriptions were accounted for per state depending on the type of opioid and the amount each prescription was distributed. Data has concluded that the Southeastern states have had the highest rate of prescribing opioids and benzodiazepines while

New England had the highest rate for high-dose opioids. It was also found that health care professionals overly prescribe opioids in the southeastern United States and New England.

Paulozzi, Mack, and Hockenberry (2014) evaluated and analyzed data from the Kids' Inpatient Database (KID) for 2009 and 2012. This information was derived from the Nationwide Inpatient Sample (NIS) for 2010 and 2011. The KID is a publicly available database for hospitalized children in the United States. The KID contains about 3 million pediatric inpatient records per year. These records come from 2500 to 4100 hospitals in the United States. This sampling strategy gives the KID analytical ability to evaluate pediatric conditions. The results demonstrate that from 2009 to 2012, NAS incidence increased nationally. The results also verified that NAS varied by geographic location. The highest incidence rate of NAS Kentucky, Tennessee, Mississippi, and Alabama followed by the New England states of Massachusetts, New Hampshire, Vermont, Maine, Rhode Island, and Connecticut. The lowest growth of NAS was in Oklahoma, Texas, Arkansas, and Louisiana.

The distribution of the increased incidence of NAS correlates with the increase in prescription opioid drug use by state. The map below demonstrates the amount of neonatal abstinence syndrome births per state (Vanderbilt, 2012).

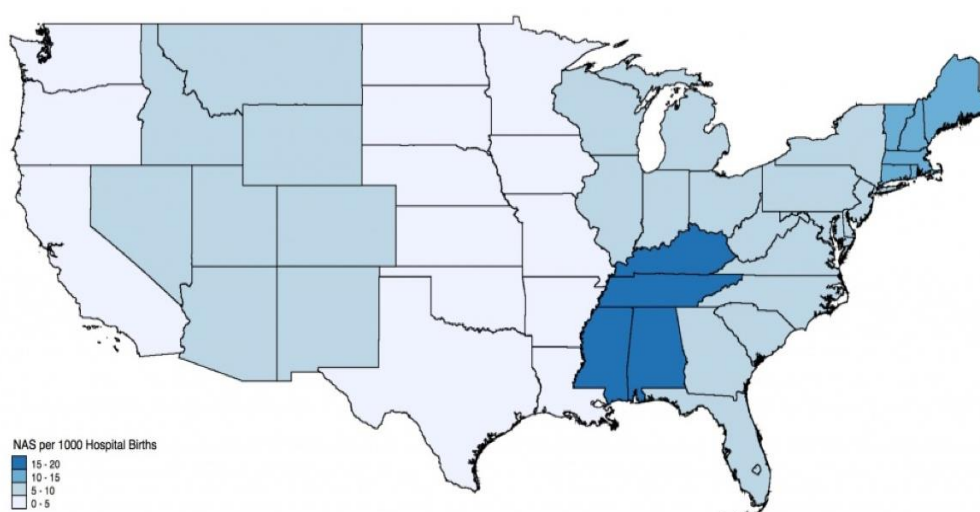


Figure 5. NAS births per state

Kentucky, Tennessee, Mississippi, and Alabama have the highest incidence of NAS followed by the New England States - Massachusetts, New Hampshire, Maine, Vermont, Rhode Island, and Connecticut. This correlates with the number of opioids being prescribed by healthcare providers within the same time frame. Figure 6 below demonstrates the number of opioids prescribed per 100 people by state and drug type during 2012. The southern states of Kentucky, Tennessee, Mississippi, and Alabama had the highest rate of prescription opioids prescribed. The New England States of Massachusetts, Maine, New Hampshire, Vermont, Rhode Island, and Connecticut are second in the highest rate of opioids prescribed (Paulozzi, Mack, & Hockenberry, 2014).

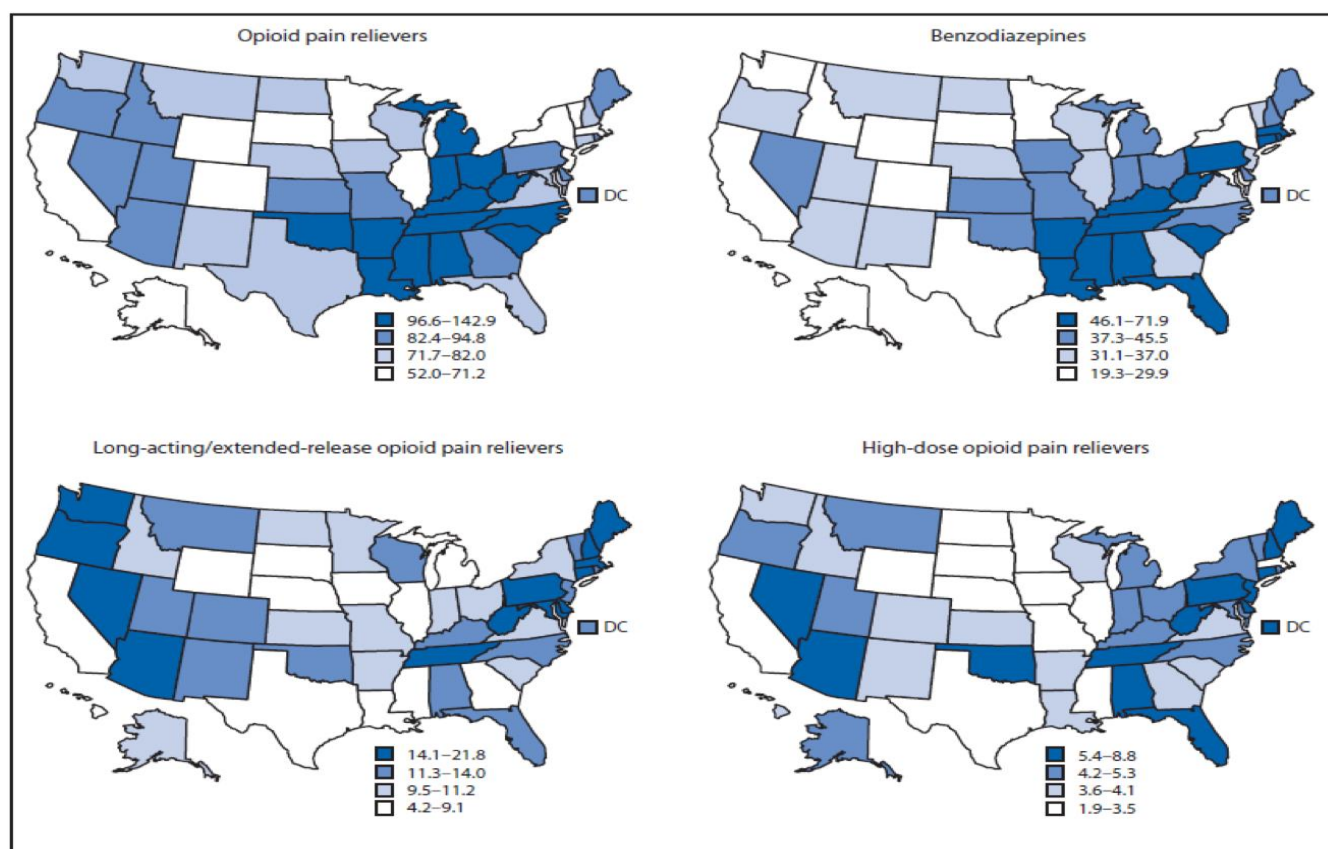


Figure 6. Variation among states in prescribing of opioid pain relievers and benzodiazepines

This information analyzed indicates that the southeastern states of the United States and New England will have the most significant number of children in schools born addicted to opioids with cognitive and developmental disorders. This prediction is made based on the evidence presented that these areas of the country have the highest rates of prescribed opioids and infants born with neonatal abstinence syndrome. The schools in the southeast and New England will most likely have the most significant educational challenges that will need to be addressed. According to the literature, these areas will need to be more proactive, more aware, and more educated on various problems the schools and communities will face. These areas of the country will also need to be educated on the best interventions to ensure these children have the tools and opportunities available to succeed.

Neonatal Abstinence Syndrome (NAS) and Development

An increase in women abusing opioids has resulted in a significant number of infants born addicted to opiates. These children experience developmental and cognitive problems that will need to be addressed through infancy and beyond. Prenatal opioid exposure is associated with weaknesses in language, deficiencies in cognition, and attention/hyperactivity disorder. These developmental problems will need to be addressed through interventions throughout the child's primary years and beyond.

A variety of studies and research indicate a link between neonatal abstinence syndrome and cognitive and behavioral difficulties through infancy and beyond. There is a great deal of discussion on whether school-age children have academic and behavior struggles because they were born with NAS or are the academic and behavior struggles as a result of environmental exposure to addiction.

Before 2010 there was limited research on whether prenatal exposure to opioids was linked to cognitive and behavioral disorders in children. Since 2010, with the increased prominence of the opioid epidemic, there has been a focus on additional studies of children's development that were born exposed to opioids leading to NAS. Most research that has been conducted since 2010 has concluded that there is a link between NAS and cognitive and behavioral disorders.

Since 2010, a combination of researchers has found that the following are consequences of infants born with Neonatal Abstinence Syndrome (Ross, Graham, Money, Stanwood, 2015). Preterm birthweight and obstetric complications, respiratory insufficiency, heart defects, reduced growth, deficits in cognitive and motor ability, attention deficit hyperactivity disorder, lower IQ, behavioral problems, inattention, hyperactivity, and speech, language, and communication disorders. The combination of various studies provides adequate evidence that opioid exposure during pregnancy does result in developmental and cognitive deficiencies. These shortcomings would qualify the children for special education services once the infant reaches school age (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Nygaard, Moe, Slinning & Walhoyd, 2015; Ornoy et al., 2010; Yaun et al., 2014).

Studies indicate that opioid exposure affects the regions that control neurocognitive processes such as attention, memory, motor speed, and visual-spatial processing. Yaun, et al. (2014) conducted research that investigates brain functions and brain structures of infants at two maternity hospitals in Australia. In this study, 16 infants were identified as opioid-exposed *in utero*. These 16 infants had MRI's at about 1.5 weeks old. The infants were confirmed as opioid-exposed through urine samples. The MRI analyzed brain volume, ventricular volumes, and basal ganglia.

The MRI concluded that structural average brain volumes and basal ganglia were smaller in infants born with NAS than infants not exposed to opioids. The MRI's also found that the babies born with NAS had lateral ventricle volumes (in the brain) that were larger than infants not exposed to opiates. The results of the MRI brain scan of babies born with NAS suggests that prenatal exposure to opioids may decrease the whole brain and basal ganglia volumes. These findings indicate that opioid exposure affects the regions that control neurocognitive processes such as attention, memory, motor speed, and visual-spatial processing (Yaun et al., 2015).

Infants who developed significant NAS are at higher risk to have developmental difficulties and delayed visual development. This was concluded through a similar study by McGlone & Mactier, (2015). This research investigated the neurodevelopment of 81 infants born with NAS at six months old. These babies were born to methadone-prescribed opioid-dependent mothers. The study compares the neurodevelopment of the 81 opioid-exposed infants to 50 children not born with NAS. The study was conducted in a large inner-city maternity hospital in Glasgow, United Kingdom, and all children were recruited within three days of birth. The six-month assessment was administered to all infants by the same person and optometrists. The individual conducting the assessment used Griffith's Mental Development Scales for babies under two. This assessment measures development trends that indicate intelligence and functional mental growth in children under two years old. The individual responsible for the evaluation did not know which infants were part of the drug-exposed group and which infants were not. The outcomes of the Griffiths Mental Development Scales for babies under two years of age concluded that, at six months of age, infants born to methadone-maintained opioid-dependent mothers had lower developmental scores in all areas (locomotor, personal-social, language-hearing, eye-hand, and performance) than the infants that were not born exposed to

opioids. These results also concluded that infants who developed significant NAS are at higher risk to have developmental difficulties and delayed visual development (McGlone & Mactier, 2015).

Other research study results indicate that children exposed to at least one risk factor such as exposure to drugs, low social, economic status, or adoption performed worse on individually administered intelligence tests than the children who were not exposed to any of these risk factors. Research conducted by Ornoy et al. (2010) focused on the neurodevelopmental and psychological assessment of adolescents born to drug-addicted mothers. This study was carried out in Israel and examined the cognitive outcomes of babies born with NAS. This study investigates whether prenatal exposure to heroin may have long-term consequences for development during early and middle childhood. The research analyzes the cognitive, social, and emotional functioning of children exposed to drugs *in utero*. The study's focus is on the degree to which early adoption of children exposed prenatally to drugs would lessen the possible effects of exposure. The study included 191 children between the ages of 12 and 16 years old. The study also involved the children's parents as participants. Parents were administered evaluations used to describe their children.

The children were administered the Wechsler Intelligence Scale for Children (WISC-III), and the Youth Self-Report Form for assessing behaviors that measure problems associated with attention deficit, self-esteem, and risk-taking. The WISC-III is an evaluation tool intended to measure intelligence. It is an assessment used to evaluate both verbal and nonverbal performance abilities. Parents were asked to complete the Child Behavior Checklist (CBCL) and the Conners Rating Scale (CRS). The CBCL is used for assessing behavior problems, and the CRS is used for

assessing attention deficit problems. The Wender Utah Rating Scale (WURS) was also given as an evaluation of behavior and is used as an ADHD indicator.

The results indicate that children exposed to at least one risk factor such as exposure to drugs, low social, economic status, or adoption performed worse than the children who were not exposed to any of these risk factors. Scores were lower on the WISC-III, the CBCL, and the CRS. Exposed low social, economic status children living with their parents performed at the same relatively low level as non-exposed low social, economic status controls. Exposure to drugs was associated with adult ADHD-related problems (Ornøy et al., 2010).

Other research investigates whether lower cognitive performances and behavior issues are a result of neonatal abstinence syndrome or environmental factors. Research conducted by Nygaard, Moe, Slinning, and Walhoyd (2015) explores the outcome of foster children born with NAS. The research focuses on foster and adoptive children to determine if the children that are placed in a low-risk environment catch up cognitively.

The cognitive functioning ability of 72 children with prenatal opioid exposure and 58 children without any recognized fetal risk was evaluated at 1, 2, 3, 4.5, and 8.5 years old. The drug-exposed children were recruited for this study from a family center in Oslo, Norway. The families were enrolled in a perinatal risk project during the period 1992–1996. The children's cognitive abilities were assessed using age-appropriate assessment tools. At ages 1, 2, and three years old the Mental Development Index of Bayley- II Scales was used to evaluate cognitive ability. At 4.5 years old, the McCarthy Scales of Children's Abilities was the assessment of choice to measure cognitive function. The Wechsler Intelligence Scale for Children was used for a cognitive assessment at 8.5 years old (Nygaard, Moe, Slinning and Walhoyd, 2015).

The research indicates that children exposed to opioids *in utero* never catch up to peers over time. This is a consistent result even when the child is placed in a stable family at a very early age. There seems to be an adverse effect of factors related to prenatal drug exposure to opioids over time (Nygaard, Moe, Slinning and Walhoyd, 2015).

The combination of these studies focused on the effects of prenatal opioid exposure in primary infancy and childhood. Results have shown that children prenatally exposed to opioids show lower cognitive performance than non-exposed infants. Prenatal heroin and opioid exposure are associated with weaknesses in language, deficiencies in cognition, and attention/hyperactivity disorder. A variety of evidence also suggests that exposure to maternal opioids decreases brain volumes in newborn infants. This exposure contributes to the high occurrence of neurodevelopmental and behavioral problems seen in opioid-exposed children in later life (Beckwith & Burke, 2015; Fill, 2017; McGlone & Mactier, 2015; Nygaard, Moe, Slinning & Walhoyd, 2015; Ornoy et al., 2010; Yaun et al., 2014).

Analyses for all the combined research proves that there is a definite link between NAS and cognitive and behavior difficulties through infancy and beyond. Weaknesses in language, deficiencies in cognition, and sometimes attention/hyperactivity disorder all warrant the possibility of special education services. These cognitive and behavioral difficulties will need to be addressed in the classroom once these infants reach school age.

Neonatal Abstinence Syndrome and Special Education Needs

As the research suggests, children born with neonatal abstinence syndrome will most likely develop conditions that will warrant special education services once they reach school age. Children prenatally exposed to opioids show lower cognitive performance than non-exposed infants and is associated with weaknesses in language and deficiencies in cognition (Beckwith &

Burke 2015). Research also indicates that this exposure contributes to the high incidence of neurodevelopmental, cognitive, and behavioral problems (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014). The link between opioids and special education is suggested through current research results. The following studies demonstrate the relationship between drug exposure and special education service needs.

The physical, cognitive, academic, social, and emotional impairments of children exposed prenatally to drugs can range from mild to severe. These students display learning difficulties in areas of fine motor, auditory processing, language delays and disorders, intellectual and cognitive delays, and mathematical comprehension problems (Kodituwakku, May, Clericuzio, & Weers, 2001). The students also may exhibit a variety of social-emotional and behavioral problems. For example, some children are overly friendly and social to everyone; others are defiant and aggressive, and others may be socially withdrawn (Delaney-Black et al., 2000). The combination of the following study's findings suggests that children exposed to drugs *in utero* are vulnerable to low achievement in school. These children are most often identified to receive special education services (Chapman, 2004; Delaney-Black et al., 2000; Sinclair, 1998).

Additionally, there is research conducted by Sinclair (1998) that investigates the relationship between prenatal drug exposure and special education needs in Kindergarten. This study involves a collection of outcome data on 142 kindergarten students enrolled in an early intervention Head Start Program. Some children had been exposed to drugs *in utero*, and some had not. The developmental screening was done by a team of professionals consisting of Head Start educational, social service, and health staff along with UCLA consultants. The UCLA experts represented the disciplines of special education, educational psychology, social work,

physical therapy, and psychiatry. A developmental screening process included classroom observations and parent interviews, combined these evaluations are applied to measure functioning in the areas of self-help/hygiene and gross/fine motor, social/emotional, language, and cognitive skills. Information was collected on ten variables and coded for each of the children participating in the study. The ten variables were:

1. Gender
2. Special Needs Eligibility
3. Speech and Language Deficits
4. History of Child Abuse
5. History of Family Violence
6. Mental Health Services
7. Current Foster Placement
8. Medical/Academic Problems
9. Prenatal Drug Exposure
10. Special Education Kindergarten Placement

The results indicate that most children in the prenatal drug exposure group had the most identified speech deficiencies, language disorders, emotional disturbances, and behavior problems. Of the exposed group, 53 percent of the children were referred for special education placement once they reached kindergarten compared to 29 percent of their nonexposed peers. This study also concluded that drug-exposed students had high occurrences of medical problems, which could also impact their development and how well they progress in an educational setting (Sinclair, 1998).

Additional studies were conducted by Chapman (2004) to determine if differences in cognitive functioning persisted as developmental outcomes among young children prenatally exposed to cocaine versus young children not prenatally exposed to cocaine. Cognitive functioning was measured in the Mullen Scales of Early Learning. Mullen Scales of Early Learning is a standardized measure of cognitive functioning designed to be used to evaluate children from birth through 68 months. There were 64 children selected for this study. Thirty-two (32) children were prenatally exposed to cocaine, and the other 32 were not exposed. The study took place in Alabama, Georgia, and Mississippi. All 64 children were assessed by the Mullen Scales of Early Learning. The evaluation tool was used to identify the child's strengths and weaknesses through assessing early intellectual development and readiness for school.

Results from procedures indicated that a significant number of children prenatally exposed to drugs displayed developmental problems in cognitive functioning and it is associated with expressive and receptive language delays. These findings suggest that there is a negative long-term relationship between prenatal drug exposure and discrepancies in cognitive functioning in this sample of children (Chapman, 2004).

Additional research results conclude that children who were prenatally exposed to drugs had higher externalizing and internalizing behaviors such as aggressive, delinquent, anxious, depressed, and withdrawn type behaviors. These components are known to place children at a higher risk for special education despite their academic capability. This research was directed by Delaney-Black et al. (2000) and examined teachers' ratings of children born exposed to drugs *in utero*. These teacher evaluations were performed in primary grades. This study considered the long-term implications of school-aged children that were exposed to drugs *in utero*. This study had over four hundred families involved. Some of those children were prenatally exposed to

drugs, and some were not. Research assistants collected all data from the teachers. The research assistants were not aware which children were prenatally exposed and which ones were not. The goal was to evaluate the behavioral outcomes of drug-exposed children.

The children's teachers assessed the behavior of all the students using the Achenbach Teacher's Report Form. This assessment measures problem behavior, academic performance, and adaptive functioning. The results show that children who were prenatally exposed to drugs had higher externalizing and internalizing behavior characteristics. These behaviors include aggressive, delinquent, anxious, depressed, and withdrawn type behaviors. These components are known to place children at a higher risk for special education despite their academic capability (Delaney-Black et al., 2000).

Most recently, Dr. Margaret Fill and the CDC (2017), conducted a longitudinal study in Tennessee and concluded that infants born with NAS are behind other children in school. Dr. Fill and colleagues followed infants born with NAS from birth to school age. The results of her study concluded that the children born with NAS were 44% more likely to be referred for an evaluation for developmental delays. 36% of the children born with NAS qualified in Tennessee for intervention and met the criteria for an educational disability.

The combined analyses of the research indicate that there is a definite need for public schools to be aware of and address the special education needs of *in utero* opioid-exposed children. The combination of the research suggests that children exposed to drugs *in utero* are vulnerable to low achievement in school. These children are most often identified to receive special education services. In the late 1990s, there were more studies began to confirm that broad drug exposure *in utero* could be directly linked to cognitive and behavioral impairments that would qualify children for special education services through early intervention to school age.

The research demonstrates that most children frequently exhibit developmental delays, behavior problems, attention issues, and speech and language disorders. It can be concluded from the combination of these studies that early intervention and subsequent intervention are critical in promoting readiness and success in school for children that were born with NAS.

Special Education Needs of Children with Opioid and Drug Abusing Parents

There is evidence that children born with neonatal abstinence syndrome will suffer from developmental and cognitive disorders throughout infancy, their childhood, and most likely beyond. Special education services are essential for these children to be successful in school. The need for special education services due to the opioid epidemic is not limited to children born with neonatal abstinence syndrome but also to children born into any family that is battling addiction. Many children involved with a family dealing with the addiction of opioids will require special education interventions as well. The children of opioid abusing parents are at risk for a wide variety of adverse outcomes, including emotional, social, and behavioral problems as well as challenges in cognitive and academic functioning. The risk for poor emotional and behavioral outcomes among children living with a parent who has a substance abuse history is reported. The children of opioid abusing parents are more than twice as likely to have a drug use problem themselves by young adulthood as compared to their peers. Literature suggests there are developmental problems in children and adolescent living with heroin-addicted mothers even if the children were not born exposed to opioids *in utero* (Herranz, Vélchez, Ledo & Sierra, 2014; Nunes et al., 2000).

Research suggests that children born to heroin-addicted parents may be at risk of having social problems, psychiatric problems and will most likely be involved in substance abuse in their lifetime. Herranz, Vélchez, Ledo, and Sierra (2014) researched that focused on interviews

with children with heroin-addicted mothers. The results are used to analyze the children's developmental outcome 25 years later. The purpose of this study is to examine the long-term progression of children born to heroin-addicted mothers. The focus of this research is on social development, psychiatric disorders, substance abuse disorders, and the need for psychological interventions throughout childhood. There were 30 people born in Spain to heroin-addicted mothers between 1985 and 1990 that were participants in this study. Each of the participants was required to complete an interview with 101 questions about their socioeconomic environment, social development, mental health, and drug use. The 101 questions were divided into six sections. The family history section contained questions about birth parents such as ethnicity, status, age, employment status, and education. In the childhood section, the participants were asked if they were adopted or lived in foster centers. The participants were also questioned about having undergone physical, sexual or emotional abuse during childhood. The third section related to personal history included questions about their current social and economic status. The participants were requested to provide information about their age, marital status, employment status, education, professional standing, socioeconomic status, and arrests.

The results of those interviewed concluded that these participants were of high or middle social, economic status and experienced a significant percentage of parental abandonment. The results showed that 56.2 percent of the participants lost one or both parents, 44.4 percent of the participants lived in extended care/foster homes and 23.3 percent who were adopted or lived in shelter centers. The results also showed that these participants had a high rate of emotional or physical abuse in childhood. The interview results showed that 26 percent of the participants were abused during childhood. Social problems such as arrests and insubordination were frequent. The interview results show that one-third of the participants had been diagnosed with a

psychiatric disorder in children and 66.7 percent of all the participants had attention deficit disorder and hyperactivity. Major depression and documented personality disorders were also noted during the interviews. Drug consumption was very high across all the participants. Results indicate that 70 percent were involved with alcohol abuse and drug use.

The results of this research suggest that children born to heroin-addicted parents may be at risk of having social problems, psychiatric problems and will most likely be involved in substance abuse. In conclusion, this study proves that children born to heroin-addicted mothers could benefit from close monitoring after birth. These children may need extra support throughout their childhood. Supports would be beneficial throughout the school to minimize the likelihood of social problems, psychological disorders, and substance abuse (Herranz, Vilchez, Ledo & Sierra, 2014).

The additional research concludes that children who were born into a family with a substance abuse problem were found to have substantial lifetime issues that would benefit from early intervention, special education services, and outpatient psychological treatment. This research conducted by Nunes et al. (2000) conducted in New York City examined the frequency of psychiatric disorders and impairments in 283 children of opioid-dependent mothers and fathers. The participants were ages 6 to 17. The opiate dependent parents included 104 mothers and 57 fathers.

Children were evaluated using direct interview and parental interview. Parents and their children were questioned by skilled clinicians trained in the use of the instruments with methods developed during family-genetic studies. The frequency of mood, anxiety, disruptive disorders, school problems, and global impairment was observed in the children of an opiate-dependent parent(s).

The results of the interviews demonstrated that the children who were born into a family with a substance abuse problem were found to have substantial lifetime issues that would benefit from early intervention, special education services, and outpatient psychological treatment. Mood disorders were prevalent in 21 percent of participants. Anxiety was documented in 24 percent of the participants, and disruptive disorders were recorded in 30 percent of the participants. School problems were predominant in 37 percent of participants. Suicide attempts and global impairment was evident in 25 percent of participants (Nunes et al., 2000).

The analysis of the studies combined indicates that parental opioid addiction has placed many students equally at risk for school failure and academic struggles as it does for children born prenatally exposed to opiates. These students who are exposed to parental drug addiction will also need school-based support services to be successful in school. It is essential that schools be prepared to address not only the academic needs of these children but also the mental health issues found in children with drug-abusing parents.

Opioid Epidemic and the American Schools

The potential implications of the opioid epidemic as a direct result of drug-exposed children in the American Schools is critical as discussed above. The opioid epidemic already has had ramifications in the American schools, but the empirical literature on the direct educational impact is scarce. Proactive literature with the focus on combating the future of the crisis in the classroom and the educational impact is relatively nonexistent. However, there are reactive news article and reports on what needs to be done today in the schools to avoid fatal overdoses and drug use prevention. The literature focuses on an increase in drug education programs starting at a younger age throughout the country. There is also literature on the benefits of supplying Narcan in the nurse's office to prevent fatal overdoses in schools. Both topics are vital to the

effort to confront this crisis but are reactive in their approach versus the proactive approach which is needed.

The opioid crisis effects have paralyzed this nation, and the American schools are no exception. According to The National Institute on Drug Abuse (NIDA, 2018), in 2015, nearly 1 in 23 high school seniors reported misusing the opioid pain reliever Vicodin. Additionally, as reported in a 2013 survey from the Substance Abuse and Mental Health Services Administration (2014), 467,000 teens between the ages of 12-17 used illegally using prescription pain medications. The report also highlights that in 2014 about 28,000 12-17-year-old children used heroin. In conjunction with already discussed US prescribing habits, the increase in opioid prescription rates for 12-17 year old's has nearly doubled from 1994-2007 (U.S Department of Health and Human Service, 2013). Furthermore, according to the Centers for Disease Control and Prevention, in 2015, opioids killed 7,163 people between the ages of 15 and 29, more than 20 percent of total deaths. These numbers are concerning, and many schools have reacted to the growing concerns.

Schools are reacting to the growing concerns about youth drug use, especially opioids, by providing Narcan in the nurse's office. Narcan is s a medication used to block the effects of opioids, especially in overdose. For example, in 2015 The Boston Globe reported, that The Massachusetts Department of Public Health conducted a survey and found that at least 133 Massachusetts school districts have Narcan available (Roberts, 2015). According to news sources, New Hampshire also has Narcan available as a precaution (Feely, 2016). This is a nationwide district trend, and the availability of Narcan in schools will continue to increase in response to this horrific epidemic.

School districts are also doing their diligence in education the youth on drug prevention with a focus on opioids. For example, in New Hampshire in there was a newly enacted law that would require all public schools to have substance abuse prevention instruction every year starting in 2016. The focus would be on age-appropriate drug and alcohol education for students in kindergarten through grade 12 (Rayno, 2015). In Massachusetts, an act relative to substance use, treatment, education, and prevention was signed into law on March 14, 2016. The Law requires community, parent/guardians, teacher, and student involvement in the implementation of an evidence-based substance use prevention curriculum for grades 5 to 12 and prohibitions against substance use as well as discipline, enforcement provisions, and treatment opportunities (Chapter 52 - Massachusetts Acts of 2016). Other states have also instituted policies and laws on drug prevention education as a direct result of the opioid epidemic. Policies and Laws are needed to ensure that the schools are doing their part in educating the students on the tragic results of opioid abuse. Most districts understand the need and are active in the development of much-needed drug prevention programs.

In summary, many New England districts are reacting to the opioid epidemic and continue to reflect and adjust to combat this epidemic. The focus thus far is a reactive approach to minimize fatal overdoses in schools and educate students on the consequences of drug use by highlighting prevention. Education and medical accommodations are a much needed first step to combatting this epidemic in the schools. The next steps are to ensure that school personnel is prepared, educated, and ready to accommodate these high-risk children.

Conclusion

The United States is in the center of a growing and serious opioid epidemic, the consequences of which are devastating and on the rise. The addiction and abuse of opioids is a

global problem that destructively affects the functions of communities, schools, neighborhoods, and families. The abuse of opioids affects the health, social, and economic well-being of all societies. Drastic increases in the number of prescribed opioids have contributed to the severity of the current opioid epidemic including heroin use across the country. One-third of the heroin users are women, and two-thirds are women of child-bearing age. The increase of women abusing opioids has increased to children born with neonatal abstinence syndrome.

Combined evidence from the literature suggests that exposure to maternal opioids resulting in neonatal abstinence syndrome contributes to the high occurrence of neurodevelopmental, cognitive, and behavioral problems seen in opioid-exposed children later in life. The research proves that children born with neonatal abstinence syndrome frequently exhibit developmental delays, behavior problems, attention issues, and speech and language disorders.

Additionally, evidence in the literature also indicates that parental opioid addiction has placed many students at risk for school failure and academic struggles as it does for children born prenatally exposed to opiates. Children who are exposed to parental drug addiction will also need school-based support services to be successful in school.

The combination of many research articles provides adequate evidence that opioid exposure during pregnancy does result in developmental and cognitive deficiencies that would qualify for special education services once the infant reaches school age. The research also indicates a need for support services and special education services for those children born into an addicted family. Schools all over the country will face challenges because of this epidemic. Teachers, staff, and any other personnel in the inclusion classrooms across the country should be educated on the socioemotional accommodations, successful academic practices, and proactive

measures to ensure drug-exposed children will be providing appropriate accommodations to help ensure the successes that the child is faced with as a result of this horrible reality. Educators should focus on the development of these children and discover the best practices to ensure their success. It is essential that school personnel be prepared, educated, and ready to accommodate these high-risk children.

In the next few years, children born with NAS or born into a family devastated by addiction will be prominent in public schools. This epidemic will likely hit New England and the South East the hardest due to the fact that the most opioids prescribed occur in this area resulting in the greatest number of infants born with neonatal abstinence syndrome. With the trends doubling every three years of children born prenatally exposed to opioids we could see the numbers of births skyrocket. For example, 2009-2012 infants born with NAS reached 2.5 births out of every 100 birth in New England (CDC, 2012). If trends continue to double, as they are predicted to, in 2018 New England could have ten infants born with NAS out of every 100 births. That is at least three students that could be in a classroom of 30 with challenges that need to be addressed because of this horrible epidemic. These number and trends are increasing and could continue to grow if the root of the epidemic shows no improvement and continues to get worse. Awareness, resources, and preparation are necessary to promote success in school for these children directly affected by the opioid epidemic.

Summary

The reality is that this opioid epidemic will impact educators in every school. Will schools have the resources needed? Will school personnel be educated thoroughly on the educational needs, psychological requirements, and behavioral issues of opioid-exposed children

enough to ensure their success in the classroom? What are districts doing to prepare their teachers for the implications of this epidemic proactively?

The purpose of this research is to raise awareness and investigate what school districts are doing to prepare teachers and school staff for the children born today that is directly affected by the opioid epidemic and to advocate for awareness. Anecdotal investigations suggest that schools have been reactive in their solutions rather than proactive. While they are providing drug education programs earlier, and making Narcan is available in the nurse's office, the long-term preparedness for when increasing number of children entering the schools with some significant needs is lacking. Another objective is to stress the importance of proactive initiatives to better prepare teachers for the influx of children born with special education needs as a result of NAS and for those children living with the family devastation of addiction. These children will be in every classroom and may or may not qualify for interventions. All teachers, general education, and special education need to be aware and cultivated in the best classroom practices and interventions. New England is a region of the country that has rapidly increasing NAS births and a high number of children born into families devastated by addiction. Therefore, New England will have one of the highest needs for special education services and general education interventions as a direct result of this epidemic.

CHAPTER 3. RESEARCH METHODOLOGY

This chapter includes an overview of the research methodology, research design, participants, and plan for data analysis. Multi-case study design according to Yin (2018) and Stake (1995) is the methodology in this investigation with the purpose to explore schools located within the opioid crisis regions of the Northeast. Questionnaires, interviews, documents and archival records will be used for data collection and analysis. The consequences of the opioid epidemic, teacher preparedness, experiences, and impact on special education will be highlighted and analyzed. The research questions have the intent to measure awareness and impact of the ramifications of the opioid epidemic. The research questions of this study are:

1. How is the opioid epidemic impacting Kindergarten through second-grade classrooms located in opioid crisis regions of the Northeast?
 - a. How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering the school?
 - b. How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?
2. How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?
 - a. How are schools located in opioid crisis regions supporting the needs of students affected by the opioid crisis?
 - b. How have special education services and referrals been affected or changed as a result of the opioid epidemic?

The research will purposefully raise consciousness about the importance of awareness and planning, the significance of professional developments and training, highlight the potential increase in special education referrals, and increase teachers' consciousness and knowledge of student needs in opioid crisis regions.

Philosophical Assumptions

The study will include multiple forms of evidence collected through interviews and questionnaires from a variety of professionals in different roles working in schools located in crisis regions of the Northeast. Teachers might view their experiences, knowledge, and preparedness differently from other teachers in the same or different school districts. Teachers' words will be documented throughout the interviews, and open-ended survey collection and different perspectives will be recorded. As Creswell (2013) explains:

When studying individuals, qualitative researchers conduct a study with the intent of reporting multiple realities. Evidence of multiple realities includes the use of multiple forms of evidence in themes using the actual words of different individuals and presenting different perspectives (p. 20).

Given the nature of this study, the methodology employed, and the goal of the research (to explain the phenomenon rather than predict the outcome), the philosophical assumptions were identified in order to maximize the strengths of the study design and the multiple realities of participants. The embedded ontological issue relates to the nature of the participant's reality and its characteristics while epistemological assumptions have adopted that embrace minimizing the distance between the researcher and those being researched. Accordingly, the researcher will rely on quotes as evidence and will spend time in the field as necessary. Interviews will take place in the "field" where the participants work; Schools located in opioid crisis regions. By

experiencing the atmosphere of the participants and the environmental influences the researcher's knowledge and understanding of the phenomenon will intensify. Listening and engaging in the worlds of participants while observing the emotions and environmental influences that impact the circumstance surrounding the phenomenon may impact the objectivity of the researcher. Exposure to the opioid impacted environment will influence the detachment of the situation but create important contexts for an understanding of what the participants are saying and referring to during the discussions.

Interpretive Framework

Throughout the research, philosophical assumptions are embedded within the interpretive framework. The interpretive framework of the research is transformative. According to Creswell and Creswell (2018), "transformative research provides a voice for participants, raising their consciousness or advancing an agenda to improve lives. It becomes a united voice for reform and change" (2018, p. 9). The research will purposefully raise consciousness about the classroom impact of the opioid epidemic in opioid crisis regions while investigating the significance the epidemic has on teachers in opioid crisis regions in the Northeast.

Participants and Sampling

The participants of this research study will be Northeast public schools located in identified opioid crisis regions. Specifically, three school districts in three different Northeast states will be investigated. The chosen districts within each state are located in regions where overdose rates are considerably above the national average.

Massachusetts, New Hampshire, and Maine are the three focus states of this research. In addition to being recognized as having multiple regions in crisis from the ramifications of the opioid epidemic, the states were also chosen based on access. Districts will be chosen within

each state as cities/towns in opioid crisis. Specifically, crisis areas are identified through data released by the Center for Disease Control. Regions qualify for this study if the CDC has reported that there were more than 30 overdose deaths per 100,000 people in a year. Once districts are identified, and access is granted, a school will be identified within each city/town as the focus of the case study. The particular school will be identified through district employee recommendations and access approval. The participants in each school will be school administrators, special education chairpersons/administrators/teachers, social workers, consultants, and kindergarten through second-grade teachers in each identified school.

Multiple Case Study

The multiple case study design offers a proven tool for achieving a deep understanding of the specific phenomenon - the impact of the opioid epidemic on schools located in opioid crisis regions of the Northeast. The use of the multiple case study design will be beneficial to identify themes and patterns among selected schools in crisis regions and may provide a general understanding of the ramifications of the opioid epidemic on elementary schools regardless of the state. Similarities, frequencies, and patterns may be identified commonly in the various locations. Specifically, the research design for this study will be a multiple case study design according to Yin (2018) and Stake (1995). Yin (2018), defines “a case study as an empirical method that investigates a contemporary phenomenon in depth and within the real-world context” (p.15), while Stake (1995) defines a “case study as the study of the particularity and complexity of the particular and complexity of a single case, coming to understand its activity within important circumstances” (p. xi). Combined, the purpose of this particular case study is to investigate the phenomenon and its unique complexities while documenting details of its contexts. The contemporary phenomenon is the opioid epidemic and the impact in the classroom

and on special education. The multiple case study design will rely on multiple sources of evidence, with a variety of collected data to “converge in triangulating fashion” (Yin, 2018, p.15). Additionally, the multiple case study research design will serve as a tool for achieving a deep understanding of this phenomenon by uncovering consistent patterns and themes that schools within opioid crisis regions are experiencing. The goal of the study is to understand a real-world situation experienced by schools as a direct result of the opioid epidemic.

Research Questions

The research questions have the intent to measure awareness and understand the impact of the ramifications of the opioid epidemic. The research questions of this study are:

1. How is the opioid epidemic impacting Kindergarten to second-grade classrooms located in opioid crisis regions of the Northeast?
 - a. How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering the school?
 - b. How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?
2. How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?
 - a. How are schools located in opioid crisis regions supporting the needs of students affected by the opioid crisis?
 - b. How have special education services and referrals been affected or changed as a result of the opioid epidemic?

Research Design, Procedure, and Data Analysis

The case study design, procedure, and data analysis follow Yin's (2018) multiple case study method. Specifically, using replication logic. Replication logic is "the logic for selecting two or more cases in a multiple-case study" (Yin, 2018, p.288). The purpose of selecting two or more cases is to confirm or deny predictions that cases may have different or similar findings. When using replication logic, if all or most of the cases provide similar results, there can be substantial support for the development of a preliminary theory that describes a phenomenon (Eisenhardt, 1989). The illustration below demonstrates the research procedure by defining the theory and design leading to the initial preparation of the three cases. The illustration shows the collection, analysis, and individual case report of the data as the next steps in the research design. Subsequently, the concluding cross-case analysis, development of policy implications and conclusion are established within the illustration. The narrative following the illustration will explain each section in depth.

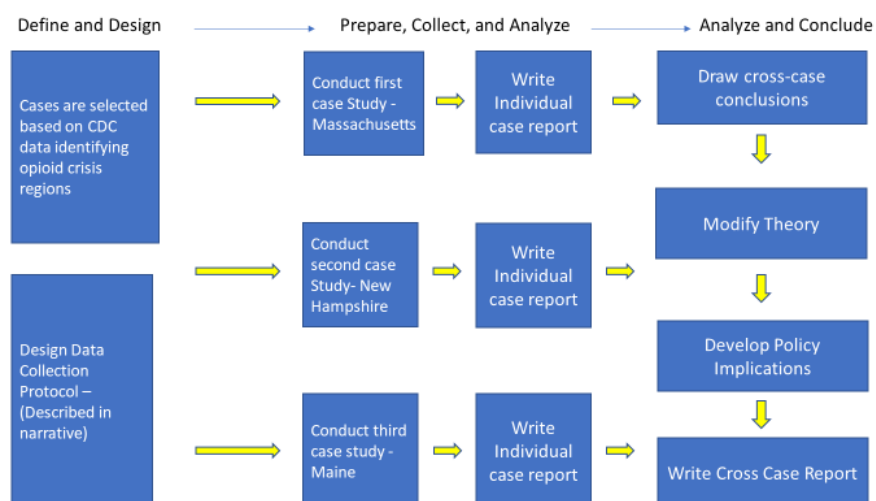


Figure 7. Research procedure

Define and Design

As defined earlier, the research design for this study will be a multiple case study design according to Yin (2018) and Stake (1995). Yin (2018), defines "a case study as an empirical

method that investigates a contemporary phenomenon in depth and within the real-world context” (p.15), while Stake (1995) defines a “case study as the study of the particularity and complexity of the particular and complexity of a single case, coming to understand its activity within important circumstances” (p. xi). This case study will investigate the phenomenon and its unique complexities while documenting details of its contexts.

Case Selection

Massachusetts, New Hampshire, and Maine have been identified as having many opioid crisis regions within the state. Each investigated region within the state will have to qualify for participation in the case study through identification as having significantly higher than the national average overdose rates per 100,000 people. To qualify, the district must be located in a high crisis region of the Northeast. The Center for Disease Control (2015) considered more than 30 overdose deaths per 100,000 people within a year as a foundational criterion as a high crisis area beyond the national average. Within the region, a city or town will be identified as a significant contributor to the high overdose rates. Overdose data will be analyzed based on information available at the Center for Disease Control. Specifically, the school district within that identified city will be the district involved in the research. Three different districts will be investigated that qualify using this outlined criterion. Within each district, one school will be the case focus as recommended by an employee and/or administration.

Initially, surveys will be distributed to staff members that work with kindergarten through second-grade students. The survey will investigate the impact of the opioid epidemic in the classroom and explore teachers, counselors; administrators comfort level at educating students exposed to traumatizing situations and social, emotional, and cognitive impairments as a result of the ramifications of their exposure to the opioid crisis. Additionally, interviews will take place

within the schools based on survey results and participants willing to be interviewed. Interview questions will be strategically developed and will take an in-depth look at experiences and comforts based on an analysis of survey data. Other personnel, such as administrators, special education directors, and counselors, will also be interviewed to develop a holistic understanding of the impact the opioid epidemic is having on the school, teachers, and leadership of the school investigated. In addition to interviews and surveys, various documents and archival information will be collected to gather data from other sources to triangulate and combine all information to draw conclusions and generate themes.

Data Collection Protocol

According to Stake (1995), “there is no particular moment when data collection begins. It begins before there is a commitment to do the study: backgrounding, acquaintance with other cases, first impressions” (p.49). In these cases, data collection has begun once the sites were determined and will be included once access is granted. Each of the three case study sites in each state will have the same protocol. The data collection protocol will occur as follows:

Step 1 - The first step will be an initial discussion with a district administrator to gain access to the school district and school. This is an informal discussion to explain the purpose of the research, gain approval, discuss the plan, and ask to be directed to a recommended school within the district for the case study. The researcher will also participate in any district-wide IRB reviews if necessary. At this time, the researcher will ask for access to documents such as professional development minutes and professional development agendas for the current academic year and previous years if available. The request is specific to district-wide documents and/or specific school-based documents if available. Archival records will also be accessed such as special education data. The archival data should be public information and could be accessed

through the various department of education websites. If not, the researcher will contact the department of education in each state to access the information.

Step 2 - Once access to a school is gained, a questionnaire will be sent to all kindergarten through second-grade teachers and other professionals who work with students. The questionnaire will contain questions, specifically, asking about the professional's history, experiences, professional development opportunities, and experiences negotiating the opioid epidemic. The questionnaire will ask demographic information, a Likert scale, and open-ended questions (See Appendix C). The questionnaire will also be used to establish focus groups and/or interviews based on willingness to participate and survey answers.

Step 3 - Based on questionnaire results, interviews of teachers will be conducted. The first set of interviews will be of at least three kindergartens through second-grade teachers in each case study. The interviewer will interview a minimum of three teachers and a maximum of 12 professionals per school district until a complete saturation of understanding is collected. Within the semi-structured interview, the researcher will plan on asking for access to any other pertinent documents that the school is willing to share.

The following are the teachers' interview questions:

1. How has the opioid epidemic affected your classroom?
2. What is your school/district doing to proactively prepare you for the influx of students that will be entering your classroom that will have been exposed to the opioid epidemic (born addicted to opioids/living in a home devastated by opioids)?
3. What is your school doing to develop and implement professional development to address the needs of students impacted by the opioid epidemic?

4. How familiar are you about the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic? Explain
5. Have special education services and referrals been affected or changed as a result of the opioid epidemic? Explain.
6. How is your school supporting the needs of students affected by the opioid crisis? Explain.
7. If you have any stories to share about the effects of the opioid epidemic on your classroom/school/ or district, please share.

Step 4 - Once the teacher interviews are complete, the special education administrator and a school administrator, such as the principal or the vice principal, will be interviewed. Within the semi-structured interview, the researcher will plan on asking for access to any other pertinent documents that the school is willing to share. The following are the school administrators' interview questions:

1. How has the opioid epidemic affected your school? District?
2. What is your school/district doing to proactively prepare administrators and teachers for the influx of students that will have been exposed to the opioid epidemic (born addicted to opioids/living in a home devastated by opioids)?
3. What is your school doing to develop and implement professional development to address the needs of students impacted by the opioid epidemic?
4. How familiar are you about the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic? Explain
5. Have special education services and referrals been affected or changed as a result of the opioid epidemic? Explain.

6. How is your school supporting the needs of students affected by the opioid crisis?

Explain.

7. If you have any stories to share about the effects of the opioid epidemic on your school or district, please share.

Step 5 - The researcher will conduct a final interview with the district administrator from the initial informal meeting in Step 1. Within the semi-structured interview, the researcher will plan on asking for access to any other pertinent documents that the school is willing to share.

The following are the district administrators' interview questions:

1. How has the opioid epidemic affected your school? District?
2. What is your school/district doing to proactively prepare administrators and teachers for the influx of students that will have been exposed to the opioid epidemic (born addicted to opioids/living in a home devastated by opioids)?
3. What is your school doing to develop and implement professional development to address the needs of students impacted by the opioid epidemic?
4. How familiar are you about the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?

Explain

5. Have special education services and referrals been affected or changed as a result of the opioid epidemic? Explain.
6. How is your school supporting the needs of students affected by the opioid crisis? Explain.
7. If you have any stories to share about the effects of the opioid epidemic on your school or district, please share.

Step 6 - Analysis of results (detailed explanation below) and repeat these seven steps at each participating case study site.

**Note – Documents will be collected throughout the process when the researcher gains access.*

The researcher will collect any/all documents that will assist and provide evidence in answering research questions. All documents will have students' names retracted. For each school district, there will be at least six interviews (district administrator, 3-5 teachers, special education administrator, and a school administrator are examples of who will join participants) with a maximum of 10 interviews per district until saturation of understanding is achieved.

Analyze and Write Individual Case Reports

According to Stake (1995), “there is no particular moment when data analysis begins. The analysis is a matter of giving meaning to first impressions as well as to final compilations” (p.71). After the data is collected, the next step is the qualitative data analysis. Initially, each case site will be individually analyzed based on interviews, documents, archival data, and evidence. The following provides an in-depth understanding of the analysis of the collected data.

Questionnaires.

Questionnaires will be used to determine the interview and focus group participants. Open-ended questions on the questionnaire will also be analyzed by coding and theme creation based on the investigation of the research questions. All open needed questions will be interpreted through multi-cycle in vivo coded according to Saldana (2016). By using the participants own words, *in vivo* coding, will be used with the intent to have a heightened awareness of each of the participants unique and individual circumstances. Cross themes will be developed by combining all open-ended questionnaire data at each case site. The questionnaire will also contain a Likert scale of questions used to measure teacher preparedness.

Interviews.

In-depth data analysis of interviews will be focused on coding and theme creation based on the investigation of the research questions. Identical to the process of the questionnaire coding, all interviews/focus groups will be interpreted through multi-cycle *in vivo* coded according to Saldana (2016). By using the participants own words, *in vivo* coding will be used with the intent to have a heightened awareness of each of the participants unique and individual circumstances. Emotion coding will also be used to identify participants biases linked to emotions regarding the impact of the opioid epidemic. Cross themes will be developed by combining all interview data at each case site through descriptive coding of the *in vivo* codes and finally pattern coding to identify patterns and frequency of the emerged themes.

Documents.

Additionally, in-depth data analysis of documents will be focused on coding and theme creation based on the investigation of the research questions. All documents will be interpreted through descriptive coding according to Saldana (2016). By summarizing the contents and topics located within documents and field notes, descriptive coding leads to a “categorized inventory, tubular account, summary, or index of the data’s content” (Saldana, 2016, p. 104). Specifically, Saldana (2016), states that by using descriptive coding to analyze basic topics the researcher is developing an understanding of what is going on and what the study is about. In analyzing the documents within each case site to create an understanding of the impact of opioid crisis and school’s preparedness, descriptive coding would be the most impactful method of coding to understand what is going on.

Archival Data.

Archival data will be used as a secondary source to analyze accruing trends and provide evidence of the phenomenon. In this particular study, data such as special education referrals and the percentage of students receiving special education services over the past few years will be documented and reviewed. Potentially, overdose data, neonatal abstinence syndrome birth data, and any other data about the district involved in the case study and the opioid epidemic will be reviewed.

Considerations.

The analysis of data will be identical within each of the case studies, but access to the data at each case site may vary pending the researcher's access. The next steps will be a cross-case analysis within each of these case sites.

Analyze, Interpretation, and Cross-Case Reports

The next step in the analysis of the data is to combine the information collected in all three sites and do a cross-case analysis and report. Once each case site has been analyzed, and an individual report has been created, the next steps would be to draw cross case conclusions between all three case sites, including a collective analysis of results, development of policy and school implications, and concluding with a cross-case report.

Pattern coding will be used to make generalized conclusions between all three cases highlighting similarities, differences, and frequencies. According to Saldana (2016), look for similarities, differences, frequency, sequence, correspondence, and causation within the themes and categories and establish patterns. By interpreting similarities, differences, frequencies, sequences, correspondence, and causation within themes the researcher can begin to draw cross case conclusions, develop policy implications, develop an interpretation of the information collected, and begin to uncover generalizations and conclusions between all three case sites.

Instrumentation and Validation Process

The research will incorporate several processes to demonstrate the trustworthiness of the data analyzed and support the legitimacy of the study including survey validation, triangulation of the findings, member checking, creating an audit trail, and maintaining a field journal.

The Validity of the Instrument

The accuracy, reliability, and validity of the questionnaire were measured through sample representativeness and through a team of content experts.

The survey was authenticated through an interdisciplinary team of experienced researchers and experts in the content area. Through convened meetings, independent review of the tool, and focus groups the effectiveness and content of the survey was validated. The team of experienced researchers and content experts that reviewed and collaborated the content, measurement tool, and wording of the survey include the following individuals:

- Rena Stroud, Ph.D. – Quantitative Statistics and Developmental Psychology
- Karen Hayden, Ph.D. – Sociology and Criminology
- Patricia Howson, Ph.D. – Human Development and Early Childhood Education
- Marie Galinski, Ed.D – Educational Leadership and Administration (retired Massachusetts Superintendent)
- Anne Gatling, Ph.D. – Teacher Education and STEM Education

In addition to the interdisciplinary team of content experts, the survey was distributed to a test group of representatives (n=63) to validate the wording, interpretation, and accuracy of the survey to confirm understanding. The representatives consisted of a population of classroom teachers, higher education professionals, school administrators, and retired educators.

Triangulation

The validity of the research will be measured through the triangulation of data collected within each case site. Salkind (2010), refers to triangulation as the practice of using multiple sources of data or various approaches to analyzing data to enhance the credibility of a research study. Within this multi-case study, the triangulation will incorporate and align multiple perspectives in an attempt to create a more comprehensive understanding of the phenomenon. The data in the case study will come from a variety of different sources and people. Teachers and a variety of school and district administrators will be interviewed, surveys will be distributed, documents will be collected, archival data will be viewed, and member checking will complete the process.

Member Checking

According to Creswell (2013), member checking, also known as participant or respondent validation, is a technique for exploring the credibility of researched results. In this study, the researcher will share data or results to participants to check for accuracy and resonance with their shared experiences and preparedness. The member check will confirm the accuracy and validity of the results.

Audit Trail / Field Journal

The researcher will also write notes and memoranda throughout the case study investigation to keep track and bracket biases with an attempt to minimize preconceptions and prejudices throughout the project. The journal will also contain an audit trail as a transparent description of the research steps taken from the start of a research project to the development and reporting of findings.

Ethical Considerations

All participants of the research will remain confidential along with the school district at which they are employed. All students' names will be redacted from any documents used for analysis. The privacy, safety, and confidentiality of the districts and participants will be preserved and will not be revealed throughout the study or in any publications or articles that follow up the study unless the schools or districts would like their identity released. Other ethical considerations of this research investigation will include the following:

- submission to Southern New Hampshire University's IRB for approval
- submission to any district IRB process if necessary
- permission to research each location will be solicited and granted before the start of the study
- the purpose of this study will be disclosed for the beginning, consent forms will be submitted for participants to sign, and all the data collected will be shared with the district
- All participants can remove themselves from the study at any point in time

Potential Limitations of the Study

Teacher responses could be minimal depending on the teacher's interest, experience, or investment in the topic. Follow up and re-sending of the survey may be necessary to get the results needed. The population studied is only three schools with opioid crisis districts. Three schools are a small sample considering all the schools in the Northeast affected by the opioid epidemic.

The topic of the research could be emotionally fueled and complicated. Biases could be present for teachers who are experiencing difficulty with parents and students who are affected by the epidemic. People could also be personally affected by the epidemic, which may create

biases within the research. Emotion coding will be used in interview analysis to label the feelings participants may have experienced.

The researcher's previous knowledge of the topic before the beginning of the investigation may increase biases. Prior to 2016, the researcher was a special education teacher in an area of the Northeast that was beginning to see a change in climate and special education referrals as the opioid epidemic was starting to impact the school district.

Summary

The research will be a multiple case study through an in-depth, real-world analysis of three schools in three states located in opioid crisis regions. Questionnaires, interviews, documents, archival data, and potentially observations will be collected and analyzed. The research will be conducted through an ontological philosophical assumption and a transformative framework. Furthermore, the design of the research will collect data that will purposefully create an understanding and raise consciousness about the classroom impact of the opioid epidemic. If all or most of the cases provide similar results, there can be substantial support for the development of a preliminary theory that describes a phenomenon (Eisenhardt, 1989). The data collection should also highlight the impact this crisis has on special educations, and recognize teachers' level of preparedness to teach students with potential cognitive, social, and behavioral implications that are evident as a direct result of the opioid epidemic.

CHAPTER 4. RESULTS AND FINDINGS

This chapter outlines the analysis of data collected from the three schools explored in the study. New Hampshire Granite Elementary School, Maine Chickadee Elementary School/Blueberry Extension School and Massachusetts Mayflower Elementary School are the participating schools and will be investigated separately. Each case contains an in-depth analysis of the individual school followed by a collective analysis of the three schools combined (Yin, 2018). The schools selected for participation are in opioid crisis regions of the Northeast. To be considered a crisis region, the school must be located in a region with significantly higher than the national average overdose rates per 100,000 people. The Center for Disease Control (2015) considered more than 30 overdose deaths per 100,000 people within a year as a foundational criterion as a high crisis area beyond the national average. The three participating schools fit the criteria and happen to be located in urban areas of each state. The three schools are similar in size, low socioeconomic status, and homelessness is 10% or higher within the school (Anonymous, Personal Communication, December 8, 2018; December 17, 2018; January 8, 2019). The locations, the name of the school employees, and participants are not identified. The research questions for this study are:

3. How is the opioid epidemic impacting Kindergarten to Grade 2 classrooms/schools located in opioid crisis regions of the Northeast?
 - c. How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering the school?
 - d. How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?

4. How familiar are teachers with the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?
 - c. How are schools located in opioid crisis regions supporting the needs of students affected by the opioid crisis?
 - d. How have special education services and referrals been affected or changed as a result of the opioid epidemic?

According to the intended design of the study outlined Chapter Three, the research questions will be answered at each case site and then collectively to highlight any trends and patterns that developed within the data and interview themes Yin (2018).

Participants

There are 76 combined participants in this study out of 111 possible participants in the combined schools, totaling 68.4% total participation. There were 29 interviews conducted between December 7, 2018, and February 4, 2019. Out of 29 interviews, 22 were in-person meetings, and seven were phone conferences. All face-to-face interviews took place at the participant's school in New Hampshire, Maine, or Massachusetts. The survey was open and active from November 28, 2018, through February 4, 2019. There are 67 survey participants. Some participants participated in both the survey and an interview.

Table 1 summarizes the details of the interviews including the interview participants identifier, role in the school, date of the interview, and type of interview (whether in-person meeting or phone conference). All participants signed consents, and interviews and surveys were voluntary. The second table (2) breaks down the survey participant by state and the role of the survey participant as well as the number of participants per role.

Table 1

Summary of the Interview Participants and Details

#	Interview Participant	Role	Date of Interview	Type of Interview
1	Maine Participant 1	Administrator at CES	12/7/2018	In-Person
2	Maine Participant 2	Administrator at BES	12/19/2018	In-Person
3	Maine Participant 3	District Administrator	1/25/2019	Telephone
4	Maine Participant 4	Teacher at BES	1/10/2019	In-Person
5	Maine Participant 5	Teacher at BES	1/10/2019	In Person
6	Maine Participant 6	Teacher at CES	1/10/2019	In- Person
7	Maine Participant 7	Social Worker	12/18/2018	Telephone
8	Maine Participant 8	Clinical Social Worker	1/10/2019	In-Person
9	Maine Participant 9	Social Worker	1/18/2019	Telephone
10	Maine Participant 10	Social Worker	1/25/2018	Telephone
11	New Hampshire Participant 1	Administrator	1/11/2019	In-Person
12	New Hampshire Participant 2	Behavior Specialist	2/1/2019	In-Person
13	New Hampshire Participant 3	Teacher	2/1/2019	In-Person
14	New Hampshire Participant 4	Counselor	1/23/2019	In Person
15	New Hampshire Participant 5	Special Education Teacher	1/23/2019	In-Person
16	New Hampshire Participant 6	Special Education Teacher	1/23/2019	In-Person
17	New Hampshire Participant 7	Special Education Teacher	1/23/2019	In Person
18	New Hampshire Participant 8	Mental Health Provider	1/23/2019	In-Person
19	New Hampshire Participant 9	Teacher	2/1/2019	In-Person
20	New Hampshire Participant 10	Trauma Consultant	1/21/2019	Telephone
21	New Hampshire Participant 11	Social Worker	2/1/2019	In-Person
22	New Hampshire Participant 12	Instructional Coach	2/1/2019	Telephone
23	Massachusetts Participant 1	Administrator	12/18/2018	Telephone
24	Massachusetts Participant 2	Administrator	1/15/2019	In-Person
25	Massachusetts Participant 3	Teacher	1/15/2019	In-Person
26	Massachusetts Participant 4	Teacher	1/15/2019	In-Person
27	Massachusetts Participant 5	Special Education Teacher	1/15/2019	In-Person
28	Massachusetts Participant 6	Teacher	1/15/2019	In-Person
29	Massachusetts Participant 7	Administrator	1/15/2019	In-Person

Table 2 breaks down the interview participants by occupation or role at the school and the number of participants with the role. For example, there are two kindergarten teachers who took the survey at the Maine CES/BES.

Table 2

Survey Participants by Role

Maine Participants - (CES/BES)	Number Who Participated
Kindergarten Teachers	2
Grade 1 Teachers	2
Grade 2 Teachers	3
Special Education Teachers	4
Administrators	4
Social Workers	3
Specialist or Others (unified arts/academic coaches etc.)	4
New Hampshire Participants – (GES)	Amount Participated
Kindergarten Teachers	3
Grade 1 Teachers	2
Grade 2 Teachers	4
Special Education Teachers	7
Instructional Coach	2
Behavior Health Support	1
Mental Health Worker	1
Administrator	1
Other	5
Massachusetts Participants – (MES)	Amount Participated
Kindergarten Teacher	4
Grade 1 Teacher	5
Grade 2 Teacher	2
Special Education	1
Administrator	3
Other (unspecified)	4
Total Study Survey Participants	67

Table 3 depicts the percentage of years participants worked in schools with students. For example, 23% of the survey and interview participants worked with students for less than five years, while 26% of participants worked with students for 20+ years.

Table 3

Years Participants Worked with Students

Years working with Students	%
1-5 years	23%
6-9 years	13%
10-15 years	22%
16-20 years	13%
20 + years	26%
No Answer	3%

Interview Coding Method

According to Stake, “Each researcher needs, through experience and reflection, to find the forms of analysis that work for him or her” (Stake, 1995, p.77). All interviews in the three schools were coded the same. *The Coding Manual for Qualitative Researchers* by Saldana (2016) was used as a reference when deciding coding strategies. In all 29 interviews, three cycles of coding were utilized--- *in vivo* coding was the first cycle, followed by descriptive coding, and finally, pattern coding. After the three coding cycles were complete, specific themes emerged and codes were distributed in the coding categories. Additionally, categories were arranged by superordinate and subordinate arrangements with the intention to focus the parameters of the investigation on finding the core and answering each specific research question. A select number of dominant themes emerged based on the research questions.

The coding cycle started with *in vivo* coding. The researcher read each interview completely three times, then began to code line by line. A list of impactful words, spoken by the participants, was pulled out of each interview and sorted into similar themes. For example, the following *in vivo* codes were from 5 different participants:

- “Homeless population increasing and transiency increasing.”
- “There is drug-related transiency because students move around missed school.”
- “Kids are taken away from parents or they go stay with others and miss school a lot.”
- “Kids in and out of homes, double up in apartments, leading to missing school.”
- “Sometimes when foster care is involved we do not see students again”

Next, the researcher read and analyzed each *in vivo* code and utilized descriptive coding of the participant's words. By summarizing the contents and topics of interviews, descriptive coding leads to a “categorized inventory, tubular account, summary, or index of the data’s content” (Saldana, 2016, p. 104). Specifically, Saldana (2016), states that by using descriptive coding to analyze basic topics the researcher is developing an understanding of what is going on and what the study is about. The researcher then categorized all similar quotes together from all participants. Based on those five examples, the researcher labeled the code descriptively as “transiency.” All quotes that fell under transiency (the superordinate category) were grouped together then subordinate categories emerged on why the transiency was happening based on participants insight. As described, this was the second step in the descriptive process. The reason for transiency was then listed as follows:

Transiency

- Foster care
- Homelessness
- Parental fluctuation

This process was continued through all the emerged themes. After the researcher completed *in vivo* coding and descriptive coding, the research went through each interview to find patterns and created percentages on how frequently the codes emerged in the combination of all the

After all interviews were coded and frequent themes were identified, the researcher conducted a member check of themes to the initial consenting administrator to validate the results. Member checking was used to validate the results at all three locations of the case study.

Instrumentation and Validation Process

The researcher incorporated several processes to demonstrate the trustworthiness of the data analyzed and support the legitimacy of the study including survey validation, triangulation of the findings, member checking, creating an audit trail, and maintaining a field journal.

Validity of the Instrument

As mentioned in Chapter Three, the accuracy, reliability, and validity of the questionnaire were measured through sample representativeness and a team of content experts.

The survey was authenticated through an interdisciplinary team of experienced researchers and experts in the content area. Through convened meetings, independent review of the tool, and focus groups the effectiveness and content of the survey was validated. The team of experienced researchers and content experts that reviewed and collaborated the content, measurement tool, and wording of the survey include the following individuals:

- Rena Stroud, Ph.D. – Quantitative Statistics and Developmental Psychology
- Karen Hayden, Ph.D. – Sociology and Criminology
- Patricia Howson, Ph.D. – Human Development and Early Childhood Education
- Marie Galinski, Ed.D – Educational Leadership and Administration (retired Massachusetts Superintendent)
- Anne Gatling, Ph.D. – Teacher Education and STEM Education

In addition to the interdisciplinary team of content experts, the survey was distributed to a test group of representatives (n=63) to validate the wording, interpretation, and accuracy of the

survey to confirm understanding. The representatives consisted of a population of classroom teachers, higher education professionals, school administrators, and retired educators.

Triangulation

The validity of the research was measured through the triangulation of data collected within each case site. Salkind (2010), refers to triangulation as the practice of using multiple sources of data or various approaches to analyzing data to enhance the credibility of a research study. Within this multi-case study, the triangulation incorporated and aligned multiple perspectives in an attempt to create a more comprehensive understanding of the phenomenon. The data in the case study came from a variety of different sources and people. District administrators, principals, special education administrators, a variety of teachers, social workers, mental health providers, and consultants were interviewed and survey.

In addition to the survey and interview participants, internal and external documents were reviewed, and each state's department of education website was used as a data source. If claims were not triangulated within the study, they were not used as a source of evidence or data point. For example, multiple teachers claimed that special education numbers were increasing dramatically because of students' behaviors tied to the opioid epidemic. However, when the researcher analyzed internal documents, external data sources, and interviews with administrators, it was found that the special education numbers are level. Therefore, the teachers claim was discredited. Data was triangulated to prove accuracy throughout the research.

Member Checking

According to Creswell (2013), member checking, also known as participant or respondent validation, is a technique for exploring the credibility of researched results. At the conclusion of this study, the researcher shared data, and the emerged interview themes to the

school administrators to check for accuracy and resonance. The charts at the conclusion of each section (Figure 10, 13 and 16) was shared to the initial consenting administrator to check for accuracy and to confirm that information listed on the chart preserved anonymity. The member check confirmed the accuracy and validity of the research results and interview themes. Table 6 outlines the dates of contact, consent, and the final member check.

Table 6

Administrator Approval Date and Final Member Check

Participant	Date of Initial Contact	Date of Participation Consent	Date of Member Check
Maine Participant 1	11/18/2018	12/7/2019	2/20/2019
Massachusetts Participant 1	11/15/2018	11/29/2018	2/22/2019
New Hampshire Participant 1	10/1/2018	1/10/2019	2/21/2019

During the final communication with the Maine Administrator, the researcher showed the administrator the final table (figure 13). At this time the entire project, data collection, and analysis were complete. The administrator confirms the accuracy of the presented table of themes and that the information presented on the table would not reveal the district. The researcher was informed that there was a proposal brought forth to close the Blueberry Extension School in Maine. The proposal was to shut down the school and redistribute the students throughout the district. The proposal suggests that the K-2 students that attend Blueberry Extension School join the Chickadee Elementary School. There is no change at this point, but it was brought to the researcher's attention to the possibility of the change. In addition, the researcher asked the CES administrator if they had exact numbers yet on next year's incoming kindergarten students on IEP's. At this point, the administrator still does not have those numbers.

It was mentioned that he knows the projected number is higher than normal but can not confirm the reason that more children are coming in on IEP's from preschool.

During the final communication with the New Hampshire Administrator, the researcher showed the administrator the final table (figure 10). At this time the entire project, data collection, and analysis were complete. The administrator confirms the accuracy of the presented table of themes and that the information presented on the table would not reveal the district. The New Hampshire administrator informed the researcher that the children of her school and their needs were captured well in the developed themes.

During the final communication with the Massachusetts Administrator, the researcher showed the administrator the final table (figure 16). At this time the entire project, data collection, and analysis were complete. The administrator confirms the accuracy of the presented table of themes and that the information presented on the table would not reveal the district. During the final communication, the Massachusetts administrator did not have any suggestions on the chart or the research. The administrator did ask to see the results in its entirety once the study was complete.

Audit Trail / Field Journal

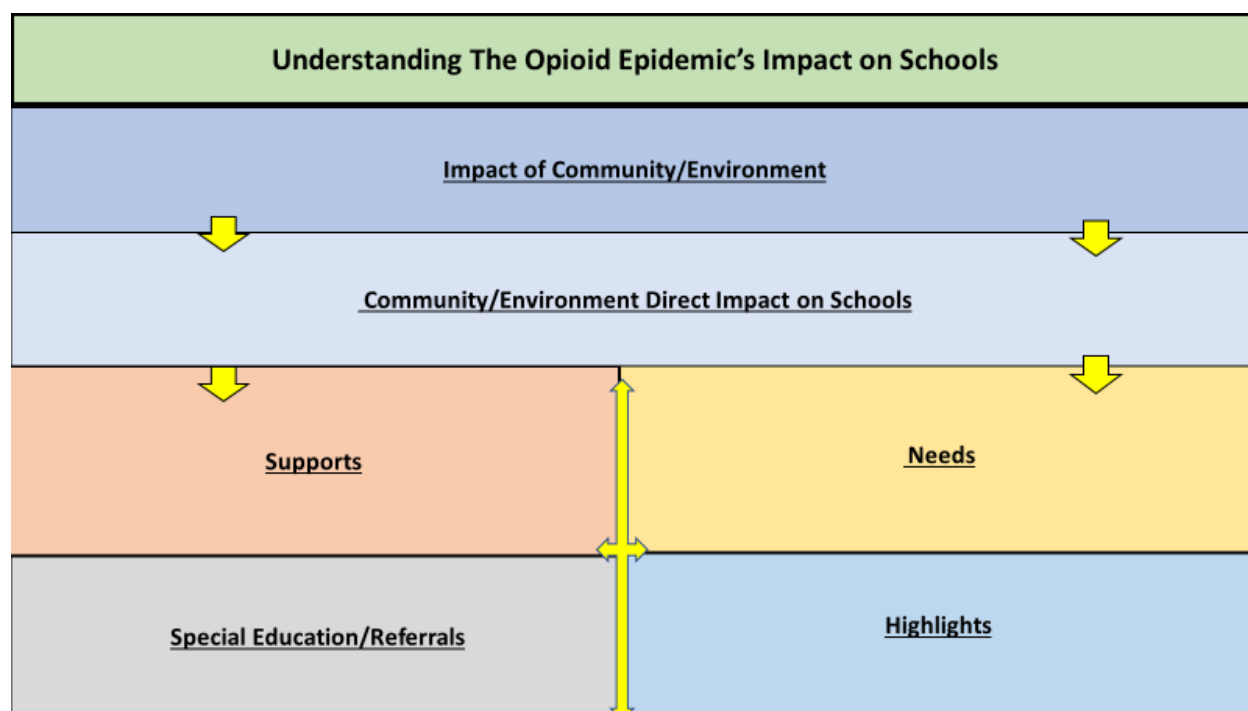
The researcher wrote notes and memoranda throughout the case study investigation to keep track and bracket biases with an attempt to minimize preconceptions and prejudices throughout the project. In several the participant interviews, personal stories of family addiction were shared. Through bracketing emotions, those stories were not coded and used in this study. The journal contains an audit trail as a transparent description of the research steps taken from the start of a research project to the development and reporting of findings.

Research Study Outline

Reoccurring themes emerged, and data were collected in each of the three case locations. The following illustration was created to restrain the information and focus on answering the research questions. As each case is described and all research questions are answered, the following Table 7 will be completed at the end of the section.

Table 7

The Template of Impact, Needs, and Supports



The table shows environmental and community factors that are associated with the opioid epidemic and the ramifications it has on schools. It outlines the themes of the interviews by specific supports, needs, special education trends, and school highlights. The details of each case will be located in the chart at the conclusion of each section.

The data collected shows that each school has a varying environmental impact, supports, preparedness, challenges, solutions, and investments in its attempt to teach children who are experiencing adverse life experiences associated with the opioid epidemic.

New Hampshire Granite Elementary School

The Granite Elementary School (GES) is in the epicenter of the opioid epidemic. According to local law enforcement, the location of Granite Elementary School has experienced over a 25% increase in opioid overdoses from 2016 to 2017 and over 500 opioid crime-related arrests (Anonymous, personal communication, February 6, 2019). Schools in the area are struggling with the impact the epidemic is having on their schools and classrooms. According to participants, the youngest victims of the epidemic are going to school each day in survival mode yet looking forward to the school hours to feel safe, eat a hearty meal, and for the love and acceptance that the Granite Elementary School staff provides them.

Overall New Hampshire Study Participants

There were 28 participants out of a possible 38 participants, equating to a 74% participation rate at the Granite Elementary School (GES). The researcher interviewed 12 participants ranging from administration, teachers, social workers, and consultants. All participation was voluntary and had appropriate signed consent. Table 8 illustrates the 12 interview participants roles, date of interview, and type of interview. Ten interviews were face to face in-person meetings, while two interviews were phone conferences. Two interview participants did not take the survey but were recommended to be interview participants by the school administrator. The researcher called and followed up with email communication to those two participants. The two additional participants agreed to participate in the study and signed a participation consent.

Table 8

NH Participants

New Hampshire Interview Participant	Role at GES	Date of Interview	Type of Interview
New Hampshire Participant 1	Administrator	1/11/19	In-Person
New Hampshire Participant 2	Behavior Specialist	2/1/19	In-Person
New Hampshire Participant 3	Teacher	2/1/19	In-Person
New Hampshire Participant 4	Counselor	1/23/19	In-Person
New Hampshire Participant 5	Special Education Teacher	1/23/19	In-Person
New Hampshire Participant 6	Special Education Teacher	1/23/19	In-Person
New Hampshire Participant 7	Special Education Teacher	1/23/19	In-Person
New Hampshire Participant 8	Mental Health Provider	1/23/19	In-Person
New Hampshire Participant 9	Teacher	2/1/19	In-Person
New Hampshire Participant 10	Trauma Consultant	1/21/19	Telephone
New Hampshire Participant 11	Social Worker	2/1/19	In-Person
New Hampshire Participant 12	Instructional Coach	2/4/19	Telephone

There were 12 interview participants and 26 members of GES who took the anonymous online survey. Ten participants who took the survey were then interviewed. There was a wide range of participation from the administration, teachers, instructional coaches, and mental health workers. Table 9 highlights each participants role in at GES.

Table 9

Participant Role at GES

Job Title or Role	Amount Participated
Kindergarten Teachers	3
Grade 1 Teachers	2
Grade 2 Teachers	4
Special Education Teachers	7
Instructional Coach	2
Behavior Health Support	1
Mental Health Worker	1
Administrator	1
Other	5

The experiences and professional responsibilities of the staff are diverse. Table 10 outlines the years of experience of GES participants. The table shows that 31% of all

participants have 20 plus years working with students, while 19% have five years or less experience working with students.

Table 10

Number of Years Participants Have Worked with Students

Years Working with Students	%
1-5 years	19%
6-9 years	12%
10-15 years	23%
16-20 years	3%
20 + years	31%
No Answer	12%

The participants include a diverse group of individuals because of the variety of expertise and years of experience. With a variety of participants ranging from administration, teachers, special educators, social workers, behavior specialist, and consultants, the impact of the epidemic was captured through various angles to triangulate the data collected. Viewpoints are captured through the diversity of the individual's experiences.

Opioid Epidemic and Impact on the New Hampshire Granite Elementary School

To understand the opioid impact on the New Hampshire Granite Elementary School, the analysis of data will be organized by the stated research questions.

RQ1 – How is the opioid epidemic impacting kindergarten to second-grade classrooms/schools located in opioid crisis regions?

Interviews combined with the survey offer an overall understanding of the impact of the opioid epidemic on the school. According to participants, students come to school every day without their basic needs met. The students who are dealing with the adverse outcomes of living

in a household battling addiction are described, as hungry, tired, dirty, sick, sad, scared, alone and anxious. Environmental factors directly link their home experiences and environment to classroom and school impact. Themes emerged throughout interviews and information appeared on surveys that linked students' exposure to family drug use, poverty, homelessness, crime, parental fluctuation, child born addicted (NAS), neglect and instability with school impact such as poor attendance, basic needs unmet, behaviors, academic impact, secondary teacher trauma, and poor parental behaviors on school grounds. Hunger was a dominant theme in unmet basic needs. Table 11 outlines the survey results and reveals that 72% of survey participants who answered the survey question had students in their class impacted by the epidemic while 28% of the survey participants did not know, no respondents answering "no."

Table 11

Participants with Students Affected by the Opioid Epidemic

Participants Who Had Students Affected by the Opioid Epidemic in The Past Three Years	%
Yes	72%
No	0%
I do not know	28%

The vast majority of survey participants have encountered students impacted by the opioid epidemic. Specifically, 18 out of 26 participants surveyed had students who have been directly affected by the epidemic. Table 12 shows the percentages of those 18 participants who have encountered the situation that ultimately impacted their classroom and student's ability to participate in learning. Many participants had more to add than the surveyed themes. Table 13 outlines situations mentioned by participants such as witnessing opioid drug use, trafficked to get

parents drug money, cleanliness, basic needs unmet, homelessness, and transiency. All the themes are adverse life experiences impacting the children of the opioid epidemic, resulting in ramifications at GES.

Table 12

Participant Experiences with Student Impacted by the Epidemic

Situations survey participants have witnessed happen to students as a result of the Opioid Crisis within the GES	Percentage who have encountered the situation with a student
Neglect	89%
Physical Abuse	61%
Verbal Abuse	72%
Death of Parent	56%
Death of Sibling	28%
Death of relative outside immediate household	6%
Observed an overdose	50%
Born addicted to opioids	56%
Removal from home because of an addicted family member	72%
Living with relative other than a parent as a result of addiction	83%
Placed in foster care	56%
Department of Youth and Family Service Involvement (DHS)	83%
An orphan as a result of household addiction	11%

Table 13

Other Situations Survey Participants Witnessed

Other Situations Survey Participants have witnessed as a result of opioid exposure	Added Write In's listed Below
Students witness opioid use	Write-In
Trafficked to get parents drug money	Write-In
Homeless	Write-In
Frequent Moves	Write-In
Poor attendance	Write-In
Poor eating habits	Write-In
Health concerns	Write-In
Missing meals	Write-In
Frequently Tardy	Write-In
Lack of cleanliness	Write-In
Lack of weather appropriate clothing	Write-In
Lack of supervision before and after school	Write-In

Neglect, parental fluctuation, abuse, moving from home to home, and DYS involvement are central themes in the survey results.

In addition to survey results, several themes emerged in the interviews when the researcher asked, “How is the opioid epidemic impacting your classroom and school?” Between the 12 interview participants, several themes developed. Table 14 outlines the most frequent themes from the combination of all the interviews. The first column lists the developed theme and the second column breaks it down by the percentage of participants who mentioned the impact in the interviews.

Table 14

Impact on Classroom Themes

Impact on Classroom /School – Themes	Percentage of Interview Participants who discussed the topic when asked – “How is the opioid epidemic impacting your classroom/school” or mentioned within the interview
Student Exposure to drug activity	100%
Increase of Children born with NAS	75%
Crime Exposure associated with Drug Activity	75%
Basic Needs Not Met/Neglect (priority-hunger)	100%
Transiency	92%
Poverty/Homelessness	100%
Student Behaviors/NAS Behaviors	100%
Family /Parental Fluctuation	100%
Parent Behaviors	83%
Teacher Impact/Secondary Trauma	58%
Academic Impact	75%

Other themes emerged but are not be listed on the table. The categories are highlighted on the table because more than 50% of the participants mentioned that specific theme as having an impact on the school and classroom. In 100% of the interviews, student exposure was the most prevalent. The experiences and exposure the students engaged in and witnessed was the most

impactful area for discussion among participants. Additionally, exposure led to participants to elaborate on the neglect, hunger, and descriptions of the mental pain and anguish their students are experiencing at home and in school as a result of addiction and crime related to addiction. In conjunction with the experiences and pain, it was evident that some teachers, social workers, and staff are experiencing secondary trauma in their day to day experiences with the children of the epidemic. Interview participants explain that teacher secondary trauma is an impact of that the opioid epidemic has on the school.

Environmental Factors that Impact Students who attend New Hampshire Elementary School

Evidence and data collected reveal that environmental exposure to drug activity has a direct result on the school and classrooms. Interview participants revealed that GES student exposure to opioid drug activity has a substantial and abrupt impact on the classroom and the school. The following areas were described in the above graph. The impact mentioned in interviews is briefly explained below with notable participant quotes.

Opioid-related Exposure and Crime

“We have a huge number of students directly impacted by the epidemic here. Our kids know way too much. They know what different substances look like, they know street names, they have been held by gunpoint over a drug deal gone wrong, they have watched their parents and guardians inject heroin. They are taken out of their homes because of this epidemic. I would say that every single child in our school has experienced some type of trauma” (New Hampshire P2, Personal Communication, January 23, 2019).

Opioid exposure was the most discussed theme that emerged within the 12 interview participants. Students are exposed to opioid abuse through family drug use, witnessing opioid-related crimes and opioid overdoses, and drug activity in the environment around the school.

Young students normalize the drug culture and verbally and physically reenact drug use behaviors on school grounds. Through exposure and experiences, the opioid use and exposure for the children of GES are typical, normal, and readily evident.

Students exposure is impacting the school and environment for learning. During the researcher's time at GES, a handful of young children were caught in the bathroom snorting, selling and marketing packages of Crystal Light, pretending it was a drug. The story was exposed during interviews by four different interview participants. The situation was mentioned in all four interviews to explain how normalized and accepted drug behavior is in the community and the trickle-down effect in the schools. According to a teacher (2019), "my students could not tell you what an aquarium is, but they can explain the process to boot up heroin." According to another teacher (2019):

These kids come in here and start talking about people using drugs, their parents using drugs, and all the people in their building that OD'ed. When we see an ambulance go by these kids are like, "Oh, I bet someone OD'ed." That is their first go to. I am thinking of a car accident, right? They think OD."

According to participants, exposure to the epidemic surrounds the school. Students talk about it because it is normalized in their lives. A second-grade teacher explained that the community surrounding the school is "full of violence and many drugs. Drugs and violence lead to the neglect of our students" (New Hampshire P3, Personal Communication, February 1, 2019). According to interview participants, the environment most of the children of GEB are exposed to is full of crime, drugs, and violence. An administrator explained that students were participating in an after-school event and witnessed a man overdose on the park bench across the street. One of the students had a phone and called 911. The administrator continued to explain

the proximity of the problem on school grounds, “we could come to school and find someone sleeping in our parking lot, passed out on the car, or up in that grassy area” (New Hampshire P1, Personal Communication, January 11, 2019). In conjunction with the administrator's concerns, two teachers mentioned that drug activity is occurring around the school; hypodermic needles have been found near or on the school playground/school grounds.

Students at GES have witnessed traumatizing events that, according to existing research, would impact learning and focus. Within the 12 interviews, a variety of duplicated and confirming stories were mentioned. According to a second-grade teacher, “I do not know how my six-year-old processes seeing her mom stick needles in her arms, the whole situation we are dealing with is heartbreaking” (New Hampshire P3, Personal Communication, February 1, 2019). Specifically, multiple students at GES have witnessed an overdose death of parents, a second-grader found her uncle deceased in a tub, children have had guns held to their heads in a dispute over drug money, and parents have trafficked their children for money to feed their addiction. A counselor explained:

Students are so aware of the drugs out there, and they see things, they see parents are doing them, family members doing them. I have had several kids that have witnessed overdoses in their homes. And I have had other students the brunt of people coming into their homes and holding them at gunpoint because people living in their home owed drug dealer's money (New Hampshire P4, Personal Communication, January 23, 2019).

Additionally, children are being pulled from their homes overnight by police or DYS and, according to participants, come to school the next day exhausted. Two participants explained a story about parents taking their children to doctors' appointments high on heroin and the children watching them get arrested in their pediatrician's office. As an administrator said, “you can

imagine, they are not learning their multiplication tables, right? There is a reason for that. There is a reason for that, right?” (New Hampshire P1, Personal Communication, January 11, 2019).

Born Addicted to Opioids

“We had so many kids that were born addicted. We are seeing those students not only with learning difficulties but so many other difficulties” (New Hampshire P5, Personal Communication, January 23, 2019).

Participants mentioned the increase of children in their classes or on their caseload who were born addicted to opioids. The three special educators interviewed all mentioned such examples. A kindergarten teacher and social workers emphasized the number of children who have been exposed to opioids *in utero* is growing quickly in the community. According to a teacher, “opioids have affected our school severely. We not only have many families with at least one parent addicted, we have many students that were born addicted” (New Hampshire P5, Personal Communication, January 23, 2019). Another teacher adds, “I have children in my class that were born addicted, kids that parents know were born addicted, and nothing has been done for them, and they are delayed” (New Hampshire P6, Personal Communication, January 23, 2019). In addition to the teachers, the administrator adds that NAS births are a frequent discussion in IEP meetings, “we see a lot of it. I sit in our students IEP meetings, and I hear about how many days they as a baby were in the hospital coming down from their high and then need treatment, etc” (New Hampshire P1, Personal Communication, January 11, 2019). Students born addicted, exposure, and traumatizing events have a direct impact on the classroom.

Transiency, Homelessness, and Poverty

“We have over 70 homeless students that I know of. That is over 10% of the school and we probably actually have more than that because others could be doubled up or not identified... We are in an area of addiction, high poverty, and high transients. Because of all this the

students that move in and out” (New Hampshire P11, Personal Communication, February 1, 2019).

Homelessness, poverty, and transiency are themes that frequently emerged within the interviews when the researcher asked, “How does the opioid epidemic impact your classroom/school?” Participants credited the epidemic for homeless and transient students living in poverty. They explained that the inconsistency of student attendance and instability of the students living conditions cause unpredictable student behaviors and impact the consistency of the classroom.

An administrator explained that “many parents can barely take care of themselves, so they are obviously not taking care of their children, leading to homelessness. The number of people doubled up in this community because of losing their homes to addiction is rampant” (New Hampshire P1, Personal Communication, January 11, 2019). Students are also removed from homes because of addiction and temporarily live with grandparents and other caregivers, leading to a change in schools. A counselor explained that the frequency of moves caused by the broken foster care system and instability of the students is tragically impacting their school day:

We had a student held at gunpoint, and she was already in a relative foster placement.

She was already removed from her biological parents’ home because of drugs. The foster placement allowed a family member who was in jail for drugs to move back home and a dealer held a student at gunpoint for money. Now the student cannot live with her biological parents or her relative foster placement. They are starting the process of moving the child again. There are so many of our poor little peanuts are in the system moving around. They are stuck moving around in a broken system” (New Hampshire P4, Personal Communication, January 23, 2019).

According to the same counselor:

Last year we had 300 kids in and out of this school in one year. We can have 620 kids then weeks later we have 575 kids in our school. We have a huge transient population because of drugs and homelessness. Kids can move one block and be at a different school, and they do, and we lose them, but they can come back (New Hampshire P4, Personal Communication, January 23, 2019).

A social worker added that the school works with family promise program. The family promise program provides food, shelter, advocacy and supports for homeless families. As described, it sounds terrific but is adding to the transiency of the school. “We are working with the Family Promise Program, but our family is relocating all over the state every two weeks (New Hampshire P11, Personal Communication, February 1, 2019). Transiency, poverty, and homelessness are outside environmental factors that impact attendance, learning, consistency of services of the GES school.

Basic Needs Not Met/Neglect

“Kids look forward to coming to school. We are their safe place. They come here to eat, to be warm, to be loved, and to get away from all the drugs and related behavior they are exposed to at home. Once they are here, we say ‘Okay what is their need today? Do they need to learn multiplication today or do they need to be loved, do they need sleep, do they need food, do they need socks? What are their needs and how can we help them?’” (New Hampshire P6, Personal Communication, January 23, 2019).

Children exposed to the opioid epidemic are coming to GES hungry, tired, disengaged, sick, dirty, without basic needs met. Consequently, students are coming to school to get their basic needs met. According to a second-grade teacher, “parents struggling with addiction, send

their kids to school with the bare minimum. Kids are in tee shirts when it is snowing, no socks on, no jacket and then parents forget to pick them up. Many of our students are just very, very neglected” (New Hampshire P3, Personal Communication, February 1, 2019). Another teacher reiterates the same:

These kids have nothing! Nothing! We supply it all for them- winter hats, winter jackets, mittens, boots. Some kids don’t eat. I give them my food. They are hungry, so hungry, and I would never say no to them. Here take it! I have all kind of snack for them. I don’t care what time of day it is; I will always have something for them. They ask for something; I will find them something. I would never say no if they want food. The poor kids are hungry (New Hampshire P2, Personal Communication, February 1, 2019).

An administrator explained that children come to school without proper attire, undernourished, with painful medical needs that require attention. “Children are coming to school in pain with mouths full of abscesses that needed extractions. We need to provide dental checks four times a year for these kids” (New Hampshire P1, Personal Communication, January 11, 2019).

Understandably, students are not learning because their physical needs and ailments take precedence. In addition to providing students with food and clothing, GES also provides students with dental checkups four times a year because children are coming to school with pains from abscesses and other dental problems. Parents are not keeping up with their children dental needs. GES feels the responsibility to take on dental care. Because of the opioid epidemic, students’ basic needs are unmet, therefore directly impacting the school and classroom of GES.

Student Behaviors

“I have students, that I know are impacted by the epidemic, and I know their parents are addicted to drugs and the kids are just so angry, and they don’t know why they are angry, or they

come in just so sad. Then we just have to start digging, and it usually comes out that their behaviors are because they just saw something traumatic the night before” (New Hampshire P3, Personal Communication, February 1, 2019).

Teachers, administrators, and staff of GES explained the behaviors of students at GES are concerning, disturbing and have a direct link to the epidemic. Interviewed participants discussed NAS behaviors and suicidal behaviors in very young children, while survey participants highlighted increased sadness, anger, hyperactivity, anxiety, and inattentiveness.

Seventy-two percent of teachers can directly link the opioid epidemic to student behaviors. Table 15 outlines these behaviors in which seventeen (17) out of 26 survey participants are directly linking behaviors to students who have been impacted by the epidemic, while 22 out of 26 are confirming that the following behaviors have increased in the past three years but are unsure why or cannot prove the epidemic is the underlying reason. The first column of the table outlines behaviors linked to students exposed to the opioid epidemic, the second row depicts the associated percentages. The second column outlines the increased in the listed behaviors over the past three years.

Table 15

Student Behaviors

Student Behaviors	Survey results- Percentage of teachers (etc.) who have encountered the behaviors of a student impacted by the epidemic	In the past three years, increases in listed behaviors in the classrooms located in crisis regions
Withdrawal	72%	41%
Increased sadness	83%	68%
Anger	78%	91%
Hyperactivity	78%	77%
Inattention during a lesson	78%	68%
Low motivation	61%	59%

Tantrums	67%	68%
Deficient cognitive ability	78%	59%
Deficient motor ability	61%	45%
Behavioral problems	89%	100%
Speech, language, and communication disorders	72%	50%
Emotional and social disabilities	72%	86%
Poor executive functioning	67%	55%
Anxiety	78%	95%
Write-Ins - Other Behaviors that Participants wrote into the survey that they are associating as a direct impact of opioid epidemic		
Withdrawn from activities	Write-In	
Over-Sexualized due to Experiences	Write-In	
Sensory Impairments	Write-In	
Low Processing and Visual Acuity	Write-In	
Low Visual Processing	Write-In	
Extreme Anxiety	Write-In	

The table shows the behaviors in the students exposed to the epidemic and behavior increases/changes of students living in opioid crisis regions. There was an additional area that was of concern for survey participants. Withdrawn from activities, over sexualized due to experiences, sensory impairments, low processing and visual acuity, low visual processing, and extreme anxiety were added by survey participants to highlight observed behaviors of students who are impacted by the opioid epidemic.

During the interviews, participants discussed concerning behaviors and inattentiveness, but most felt that behaviors are a consequence of their household experiences and exposure. Therefore there is a level of understanding amongst teachers, social workers, and administrators. For example, a teacher said:

Here I am teaching my math and reading lessons and my students are not paying attention. They are thinking, they are scared, who is coming into my house tonight, are they going to eat, will anyone feed them? I don't blame them. They do not care about my

lesson. They know way too much. The effects of the epidemic are all around them. They do not get to be kids (New Hampshire P3, Personal Communication, February 1, 2019).

Another teacher referred to her students as “feral children that she is trying to rein in” (New Hampshire P3, Personal Communication, February 1, 2019). She continued to explain that coming from an environment with neglect and with no rules, kids are distracted and defiant. The same teacher explained that her students impacted by the epidemic pushback on the caring support and love she tries to provide. “They sometimes really pushback when you try to love them. I do not know if they know how to receive it. They do not get it. It takes a while to build trust” (New Hampshire P3, Personal Communication, February 1, 2019).

Additionally, children are depressed and display suicidal behaviors. A school counselor explained the prevalence of mental illness the epidemic is having on their students, “It’s so hard because I think so many parents are affected by it and to see the weight that it places on the kids is really hard. These kids come in, hungry, and tired, and legitimately depressed. I have elementary school kids as young as first grade suicidal, and you would never have seen that years ago” (New Hampshire P4, Personal Communication, January 23, 2019) Another teacher adds:

We have kids as young as first graders with suicidal thoughts and have plans to kill themselves and it’s hard because we call, and ambulance and parents refuse to help their kids because they don’t want anyone to find out about the drugs and things going on at home” (New Hampshire P2, Personal Communication, February 1, 2019).

Mental illness is a consequence of the trauma experienced by the children of the opioid epidemic.

Interview participants also discussed the behaviors children born with NAS present. All the special education teachers interviewed (3 out of 3) discussed the behaviors of children born with NAS as atypical and unable to fit in any of the federal special education categories cleanly. The following quotes help understand what teachers are witnessing in terms of an inability to add students to just one federal category.

We are seeing more kids come in, primarily through the kindergarten, and wonder, what is going on? They're not really fitting into any of the typical criteria ... the SPED categories under the law. Some of those kids' parents have admitted that they used drugs during their pregnancy, so we're assuming that some of the things that we're seeing is not a developmental delay or autism but something else. But we're seeing it in more the kindergarten and the younger kids, where they're coming up and they're like, "Wow, that doesn't fit any category. Let's just put them as DD. But when you do the three-year evaluation, you're like, "They're still not really fitting into any kind of sped category. Some of these kids, you know that they need something, but what? They don't really fit into criteria, and they're kind of pushing them into one that may not be the best fit. This is what we are seeing with kids born addicted to opioids (New Hampshire P7, Personal Communication, January 23, 2019).

Another second-grade teacher adds that:

Because these kids are born addicted, it made me think that what we're seeing now is just an umbrella. You used to just be able to say, "That kid is other health impaired or he's DD," and now it's like this overlap of disabilities, and there's no true cause, but it has to do with their parents being on drugs when they're pregnant. So, it's like this crossing over of disabilities. I feel like they're going to need an umbrella in and of itself of just to

identify these kids, because they fit under every category, and it was so interesting. I was like, "Oh my God, we're going to have to change our Special Ed paperwork, because they're falling under all of these categories, and it has to do with drugs (New Hampshire P3, Personal Communication, February 1, 2019).

Interview participants describe the behaviors of students born with NAS as indescribable, presenting with a combo of ADHD, autism, developmentally delayed, and low IQ's.

In combination, the behaviors highlighted in the survey (table 15), behaviors associated with NAS, and the additional behaviors linked to mental illnesses and distractibility suggest that the behaviors of students exposed to the opioid epidemic are directly impacting classrooms at GES.

Parental Fluctuation and Grandparents Raising Children

"Lots of kids are living in families with active use, but many of our children are living with extended family members. They could be living with an aunt or a grandparent because of parent's addiction, or parents are incarcerated because of drugs" (New Hampshire P8, Personal Communication, January 23, 2019).

Another theme that developed in the interviews was the concerns of parental fluctuation, abandonment, and grandparents raising children. Addiction is resulting in instability of the home. Children are transitioning from one house to the other, in and out of foster care, and grandparents are raising children.

The number of grandparents that are raising children in this building is extraordinary. We have one grandparent- The little boy is in second grade, was born with addicted. Mother was addicted, and now she's incarcerated, so the grandmother has him and he's very behaviorally involved. She, grandma also has her son's two children in addition for the

same issue. Drugs. And in that same apartment, there's another family that attends school here where the grandmother is the custodian of the children and they live together and take care of all those kids together. (New Hampshire P1, Personal Communication, January 11, 2019)

Teachers mentioned that grandparents raising children in homes is the norm. A kindergarten teacher mentioned that students think it is odd not to be raised by a grandmother. Out of a class of 22, this teacher has five grandparents raising her students, two siblings in their early 20's raising siblings in her class, and a few active and open foster care situations. In this teacher's class alone, she can confirm 9 out of 22 students are not living with mom or dad. The researcher then asked why she thought her class was dealing with such influx of children raised by grandparents and she confirmed that half of those are drug-related and her suspicion was that the other half was likely related to drugs as well.

On a positive note, another teacher commended a grandparent for positive changes in her student.

The principal came up to me and said, "Just letting you know, this is what happened with him. You might see a change." Then, I saw a huge change, but for the better, because he was with grandma. He was coming in clean. He had new clothes on. You could tell he was eating. He didn't look like he hadn't showered in a week. He was smiling, because I think he got a good night's sleep, and he was really trying to please me and do his job. I think that was because of the support he was getting at home. But unfortunately, I knew the day that he went back to mom, because everything went back to how it was, and he's still back with mom. It is so sad. All his parents had to do was pass a drug test to get

custody back. We all know she is still on drugs, but unfortunately, it takes a crisis. (New Hampshire P3, Personal Communication, February 1, 2019)

Parental fluctuation is resulting in anxiety and instability on the students directly impacting the classrooms at GES.

Parents Behaviors

“Parent behavior is a problem. There are parents that are consistently intoxicated or under the influence that cannot come on the property because they have threatened me or threatened others on the property” (New Hampshire P1, Personal Communication, January 11, 2019).

Parental behavior was a theme throughout the interviews. Teachers and staff describe parents as guarded, secretive, disengaged, aggressive, addicted, and neglectful.

Specifically, teachers are concerned that parents are coming into school under the influence. A teacher expressed concerns that parents are high coming to IEP meetings. She wonders if they can legally sign off on services while under the influence. A building administrator added a few stories that highlight the behaviors they have had to deal with parents under the influence on school grounds:

We had a father arrested in the lobby who came in high as a kite. I came into the lobby and immediately asked my secretary to call 911 and we put the building in lockdown.

The police walked through the door, they took one look at him and put him face down on the floor and handcuffed him and took him away.

I had an incident with a parent, where the parent was screaming in my face, again, the F word, and other things. And the next day the fourth grader came to see me on his own and said, I'm really sorry about my dad.

We've had parents engage each other physically on the property. There's a food pantry here on Saturdays so the fight started at the food pantry and then the Monday following, the two women are outside my window here, engaged, physically engaged with each other. The windows are open, the profanity is flying. It's just a, the boundaries, it's a consistent issue with lack of boundaries.

A Mom came to do the volunteer to pop popcorn last week and the tee shirt on the back said, one, two, three, fuck you. On the back. So, I went out in the lobby and I said to her, ma'am, you either have to go turn that inside out in the bathroom, put your coat on, or you need to leave. She fought me with the freedom of speech. She ended up leaving but I was about to call the police (New Hampshire P1, Personal Communication, January 11, 2019).

A teacher explained that the parents do not want anyone in their homes because of fear of the exposure of drug activity. Most of the time, any outside resources that teachers advocate for their students are not approved by parents. They are reluctant for their children to receive any outside therapy or home visits. Teachers are also concerned that are ill-prepared to deal with the parents which can be frightening and stressful. Consequently, as a result of the epidemic, parental behaviors are impacting the GES are leading to teacher stress, burnout, and secondary trauma.

Secondary Teacher Trauma

"It is so hard. I think of my babies all the time. I do not know what they are going home to after school. Are they going on to a home with a parent that overdosed that day? Will they see that? Will they be the one to find them? Are they going home to starve and realize their parents would rather purchase drugs than feed them dinner? I don't know! Every day I wonder what are my

babies going home to? They do not know what they are going home to. I do not know what they are going home to. It is so so hard” (New Hampshire P9, Personal Communication, February 1, 2019).

The impact the epidemic is having on teachers at this school is described in this section. Throughout the interviews, teachers told stories about the impact the epidemic is having on their students with tears in their eyes, some could not finish sentences, some changed the subject quickly when they did not want to talk about it anymore. Regardless of the added stress, fear, and anxiety, the teachers of GES show so much love and compassion for their students. According to interviews, the impact of the student’s experiences is impacting the teacher’s wellbeing.

According to interview participants, last year two young teachers from GES were admitted to the hospital with panic attacks. The following quotes emphasize the secondary stress and anguish the teachers are experiencing:

I think that during the day you put on a happy face, because you know it's what the kids need to see, but then it affects you at home. Ya know, coming here and hearing about sexual abuse, and how the children have no food, and how they get food and hide it underneath ... it's just ... it is so wearing on everyone here, emotionally. You do become numb to it, bed bugs and lice are a daily occurrence. It's just kind of, you know, do I send a kid that has lice to the nurse every day? Because they get sent home and I don't want that, or do I keep them where they need to be fed, warm, safe? So, it's a constant struggle emotionally, not to ... you know, you wanna save them. I've brought in clothes, I've brought in food, I've had my kids go through their toys. I fed one girl for four months at lunch last year, given my own lunch to kids, just to have them make it through the day and feel something. It's wearing. I think the trauma that ... especially this school, the

teachers and administrators feel is like nothing that I've ever seen before. (New Hampshire P6, Personal Communication, January 23, 2019).

If we look at the saturation of the epidemic in the community and we see the adverse behaviors and impact on the children, my staff has clearly been affected. I mean there are this many chairs in my office because my emergency team needs time to debrief negative incidents with each other all the time. We need to meet in this office because we need each other. Last year I had two very young teachers admitted to the hospital with panic attacks, never had panic attacks before in their life. There are days that I'm sure some of them just don't want to come back and try this again. There are days that I don't want to come back and try this again. But I feel an obligation and I think that's what they do too. We are here for our babies. (New Hampshire P1, Personal Communication, January 11, 2019)

I worry about my students over the weekend. Holidays, I worry about them. This is tough this role is tough. I am always worrying about them. I need to take care of myself and sometimes I can but most of the time it bothers me so much that I cannot stop the worrying. In my mind it is always them, them, them. These kids have nothing. Nothing. (New Hampshire P2, Personal Communication, February 1, 2019)

The ramification of the epidemic are clearly taking a toll on the teachers and their wellbeing. Despite all of the hardships teachers encounter, teacher attendance is always very high, according to the administrator, because the teachers care for the children and want to be there for them.

Preparation, Support, and Professional Development at New Hampshire Granite Elementary School

To understand the preparation, support, and professional development provided at the New Hampshire Granite Elementary School, the analysis of data will be organized by the stated research questions.

RQ1A- How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering schools?

“We are woefully unprepared. When I supervised child find, before I was the principal here, in one year three years ago, we brought in more than 400 preschoolers for evaluation. Most of those young children were evaluated because there was a substance abuse issue when mom was pregnant. We knew that three years ago. Three years ago! We have not prepared for those children in our district. We knew, but we are not addressing the needs of those children in our schools and we are still not preparing for them” (New Hampshire P1, Personal Communication, January 11, 2019).

According to survey and interview participants, the GES district is not proactively preparing for the impact of the opioid epidemic or providing specific professional development around the crisis. Twelve out of 12 of interview participants agreed that the district is not doing anything to address the influx of students impacted by the epidemic. The following quotes are sample responses of the researcher’s question, “What is your district/school doing to proactively prepare for the influx of students that are going to be impacted by the epidemic, either born with NAS or living in an environment exposed to the opioid epidemic?”

- Unfortunately, I don't think a lot. They could probably be doing more. But, no I wouldn't say there's been any opportunities to learn more or prepare. (New Hampshire P7, Personal Communication, January 23, 2019)
- I would say nothing. I think they know it's a problem, I just think it's ... in this district itself, it's really overwhelming, where we don't know where to start. (New Hampshire P6, Personal Communication, January 23, 2019)

- I guess I don't know. I'm not sure, I have not been involved in any specific trainings through the school district around that (New Hampshire P8, Personal Communication, January 23, 2019).
- I have no idea. I don't know. As teachers, we haven't been trained in that. I don't know what to do with the whole situation. We just haven't learned anything about it. (New Hampshire P3, Personal Communication, February 1, 2019).
- We are woefully unprepared (New Hampshire P1, Personal Communication, January 11, 2019).

RQ1b- How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs impacted by the opioid crisis?

“We are not going to professional development on the crisis. As teachers, we have not been trained in anything that has to do with the opioid epidemic. We need to know. We need to understand. I don’t know what to do about it. We have not learned anything about it.” (New Hampshire P3, Personal Communication, February 1, 2019).

Teachers feel that they are not prepared to teach children of the opioid epidemic and are not provided with professional development addressing the needs of children impacted by the crisis. Although teachers are not making the connection, there are support that should be highlighted. GES is working to address the needs of children impacted by trauma through many programs, such as Dove Tail, zones of regulation, mental health providers on site, and working with a consultant to become a trauma-sensitive school.

According to survey results, 36% of participants feel prepared to teach children of the opioid epidemic, and only 8% have received professional development specifically teaching the needs of children impacted by the opioid epidemic.

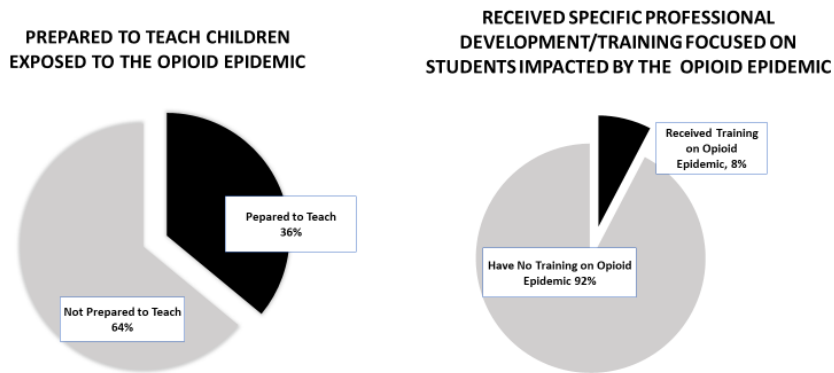


Figure 8. Teacher Preparedness to Teach Students Impacted by the Opioid Epidemic

According to the survey results, teachers have not received professional development on the epidemic specifically, but interviews do suggest they are receiving helpful tools to address the trauma and support the children of the epidemic.

RQ2a- How are schools located in crisis regions supporting the needs of the students affected by the opioid crisis?

“We are building the plane and flying it at the same time” (New Hampshire P1, Personal Communication, January 11, 2019).

It should be highlighted that GES is working to address the needs of children impacted by trauma and the epidemic through a number of programs, such as Dove Tail, zones of regulation, mental health providers on site, and as a school GES is working with a trauma consultant to become a trauma-sensitive school. As mentioned above, GES focuses on providing the basic needs to the children such as clothing, food, warmth, dental services and a safe place to be.

GES received a grant to provide mental health services to students at the school. The service provider is located on-site and meets and works with students and families throughout the day. It is a city-wide initiative to improve health indicators in the city. The researcher had an opportunity to interview the mental health provider to learn more about the position and role she has at GES. She explained,

The goal of the grant and my presence in the school is to improve the health indicators in the city. I work here and see lots of kids that are living in families where there is active drug use, families are struggling with homelessness due to past use, and children are living with extended family members, whether that's an aunt or a grandparent, also because of use, and parent incarceration (New Hampshire P8, Personal Communication, January 23, 2019).

Other interview participants credited her with as needed support at GES, hoping that the grant continues, and the mental health services will continue at GES.

In addition to mental health supports, GES uses a social-emotional combined with a resilience curriculum. Walking throughout GES, there is a Dovetail 12 Tools Poster in every classroom and office (Appendix D). The poster outlines 12 tools that can be used to help students build resilience, self-mastery, and empathy. The language of the Dovetail program is used throughout the building, and the frequent use of the tools was evident when talking to interview participants. The goal is to provide tools to reinforce resilience for students who may need them and have a visual reference throughout the day. Interview participants credited the Dovetail program as a successful calming process to avoid a crisis in the school-

In addition to the Dovetail toolbox, all GES staff, from the secretary, support staff, teachers and administrators have the Zones of Regulation on their nametags (Appendix E). The

school has combined the Dovetail Tools and the Zones of Regulation to provide support to children that need social-emotional assistance by building resilience. GES uses the zones to regulate students' emotions and pick up on escalating behaviors before the behaviors begin. Both tools, Dovetails, and Zones of Regulations are used to avoid an emotional or behavioral crisis before it begins.

The Zones of Regulation is used to provide strategies to students to become more aware of and independent in controlling their emotions and impulses, manage sensory needs, and solve conflicts.

In addition to providing mental health services, DoveTails, and Zones of Regulation, a trauma consultant will be providing professional development to GES to become a trauma-sensitive school. The trauma consultant was interviewed in hopes to understand her vision for GES. She explained her role at GES is to teach educators how to:

...intervene to help students understand how their experiences contribute to their behavior, and their cognition, and their emotions and how we help them to build security, safety and hope moving forward. There's really specific language around the trauma responsive framework and practice exercises that we have, etc. We need to foster reflective thinking, especially in the presence of strong emotions. That's how we heal kiddos in those circumstances. That's how we handle dysregulated educators, at this point, maintain their composure in the face of really dysregulated kiddos. I really want equip them with both the background understanding, but then also the strategy as to move forward? it is our understanding of the fundamental biological interconnectedness of us and how teachers can use and understand that emotion contagion, as they call it, to better understand

students and have better relationships with them over time.(New Hampshire P10,
Personal Communication, January 21, 2019)

In the researcher's tenure at GES, the trauma program was in its infancy stage and not yet implemented, but it an upcoming initiative at GES and will continue for two more years. This program is another grant-funded program unique to GES and no other school in the district will be implementing it.

In addition to the curriculum needs, GES provides its students with needed necessities to live. The basic needs are met first and foremost before learning can begin. Students are provided with food, clothing, boots, jackets, lunch, breakfast, dental needs, warmth and love. Additionally, on Fridays over 100 students go home with backpacks full of food so they can make it through the weekend until school starts again on Monday. According to survey and interview participants, they do not feel like they are doing enough, but in the calibration of all collected data, it is evident that many systems are in place to support their students.

Understanding of the Impact of Students exposed to the Opioid Epidemic at The New Hampshire Granite Elementary School

To understand the opioid impact of students exposed to the epidemic on the New Hampshire Granite Elementary School, the analysis of data will be organized by the stated research questions.

RQ2- How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the epidemic?

Participants at GES are familiar with the special education needs of children affected by the epidemic. Through experience educating children with NAS, many participants described behaviors associated with NAS. According to the literature, children born with NAS or living in a household with a parent or family member addicted are predisposed to an array of potential

disabilities such as behavioral disorders, ADHD, cognitive disabilities, social-emotional disabilities, trauma, and mental health impairments including psychiatric disorders (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014). As described in the behavior section of this case, many teachers have mentioned the disabilities that they have encountered students born with NAS have. Those disabilities include low IQ, ADHD behaviors, Autistic behaviors, seizure disorders, and aggressive behaviors.

Survey participants were asked if they are trained in each specific disability area associated with opioid exposure, their understanding of NAS and knowledge of the disabilities related to NAS, and their comfort level teaching children with specific disabilities associated with opioid exposure (born or living in the environment). Additionally, survey and interview participants were asked if they knew what NAS was and if they were familiar with the disabilities associated with NAS. The survey results showed that 33% of participants know what NAS is and 29% of participants are familiar with the disabilities associated with NAS.

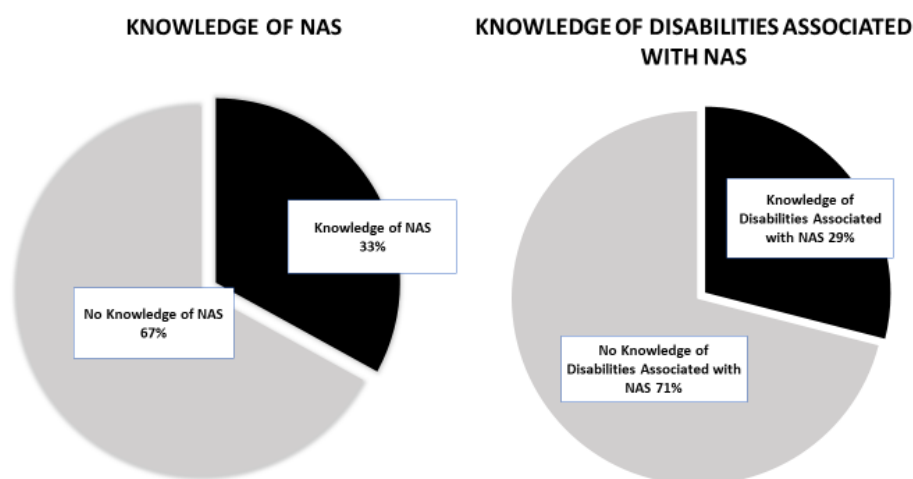


Figure 9. Knowledge of NAS and Associated Disabilities

Figure 9 illustrates that only 33% of survey participants know what NAS is and less than 30% are familiar with the disabilities associated with NAS. Additionally, survey participants were asked about their training related to opioid exposure disabilities.

Table 16 outlines the training and preparedness of the participants. While most teachers at GES do not feel prepared to teach children with mental illnesses and children exposed to the opioid epidemic (born with NAS or living in an opioid-addicted household), most are confident in teaching children with the other associated disabilities.

Table 16

Trained and Prepared - NAS and Environmental Exposure to Drugs

Documented Disability/Situations related to NAS or living in a drug-exposed home	Percentage trained in the listed disabilities /experience	Percentages of Participants prepared or somewhat prepared to successfully teach a student with the identified disability
Behavioral Disorders	87%	58%
ADHD	33%	75%
Cognitive Disabilities	50%	67%
Social-Emotional Disabilities	83%	62%
Experienced Trauma	95%	62%
Mental illness including psychiatric disorders	30%	42%
Exposure to the opioid epidemic (born with NAS or living in opioid-addicted household)	8%	33%

Changes in Special Education or Referrals at New Hampshire Granite Elementary School

To understand the changes in special education or referrals of the New Hampshire Granite Elementary School, the analysis of data will be organized by the stated research questions.

RQ2b- How have special education services and referrals been affected or changed as a result of the opioid epidemic?

The GES district special education percentages have remained consistent over the past three years (Anonymous, Personal Communication, January 23, 2018).

- In 2015, 17% of the district was receiving special education services.
- In 2016, 18% of the district was receiving special education services
- In 2017, 18% of the district was receiving special education services

There is an escalating concern for next year's incoming kindergarten class. According to teachers and the administrator, this incoming class has three times the number of students on IEP than in previous years, and they do not have the staff to service those children. The administrator expressed concerns:

I just had a meeting with my sped team this morning; we have 28 kindergartners coming in in the fall that are identified with special needs. Twenty-eight coming from the child find! I need another kindergarten teacher, and I need another special ed teacher because that's an entire caseload of students right there (New Hampshire P1, Personal Communication, January 11, 2019).

Teachers are experiencing more difficult behaviors among their students, but the children are not always receiving the services they need for a variety of reasons including parental disengagement. Teachers explained that they are unsuccessful at receiving parental approval to begin the evaluation of a student because the parents are unreachable. Teachers also explain that they can often get through the evaluation process but cannot find the parents to sign off on services to begin students on an IEP. When teachers do feel they are making progress, their efforts are often halted when students do not attend school again in order to begin receiving support or advocacy, making the entire process a waste of time.

Additionally, teachers believe there are insufficient special education teachers and paraprofessionals to service all the students. Special education professionals have over 20 students on their caseloads making service requirements difficult. According to multiple special education teachers, caseloads are increasing while the number of supportive staff is not.

As of 2017, special education numbers are the same, but there are concerns about the upcoming years of children with IEP's through Child Find. Additionally, teachers are frustrated at the number of students who need services, but parental engagement and transiency hinder the special education evaluation process.

New Hampshire Granite Elementary School Highlights

Although not directly designed to support the children of the opioid epidemic, the district has implemented several initiatives to support the general student population which subsequently supports the children in need impacted by the epidemic:

- Social-emotional and trauma-informed curriculum- Dovetails and Zones of Regulation
- Trauma Consulting and future involvement to create a trauma-sensitive school
- Mental Health service providers in the school
- Before and After School Program that provides meals and a safe place
- Internal and External resources associated with the school
- Focusing on basic needs and the whole child- providing dental, free meals and snacks, free weather appropriate clothing, and a safe place to stay
- Backpacks of food for the neediest children on Fridays

New Hampshire Granite Elementary School Needs

Interview participants expressed concern over needs to supplement their intent to provide for the students of the school. Specifically, they explained that they feel that staffing is a

concern, especially with the expectations to provide for all the students with social-emotional, behavioral, and trauma impacts. Participants acknowledged that special education caseloads are very high. Specifically teachers have over 25 students they are responsible for providing services and curriculum modifications. The need for paraprofessional help was mentioned numerous times within the interviews. In addition to staffing, interview participants felt that they need to learn more about NAS and all associated disabilities associated with the epidemic. Parents behavior is a concern that staff would like to know how to handle and navigate to develop and establish better relationships.

New Hampshire Granite Elementary School Summary

The following illustration (Figure 10) summarizes the aforementioned sections and focuses on the impact the opioid epidemic is having on GES which is directly influenced through the student's community and environment. The illustration follows up with an overview of supports, needs, special education, and highlights. Each section of the illustration answers the research questions and combines the data discussed in the case study above. The visual provides a graphical overview to summarize the section and illustrate a relationship amongst the research questions and the direct impact the opioid epidemic has on New Hampshire Granite Elementary School.

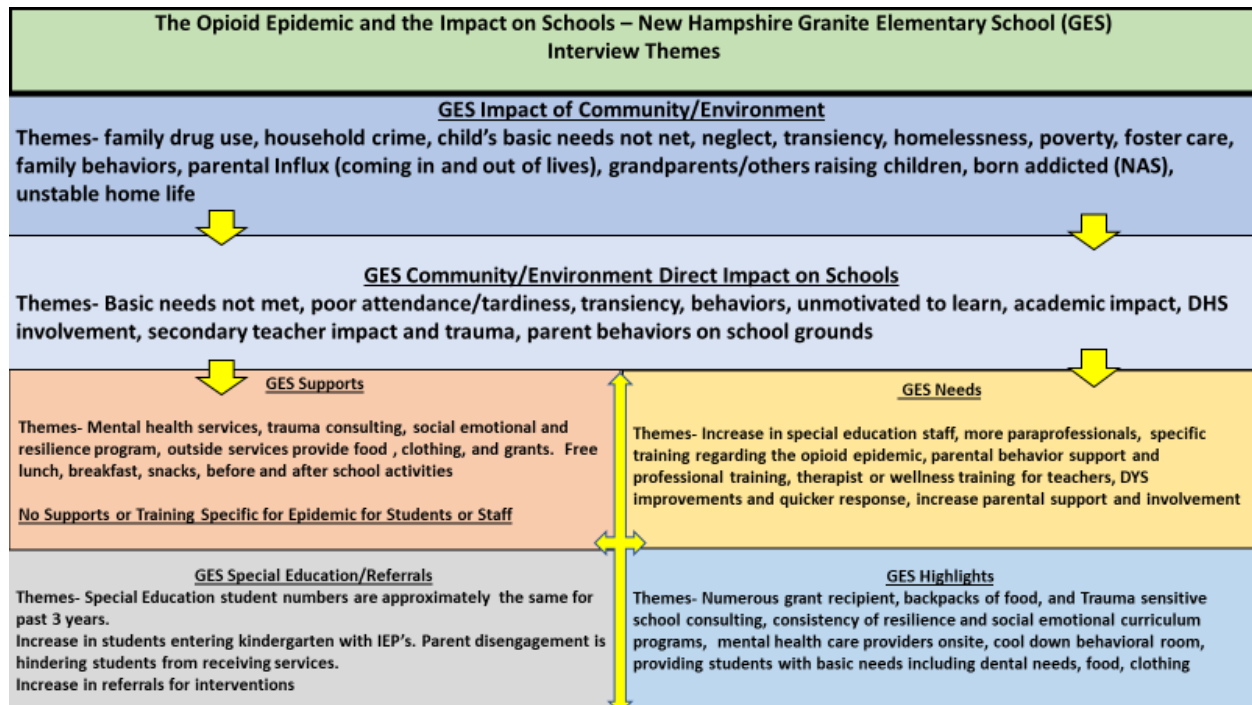


Figure 10. New Hampshire Template of Impact, Needs, and Supports

Maine Chickadee Elementary School

Maine Chickadee Elementary School and Blueberry Extension School

“There's no substitute for a stable, healthy, consistent home. There's just no substitute. I think for whatever reason, a lot of the students that we have are students that come from homes that aren't consistent, homes that have a lot of challenges. Substance abuse has become a huge problem with a direct impact on our school. There is a dramatic increase in our community, especially in this community with opiates” (Maine P8, Personal Communication, January 10, 2019).

Located in an opioid crisis region of Maine, the Chickadee Elementary School (CES) and Blueberry Extension School (BES) are located within a few blocks of one other. Students are exposed to the opioid epidemic in their homes, community, and outside the windows of the schools. According to the Opportunity Alliance Community Notes (2018), the number of opioid overdose deaths in Maine hit a record of 418 in 2017, and it is estimated that 8% of all births in Maine had NAS. The community of CES and BES are in the center of the epidemic and are in crisis.

CES and BES are connected through their special education service model. Students with social-emotional and behavioral disabilities at the CES go to BES for academic and behavioral support that the CES cannot provide. Students at BES may transition to CES for unified arts or other classes, but for the most part, students stay at BES until their needs are met and related services are no longer required. Both schools are investigated in an exploratory case study to develop an understanding of the impact the opioid epidemic is having on the school and the related community.

The Maine Chickadee Elementary School (CES) and Blueberry Extension School (BES) participated in this case study exploring the impact the opioid epidemic is having on schools.

Grades K-2 was the primary focus with a variety of participants ranging from a Central Office District administrator through school administrators, teachers, and social workers.

Overall Maine Study Participants

With a total of 41 possible participants, there was a 68.2% participation rate. Twenty-eight people affiliated with CES and BES gave input to this study. Participants either volunteered for interviews in the survey, colleagues recommended participants or the researcher reached out to specific interview participants based on coding and emerging themes to thoroughly understand and gain a better knowledge of the situations and case. All interviews were voluntary and had appropriate signed consent.

The researcher interviewed 10 participants ranging from central office administrators to mental health providers, teachers, and school administrators. Table 17 illustrates the 10 participants roles, date of interview, and type of interview. Six interviews were face to face meetings, while four interviews were Telephones.

Table 17

Participants

Maine Interview Participant	Role at CES/BES	Date of Interview	Type of Interview
Maine Participant 1	Administrator at CES	12/7/2018	In-Person
Maine Participant 2	Administrator at BES	12/19/2018	In-Person
Maine Participant 3	District Administrator	1/25/2019	Telephone
Maine Participant 4	Teacher at BES	1/10/2019	In-Person
Maine Participant 5	Teacher at BES	1/10/2019	In-Person
Maine Participant 6	Teacher at CES	1/10/2019	In-Person
Maine Participant 7	Social Worker	12/18/2018	Telephone
Maine Participant 8	Clinical Social Worker	1/10/2019	In-Person
Maine Participant 9	Social Worker	1/18/2019	Telephone
Maine Participant 10	Social Worker	1/25/2018	Telephone

Table 18

Participants Role

Job Title or Role	Amount Participated
Kindergarten Teachers	2
Grade 1 Teachers	2
Grade 2 Teachers	3
Special Education Teachers	4
Administrators	4
Social Workers	3
Specialist or Others (unified arts/academic coaches etc.)	4
Total	22

Table 19

Number of Years Participants have worked with Students

Years Participants worked with Students	Percentage
1-5 years	21%
6-9 years	21%
10-15 years	26%
16-20 years	15%
20 + years	15%
Total	100%

The participants bring a variety of expertise and number of years' teaching experience. With participants ranging from central office administration, teachers, special educators, and social workers, the impact of the epidemic was captured through numerous lenses to triangulate data collected. Perspectives are entwined through multiple professionals who all are experiencing the impact of the epidemic from different views and expertise. All communications with

professionals involved and data collected indicated a high state of concern with the opioid epidemic and the impact on the school.

Opioid Epidemic and Impact on the Maine Chickadee Elementary School and Blueberry Extension School

To understand the impact of the opioid epidemic on Maine Chickadee Elementary School and Blueberry Extension School, the analysis of data will be organized by the stated research questions.

RQ1- How is the opioid epidemic impacting kindergarten to grade 2 classrooms/schools located in opioid crisis regions?

The combined data collected will explore the impact of the opioid epidemic on the schools and classrooms at Chickadee Elementary School and Blueberry Extension School. The survey offers an overall understanding of the impact, while the interviews take a comprehensive look revealing the depth of the issue and concern. Environmental factors such as exposure, family drug use, poverty, homelessness, proximity of school to drug activity, parental fluctuation, child born addicted, neglect and instability are directly linked with classroom impact such as poor attendance, unmet basic needs, behaviors, academic impact, secondary teacher trauma, no motivation to learn, and poor parental behaviors on school grounds. According to survey results, as shown in Table 20, 63% of the 19 survey participants who answered the survey question have had students in their class impacted by the epidemic.

Table 20

Participants with Students Affected by the Opioid Epidemic

Participants who had students affected by the opioid epidemic in the past three years	Percentage
Yes	63%

No	5%
I do not know	31%

Sixty-three percent (63%) of the participants surveyed had students in their classes who they were confident were affected by the epidemic. Of the 63% with documented evidence of opioid-related impact, Table 21 illustrates the percentages of those participants who have encountered the situation that ultimately impacted their classroom and student's ability to learn.

Table 21

Participants Experiences with Students Impacted by the Epidemic

Situations survey participants have witnessed happen to students as a result of the Opioid Crisis within the CES/BES	Percentage who have encountered the situation with a student
Neglect	100%
Physical Abuse	58%
Verbal Abuse	100%
Death of Parent	75%
Death of Sibling	17%
Death of relative outside immediate household	75%
Observed an overdose	67%
Born addicted to opioids	75%
Removal from home because of an addicted family member	100%
Living with relative other than a parent as a result of addiction	92%
Placed in foster care	75%
Department of Youth and Family Service Involvement (DHS)	100%
An orphan as a result of household addiction	25%
Others (Write-In)	Homeless/Shelters

Based on survey results, participants have been exposed to tragic situations involving students. Neglect, verbal abuse, DHS involvement, experiencing a parent's death, born addicted, home instability, and foster care involvement percentages are high.

In addition to survey results, several themes emerged in the interviews when the researcher asked, "How is the opioid epidemic impacting your classroom and school?" Out of

the ten interview participants, several themes developed. Table 22 outlines the most frequent themes from the combination of all the interviews. The first column lists the developed theme and the second column breaks it down by the percentage of participants who mentioned the impact in the interviews.

Table 22

Impact on the Classroom- Themes

Impact on Classroom /School – Themes	Percentage of Interview Participants who discussed the topic when asked – “How is the opioid epidemic impacting your classroom/school” or mentioned within the interview
Student Exposure to drug activity	100%
Basic Needs Not Met/Neglect	90%
Transiency	100%
Poverty/Homelessness	100%
Student Behaviors/NAS Behaviors	100%
Family /Parental Fluctuation	100%
Parent Behaviors	100%
Teacher Impact/Secondary Trauma	80%
Academic Impact (evidence suggests teacher priorities/concerns are caring for the whole child - less focus on educational needs)	50%

Other themes emerged that may not be listed on the chart. The categories highlighted on the table are those in which at least half of the participants mentioned that specific theme as having an impact on the school and classroom. In 100% of the interviews, student exposure was the most dominant, most discussed, and a constantly recurring theme. The experiences and exposure the students engage in, and witness was the most impactful area for discussion among participants.

Evidence and data collected reveal that environmental exposure to drug activity has a direct result on the school and classrooms. Interview participants revealed that CES and BES student

exposure to opioid drug activity has an immediate impact on the classroom and the school. The following areas were described in the above graph. The impact mentioned in interviews is briefly explained below with notable participant quotes.

Environmental Factors that Impact Students who Attend Chickadee Elementary School and Blueberry Extension School

Students at the CES/BES are exposed to drug activity through their experiences at home, in their neighborhood, and proximity to the school. Interviews revealed that environmental factors such as exposure, family drug use, the vicinity of drug activity to the school, poverty, homelessness, parental fluctuation, born addicted, neglect and instability are impacting the classroom.

Opioid Exposure

Participants discussed that students have witnessed parent, strangers, and other family members use drugs, overdose, and die from opiate abuse. According to a CES/BES social worker, “the epidemic is having a direct impact on the classroom and the school. Students are experiencing deaths of parents, family members and adult friends of families” (Maine P9, Personal Communication, January 18, 2019). Another social worker added, “I had a student who witnessed their mom trying to be resuscitated after an overdose. She did not make it” (Maine P8, Personal Communication, January 10, 2019).

Consequently, teachers feel the same as social workers. One teacher added:

the opioid epidemic is impacting my classroom in the sense that the kids are dealing with a parent that is addicted. I had one kid last year. One parent was using, and one parent was not. The using parent was in and out, but dad was a good parent but just could keep the mom out of the house. It was heartbreaking. That student was put in foster care (Maine P6, Personal Communication, January 10, 2019)

Another teacher explained, “all of my students are affected by the opioid epidemic in one way or another, including myself. The majority of my students have a parent who is either in active addiction or have used in the past” (Maine P5, Personal Communication, January 10, 2019).

Interview participants acknowledge and explain that parental use and consequences of drug use directly impact the classroom and school.

In addition to watching parents use drugs, students at CES and BES are exposed to drugs in their community and environment. Interview participants link community drug exposure to classroom impact. A CES teacher explains that “even if these kids don’t deal with it in their immediate household, they are living in an area or neighborhood that they are being exposed to it everywhere. They see stuff, hear stuff, and know bad stuff is happening around them all the time, and they come to school in crisis” (Maine P6, Personal Communication, January 10, 2019). A social worker explained that students cannot even escape by going to local facilities. “The kids can go to the local YMCA, but unfortunately, there is no escape because people are doing drugs in that building too” (Maine P8, Personal Communication, January 10, 2019). Exposure to opioid abuse and environmental factors were frequently identified within the body of each interview as having a direct impact on the school.

Participants also reveal that the conditions and exposure students have at school, specifically at BES, have a direct impact on learning. The proximity of three homeless shelters that surround BES attracts a culture of drug and drug activity. A clinical social worker described BES surroundings as an abundance of “floridly psychotic, drug-addicted, and then the people that are preying on those people” (Maine P8, Personal Communication, January 10, 2019). A teacher added that “the opioid epidemic is constantly affecting my classroom. My students are not only exposed to drug abuse in their homes but right outside the windows of their school”

(Maine P5, Personal Communication, January 10, 2019) Additionally, another social worker expressed concern for not only the students, but the teachers, staff, and parents that are exposed to the environment:

Students are being schooled in areas in which students, parents, teachers, and staff have to walk over used needles in the streets and sidewalks to get to school. Students are watching people shoot up in their cars outside the classrooms and pass out. People urinate outside classroom windows... Middle schoolers used to put signs in the window that would say 'this is a school don't smoke or whatever here' 'this is a school, don't urinate here.' Within the square block of the school, called heroin square or heroin block, in 2017 we were losing one person a day to a heroin overdose" (Maine P9, Personal Communication, January 18, 2019).

An administrator shares the same concerns as the two social workers and the teacher highlighting that the school environment as having a direct impact on the school:

Look outside this window! This is a direct impact. We all see adults using and dealing all day long. See that window? Somebody leaves drugs on that window, then somebody else comes and picks it up. I see people right there (pointing outside office window) shooting up heroin. Unfortunately, our young children here are watching this too (Maine P2, Personal Communication, December 19, 2018).

One hundred percent of interview participants at CES/BES revealed stories that described students who are directly impacted by the epidemic through exposure from their family, community, and/or proximity to the school.

Transiency, Homelessness, and Poverty

As a result of the opioid epidemic, transiency, homelessness, and poverty are directly impacting classrooms and at CES and BES. Low attendance and frequent moves are harmful to the classroom. According to an administrator (2018), CES has a 15% homelessness rate. The schools in the district are neighborhood schools, and CES has various shelters located within the school vicinity. Students are coming and going, students are disappearing and reappearing, finding shelters and leaving shelters, living in foster care, moving with grandparents, and sometimes coming back and forth between schools in the district. According to a teacher:

We get a lot of kids that will move and come back two months. That happens a lot, and it's just, it sucks for the kid. After leaving for a few months, they come back here, and it feels like a step back. It's hard for the teachers, we make so much progress with kids and then they just move. Eventually, they come back and they are so much worse, and all progress is gone (Maine P5, Personal Communication, January 10, 2019).

According to a social worker, “there are 301 homeless children in the district. These students are transient. The students are living in shelters, cars, camps, or outside” (Maine P9, Personal Communication, January 18, 2019). Students move around from city to city, shelter to shelter, and school to school within the district and out of the district. Sometimes they stay away, and sometimes they come back. According to a district administrator (2019), “My guess is 40 percent of the kids that are there on the first day may not be there on the last.” An administrator and another teacher also shared the same concerns:

We have a student whose family was dealing with addiction. She missed 43 or more days of school. We started making phone calls, never got a response. Mom was in crisis with addiction. We reached out to community police. They knocked for us. They checked in. No response. The family was moving around, unbeknownst to us. That is when we

knew, we had to start an attendance team (Maine P1, Personal Communication, December 8, 2019).

That opioid epidemic impacts my class on a lot of levels. The biggest impact is that my students are taken away. Kids are in school then leave the school and eventually come back to school. Sometimes they are put in foster care or need to stay with someone else. Sometimes you have other kids suddenly missing school, and you know things are not right. You need to investigate, you need to figure it out, sometimes it hard to figure it out but ultimately you will... Most of the time it takes a crisis or to get to crisis point and then the kids were taken away and sadly we may or may not see them again (Maine P6, Personal Communication, January 10, 2019).

Opioid abuse is leading to lost children and transient families which have a direct impact on attendance, classroom, and learning.

Basic Needs Not Met/Neglect

“Could you imagine the emotional effect of a kid who knows that injecting that drug was more important than feeding me, than clothing me, than bathing me” (Maine P8, Personal Communication, January 10, 2019).

Neglect was another theme that was mentioned fluidly throughout the interviews. Participants are concerned that students are coming to school with their basic needs unmet with apparent signs of neglect. According to 9 out of 10 interview participants, students are coming to school hungry, dirty, and are uncared.

Additionally, dental and medical needs are not met when parents are battling addiction. Basic human needs are essential to learning in the classroom. Unfortunately, according to interview participants, because many students come to school with their basic needs unmet, it

harms classroom learning and behaviors. According to an administrator, “when a kid starts looking less cared for, it usually comes out that parents, particularly Mom, is using again” and later on in the interview the participant adds that “kids are always coming to school with basic needs not being met because of this addiction, so it adds to our jobs. We say ‘ok now what can we do to put the kids together so they can learn. What do we need to provide them?’” (Maine P1, Personal Communication, December 8, 2019). Another teacher adds, “in addition to supplying kids with a dental clinic, we need to get these kids eyes checked here at school. This is in addition to giving out food and clothes. We have closets full of clothing to give students. Kids just are not well cared for, but we need to meet their needs in order for them to learn” (Maine P6, Personal Communication, January 10, 2019). The teacher also mentioned the importance of making the students in her class feel safe, “we know things are going on and we really just want to keep the kids safe and try to get the kids to talk to us” (Maine P6, Personal Communication, January 10, 2019).

Student Behaviors

“We are seeing students that come in with real deficits, cognitive deficits, executive functions deficits related to in utero exposure to toxins” (Maine P8, Personal Communication, January 10, 2019).

Teachers, administration, and social workers are concerned about student behaviors. Their concerns are highlighted in both the survey results and interviews. Increased sadness, anger, low motivation, withdrawal, and hyperactivity in students are findings of the surveys. Interview participants spoke primarily about children with documented NAS and the associated behaviors such as academic delays, difficulty deescalating, explosive, reactive, poor executive

functioning, difficulty processing. A few described the behaviors associated with NAS as a combo of symptoms similar to ADHD and an autism combination.

The survey results are displayed below. Indicated in Table 23 in which 12 out of 22 survey participants are directly linking behaviors to students who have been impacted by the epidemic, while 15 out of 22 are confirming that the following behaviors have increased in the past three years but are unsure why or cannot prove the epidemic is the underlining reason.

Table 23

Students Behaviors

Student Behaviors	Survey results- Percentage of teachers (etc.) who have encountered the behaviors of a student impacted by the epidemic	In the past three years, increases in listed behaviors in the classrooms located in crisis regions
Withdrawal	92%	73%
Increased sadness	100%	87%
Anger	100%	93%
Hyperactivity	83%	87%
Inattention during a lesson	80%	100%
Low motivation	92%	93%
Tantrums	75%	75%
Deficient cognitive ability	67%	73%
Deficient motor ability	50%	60%
Behavioral problems	100%	93%
Speech, language, and communication disorders	67%	73%
Emotional and social disabilities	92%	80%
Poor executive functioning	100%	73%
Anxiety	92%	80%
Other		

The table shows behaviors in the students exposed to the epidemic and behavior increases of students living in opioid crisis regions.

In addition to increased negative behaviors in the classroom directly related to exposure to the opioid epidemic, interview participants describe their students born with NAS in the following notable quotes regarding NAS behaviors:

His behaviors manifest typically as almost as being on the spectrum, but not as much the social, emotional piece of that. It's almost like he's playing a movie in his head that's more interesting than what we're talking about. So, he'll do his own thing. A lot of auditory behavior type things, where he'll hum really, really loud. He doesn't like any music being played. If you interrupt what he is doing in his head, he becomes aggressive. He'll obsess about typical things, but it changes more frequently than a student on the spectrum. He does seek out social interaction, so that's why we ruled out the autism piece. But he sometimes does manifest autism mixed with ADHD. He's an interesting little guy. He cannot be independent, he needs a lot of support. And he's not a bad kid. He doesn't swear or try to hurt anybody purposely. He just not available (Maine P5, Personal Communication, January 10, 2019).

We've seen an increase of students who appear to have NAS. Or they are following the criteria of it - some parents admitted that it is NAS, some we will never get confirmation. They display more explicit behaviors, not able to de-escalate as maybe as effectively as students who are not born on opiates. They are more explosive, more reactive. More conduct disorder type behaviors (Maine P2, Personal Communication, December 19, 2018).

There's been an increase with the students that I have on my caseload that have been affected in utero by toxins. That is something that I've definitely seen an increase in.

We're seeing students that come with real deficits, cognitive, executive functioning deficits related to in utero exposure to toxins (Maine P8, Personal Communication, January 10, 2019).

Behaviors are a prominent area of concern for teachers, administrators, and social workers at CES and BES. Whether it is a diagnosed case of NAS or behaviors associated with household opioid exposure, teachers are struggling to finding adequate accommodations in the classroom.

Parental Fluctuation and Parents Behaviors

“Parents are good for a while, they're sober for a while, they're not, they're sober for a while, they're not. Kids learn to not be able to depend on anything. You know, so, “Oh, Mom's being really great now. Everything is great at home, uh oh, it's back.” So, they can never relax and depend on their parents and I think that's really damaging going forward in their life” (Maine P6, Personal Communication, January 10, 2019).

Interview participants describe parents as disengaged, unreachable, unstable, aggressive and on the move. There are numerous concerns about parent’s recovery and relapse cycles that cause overwhelming anxiety on the students that attend CES and BES. Grandparents, aunts, and foster families are raising children.

Additionally, there are many active Department of Family Service open cases in the schools. A teacher explains the instability of a parent, “The kids know there were drugs involved and eventually, kids get taken out and put in foster care, but it usually takes a crisis” (Maine P6, Personal Communication, January 10, 2019). She went on to explain the struggles of parental behaviors.

I know that it's affecting my classroom it in the sense that they're kids all the time who are dealing with a parent that are on drugs. The biggest impact is that kids leave and they're taken away. Sometimes we have kids that leave the school and put in foster care, or they have to go stay with somebody else. I've done many a conference where parents come in, and you just know, they are high and you have to report it. These kids are constantly in and out of their homes. There is no stability (Maine P6, Personal Communication, January 10, 2019).

Parental behavior is also inappropriate on school grounds. An administrator explained, “parents get escalated very quickly. Yelling, screaming, arguing for no reason. And you just have to take it and wait until they're done and then say your point. Then they come around. It's almost like they're a child still, and you just let them have their tantrum” (Maine P2, Personal Communication, December 19, 2019). Two other teachers explain that parents are consistently coming in high to parent conferences or to pick up their children at school (Maine P6 & P5, Personal Communication, January 10, 2019). Parental behaviors and influx were a prominent theme throughout the interview.

Secondary Teacher Trauma

An unanticipated yet prominent theme that developed in the interviews was secondary teacher trauma. The needs, neglect, and pain of students are impacting teachers. Teachers are responsible for more than just educating students. Teachers are providing students with basic needs that do not receive at home and creating a safe haven in their classrooms.

When the researcher asked the CES administrator, “how has the opioid epidemic impacted your school?” his first response was, “the piece that probably impacts us the most about the epidemic is the impact on staff. The staff is really struggling with holding all this

together. When you have that many kids in need, how do you take it in as an adult? It's hard" (Maine P1, Personal Communication, December 7, 2018). In conjunction, the BES administrator (2018) also mentions that the teachers at BES are "affected with their own vicarious trauma" and would love to be able to provide staff therapist. Unanticipated teacher trauma is an unanticipated consequence of the opioid epidemic.

At BES and CES Environmental factors such as exposure, family drug use, poverty, homelessness, proximity of school to drug activity, parental fluctuation, child born addicted, neglect and instability are directly linked with classroom impact such as poor attendance, basic needs unmet, behaviors, academic impact, secondary teacher trauma, no motivation to learn, and parental behaviors on school grounds. According to participants, the impact of the opioid epidemic is profound.

Preparation, Support, and Professional Development at Maine Chickadee Elementary School and Blueberry Extension School

To understand the preparation, support, and professional development offered at the Maine Chickadee Elementary School and Blueberry Extension School, the analysis of data will be organized by the stated research questions.

RQ1A- How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering schools?

According to survey and interview participants, the CES and the BES are not proactively preparing for the impact of the opioid epidemic nor providing specific professional development around the crisis. However, CES and BES do have a variety of student supports and professional development opportunities in place that should be highlighted and directly help the children and teachers of the epidemic. Highlighted supports include a clinical mental health administrator, relevant professional development around social-emotional learning, multiple social workers and mental health providers in the schools, a district emphasis on professional development on

poverty and trauma, and the use of common language around the benefits of teaching the whole child.

School Supports

RQ2a- How are schools located in crisis regions supporting the needs of the students affected by the opioid crisis?

Although not directly credited as support for the needs of children impacted by the opioid epidemic, CES and BES have begun to add some support that are helpful for students in need such as a district-wide focus on mental health and equality. This focus includes adding mental health service providers in schools and attempts to provide social-emotional learning.

Unique to the district, a mental health administrator oversees and supports the district's, approximately 25 school-based social workers and mental health providers. The position, Director of Clinical and Behavior Supports, is located at the central office directly under the Assistant Superintendent of Teaching and Learning. The position is a newly developed academic position, and the current administrator is on his third month of the job. The administrator holds a Ph.D. in clinical psychology. He has experience in day treatment facilities, mental health clinical supervision, experience with the implementation of SEL, and trauma-sensitive practices. As noted in, multiple interviews and other documents (Anonymous, Personal Communication, January 10, 2019), the Director of Clinical and Behavior Supports is credited for taking account of each of the district's schools' trauma-informed practices and social-emotional learning (SEL) initiatives. The Director of Clinical and Behavior Supports was interviewed and explained his role in the system and specifically at CES/BES. He explained the CES/BES SEL initiative are part of their Right to Intervention (RTI) process. He specifically guides the interventions for social/emotional and behavioral needs and works collaboratively with the school's social

workers, social-emotional learning coach, and administration. The quote below explains the process he is trying to implement for RTI initiative at CES:

What does the CES stand for? Do they have clear expectations about what those values look like in each different context? Do they have clear expectations about what the hallways are supposed to look like, sound like? The classrooms, the cafe, the arrival and dismissal? Do they teach those things explicitly to the adults and students so that we're on the same page around how to behave in CES? Do they have a curriculum that actually teaches social-emotional knowledge and skills to students? For example, if a student is sent to the office for punching another student, is the process, not necessarily the outcome, but is the process predictable and consistent? So, do they follow the same steps to get to the outcome. Do they have systems for recognizing students for doing well? Do they have a system in place that helps us engage in that practice, which we know to be helpful, of recognizing and attending to the good stuff? And the last one is are we using data to inform our decision making? So those are our set tier one components.

CES, like a lot of schools, have really good, people are engaging in really good practices but there are not a lot of systems in place to make sure that the practices are happening consistently within classrooms and across classrooms and outside of classrooms. So that's a lot of what the SEL Coach is charged with championing. Not doing by himself because it's all team-based work. That is the our role in RTI tier one around the behavioral side of things (Maine P3, Personal Communication, January 25, 2019).

The Social Emotional Learning (SEL) Coach works under the Director of Clinical and Behavioral Support and collaboratively with the Social Workers at CES. The SEL Coach's job is to ensure that there is adequate tier one RTI social-emotional supports in place and focus on

Positive Behavior Intervention and Supports (PBIS). Additionally, CES has a before school breakfast program that is part of the RTI tier one initiative. Before school students have an opportunity to check in with school social workers, administration, SEL coach and some teachers to make sure they are ready to learn and if there is anything that needs to be discussed that may hinder learner for the day.

CES/BES also have social workers that support students. There is school-based social workers that support student's mental health needs and an additional McKinney-Vento Social Worker. McKinney-Vento Homeless Assistance Act protects homeless students. Since CES has a substantial homeless population, the school has a specific social worker to protect the homeless student's rights, develops a relationship with the homeless families, keep data on homeless numbers, make sure transportation is provided for families regardless of location, and to track homeless students who are not showing up at school. According to the McKinney-Vento Social Worker, her job is to "help the most invisible, the most vulnerable population in a very concrete but powerful way, so that I can hold them, and help them get them the next step of services they need and to properly account for them" (Maine P9, Personal Communication, January 18, 2019). Currently, in the district, there are over 300 homeless students. Many of the homeless are victims of refugee families, generational poverty, and drug-addicted families. The McKinney-Vento Social Worker is also part of the RTI referral clinical team that ensures all students are receiving mental health and behavioral supports and interventions before the special education referral process.

In addition to the Director of Clinical and Behavioral Support, the school district has an Equity Director. The Equity Director is a district-wide administrator position that falls under the assistant superintendent. The Equity Director's goal is to put systems in place to close the gap in

achievement between the diverse students in the district. The Equity Director runs systems to ensure that schools focus in on achievement, teaching the whole student, equity, and provide opportunities to focus on the people and families within the community. The overall initiative, under the Equity Director, serves as an essential blueprint to guide student learning (Anonymous, Personal Communication, January 25, 2019). In the interview process, it was evident that teachers, social workers, and administrators knew the importance of teaching the whole child and bridging the gap between school and the community. The following quotes are from various interviews that highlight the Equity Directors mission is in progress:

We spend a lot of time looking at the whole child, and so it's sort of like when you see a behavior, when you see a change in somebody, we try to look at, well what's going on? Why? What's going on at home? What do we see in changes? Do we see changes in their academics? Do we see changes in their personality? Do we see changes in their physical condition? And I think all the interventions are a way of us, really getting to know our students, and saying, "I have a feeling that this is off or that's off." And what interventions is the next step. Like putting someone in detention isn't going to solve anything, kind of... Well, I really know my students well. I do home visits. I talk to parents. And I think that's the key to it, is like I know my students, so when something's off, I know it. And I usually talk to them, have lunch with them, start there. Call a parent. And then you kind of figure out what are the interventions that you need. And then, you know, go to a social worker, go to the next level if I need to (Maine P6, Personal Communication, January 10, 2019).

So, our school is very focused on relationships, that's a big piece of it. That goes back to where we were talking about Maslow and Blooms, you gotta take care of those basic

needs. So, that's why we do so much partnership with outside agencies as far as provide clothing and food and as a universal Title I school, we provide free breakfast and free lunch to everybody regardless of income. Yeah. So, I think we're good about getting these kids what they need (Maine P1, Personal Communication, December 7, 2018).

Other participants discussed the importance of school and home relationships, “as a school, we build the bridge between community, home, and school. So, we are constantly calling home, having parents come in. We do a lot of work around that, a lot of work of helping parents” (Maine P2, Personal Communication, December 19, 2018). Another participant added, “our goal is to wrap around the students, then wrap around the student’s family, and do what we can to support not only the student but the student’s family. And make sure that we have a good connection with the parents so that we can help them if we need to” (Maine P5, Personal Communication, January 10, 2019). In addition to building the family relationships, participants discussed the importance of building the relationship with the student. “We really try to keep kids safe, so if we know things are going on, we really try to, you know, report it, talk about it, get it out there and get kids to talk to us about things” (Maine P6, Personal Communication, January 10, 2019).

Although there are no support specific to the opioid epidemic, CES and BES have some efforts in place that benefit children impacted by the opioid epidemic. The school district has a Director of Clinical and Behavior Supports and an Equity Director as part of district leadership, social workers in every school, McKinney-Vento Social Worker to support homeless students, SEL and trauma-informed professional development, and a district initiative to teach the whole child.

Professional Development at Chickadee Elementary School/Blueberry Extension School

RQ1b- How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs impacted by the opioid crisis?

CES and BES provide many opportunities for professional development. There are 31 days in an academic school year on which teachers are required to attend professional development workshops. Each Wednesday, professional development is offered at all schools in the district. Survey questions investigate the offerings and the relationship of those offering to help and support students and teachers impacted by the opioid epidemic.

The survey results yielded that 4% of participants have received specific training on teaching children impacted by the opioid epidemic, and only 9% of participants feel prepared or somewhat prepared to teach children impacted by the epidemic (Figure 11).

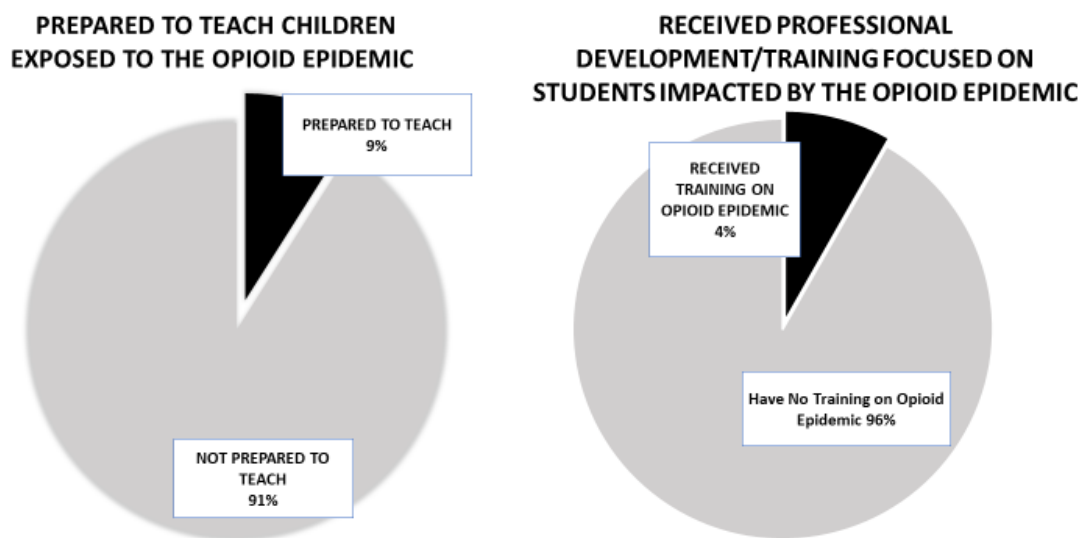


Figure 11. Teacher Preparedness to Teach Students Impacted by the Opioid Epidemic

Interview data uncovered the same findings. The interviews revealed that 100% of interview participants report they are receiving no professional development on how to teach and

support children impacted by the opioid epidemic. Although 88% of all interview participants feel that the district offers an abundance of SEL, Trauma, and poverty training, 100% feel that they cannot support all the needs of the children impacted by the epidemic. During the interviews, 38% of participants mentioned, unprompted, that although they have SEL and trauma curriculum tools, schools within the district are inconsistent in the delivery and implementation of the programs.

Currently, schools have the autonomy to provide social-emotional learning and trauma-informed professional development. At the CES 48% of all professional development opportunities are social-emotional and equity training. Specifically, 15 out of 31 planned professional development days have an SEL and Equity focus (Anonymous, Personal Communication, December 7, 2018). Although schools have programs, many participants feel that a consistent model of implementation throughout the district is lacking. Specifically, a school administrator pointed out, “schools are doing a lot of different initiatives, we have many programs, the problem is the amount of fidelity doing them is lacking” (Maine P2, Personal Communication, December 19, 2018). Specifically, some schools are using pieces of the second step, pieces of HOWLS, attempting zones of regulation, morning meetings, student supports teams, and restorative practices (Anonymous, Personal Communication, December 20, 2018). The problem is that all school are doing their own thing, the supports are there, but schools may not be using them properly. In conjunction with the administrator, the Director of Clinical and Behavior Supports agreed and explained, “my understanding of CES is, that they all like the same music, but no one can agree when it's time to dance. And I think it's because it's a really warm atmosphere. The people are kind and welcome you in, but there seems to be a lack of systems, so that will be a process for what we do under the clinical and behavior supports of the

social workers and myself” (Maine P3, 2019, January 25, 2019). Some support is available to help the children impacted by the opioid epidemic, but the correct implementation is a work in progress.

According to interview participants and survey results, the staff do not feel that they are prepared to teach children of the opioid epidemic but do feel they are receiving adequate professional development in SEL, trauma, and poverty.

Understanding of the Impact of Students exposed to the Opioid Epidemic at Maine Chickadee Elementary School and Blueberry Extension School

To understand the impact of students exposed to the opioid epidemic on Maine Chickadee Elementary School and Blueberry Extension School, the analysis of data will be organized by the stated research questions.

RQ2- How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the epidemic?

Participants at CES and BES are not familiar with the special education needs of children affected by the epidemic. According to the literature, children born with NAS or living in a household with a parent or family member addicted are predisposed to an array of potential disabilities such as behavioral disorders, ADHD, cognitive disabilities, social-emotional disabilities, trauma, and mental health impairments including psychiatric disorders (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Ornoy et al., 2010; Yaun et al., 2014).

Survey participants were asked to answer questions about their training in each specific disability area associated with opioid exposure, their understanding of NAS and knowledge of the disabilities related to NAS, and their comfort level teaching children with specific disabilities associated with opioid exposure (born or living in the environment). Additionally, survey and interview participants were asked if they knew what NAS is and if they were familiar with the

disabilities associated with NAS. The survey results showed that 32% of participants know what NAS is and 23% of participants are familiar with the disabilities associated with NAS.

Furthermore, 12% of interview participants had prior knowledge of NAS, and one participant said she was unable to find research on NAS to help with a student in her class diagnosed with NAS. The following quote describes a special education teachers dilemma in addressing her students' needs that was born with NAS:

NAS has affected my students. I have students who were born addicted to opiates. And the biggest problem is there's no research on it. So, there's nothing out there yet about how that affects the brain and how that affects development. There's a ton about Fetal Alcohol Syndrome, but nothing about being born addicted to opiates. The one student that I do have this year, that we know was born addicted to opiates, was adopted. And it's hard for that parent to find solutions and find resources because we don't know, they don't know, I don't know, and there's no research out there (Maine P5, Personal Communication, January 10, 2019).

That interview revealed that this teacher is knowledgeable about NAS and seeking resources and researching the effects, but are unsuccessful in finding literature to help her in the classroom. Figure 12 illustrates the survey and interview results regarding participants knowledge of NAS and associated disabilities including the fact that only 32% of survey participants are knowledgeable of NAS is and less than 25% are familiar with the disabilities associated with NAS.

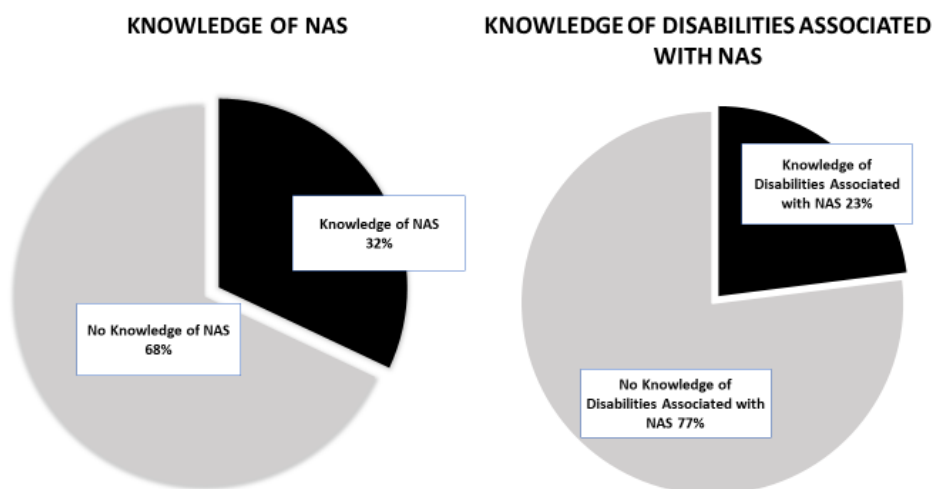


Figure 12. Knowledge of NAS and Associated Disabilities

Additionally, survey participants were asked about their training related to opioid exposure disabilities. Table 24 outlines the results.

Table 24

Trained and Prepared – NAS and Environmental Exposure to Drugs

Documented Disability/Situations related to NAS or living in a drug-exposed home	Percentage trained in the listed disabilities /experience	Percentages of Participants prepared or somewhat prepared to successfully teach a student with the identified disability
Behavioral Disorders	50%	41%
ADHD	32%	50%
Cognitive Disabilities	32%	32%
Social-Emotional Disabilities	64%	50%
Experienced Trauma	73%	50%
Mental illness including psychiatric disorders	27%	22%
Exposure to the opioid epidemic (born with NAS or living in opioid-addicted household)	4%	9%

According to the above survey results, CES and BES participants are receiving the most training and professional development in trauma, social-emotional disabilities, and behavior disabilities.

Furthermore, participants feel the least prepared to teach children exposed to the opioid epidemic and mental illness including psychiatric disorders.

In conclusion, participants at CES and BES are receiving professional development. However, there is nothing specific to NAS or the opioid epidemic, and most participants are not familiar with the special education needs of children affected by the epidemic.

Changes in Special Education or Referrals at Maine Chickadee Elementary School

To understand changes in special education and referrals at the Maine Chickadee Elementary School and Blueberry Extension School, the analysis of data will be organized by the stated research questions.

RQ2b- How have special education services and referrals been affected or changed as a result of the opioid epidemic?

The CES special education percentages have remained consistent over the past three years (Anonymous, Personal Communication, December 8, 2018).

- In 2015, 16% of the school was receiving special education services.
- In 2016, 15% of the school was receiving special education services
- In 2017, 16% of the school was receiving special education services

Although special education services have remained the same, the number of RTI referrals and interventions have increased. As quoted by an administrator,

Our numbers have stayed stable in the special ed. I'm gonna pat us on the back a little bit for this, because we've been working really hard through the RTI piece of developing a much more broad type Tier I as far as social-emotional Tier I, really blowing that up, and even then Tier II...I think we're doing a good job of creating a lot of supports within that Tier I and Tier II, so they're not necessarily going into a special ed referral ultimately. So, while I don't see our sped number going up, referrals for support are going up, but the

level of supports that we've had to put in place to keep them in the classroom without special education services and keeping kids in the least restrictive environment has gone way up (Maine P1, Personal Communication, December 8, 2018).

Multiple interviewed participants explained that the RTI process has a clinical team of interventionists, including a variety of social workers, administrators, and nurses. The clinical team is responsible for addressing behavioral and social/emotional issues that would have had the potential to lead to special education. Rather than students receiving special education services, they receive in-depth services through social workers at Tier 1 and Tier 2 level of the RTI process. Schools also have outpatient mental health clinicians that support the clinical team of interventionist (Maine P9, Personal Communication, January 18, 2019).

In summary, there are notable changes in referrals and interventions to minimize the number of students who receive special education services by adding a clinical team of supports. Although the numbers of children that have been referred for interventions has increased, based on social-emotional and behavior needs, the increase of interventions have kept the special education numbers consistent.

Maine Chickadee Elementary School and Blueberry Extension School Highlights

As noted above, there are supports that should be highlighted in the districts attempt to help the neediest of children. Although not credited to support the children of the opioid epidemic, the following initiatives, revealed by interview participants, will support the children in need impacted by the epidemic:

- Social workers in every school including a McKinney Vinto Social Worker
- District level Administrators- Director of Clinical and Behavior Supports, Equity Director
- Professional Development in poverty, trauma, and social-emotional learning

- Before and After School Program that provides meals and a safe place
- Internal and External resources associated with the school
- Focusing on basic needs and the whole child- providing dental, medical, and eye care at school, free meals and snacks, free weather appropriate clothing, and a safe place to stay

Maine Chickadee Elementary School and Blueberry Extension School Needs

Throughout the interviews, the following school “needs” were mentioned by participants.

Multiple participants felt the following supports would help children impacted by the opioid epidemic.

- Money to sustain and expand mental health programs in school
- Increased community program and resources not associated with schools
- Opioid Epidemic specific professional development including an overview of NAS
- Therapist or wellness training for teachers
- Systematic systems in place for trauma-informed practices and social-emotional learning
- District changes in school location and proximity to shelters
- Development of a less restrictive model for students diagnosed with social-emotional and behavior disabilities
- Faster response from DHS

The list above are needs that participants felt were necessary for successfully providing adequate support to students, teachers, and administrators who are impacted by the epidemic.

Maine Chickadee Elementary School and Blueberry Extension School Summary

Figure 13 summarizes the impact the opioid epidemic is having on the schools which are directly influenced through the student’s community and environment. The illustration follows up with an overview of supports, needs, special education, and highlights. Each section of the illustration answers the research questions and combines the abundance of data discussed in the

case study above. The visual provides a visual overview to summarize the section and illustrate a relationship amongst the research questions and the direct impact the opioid epidemic has on Chickadee Elementary School and Blueberry Extension School.

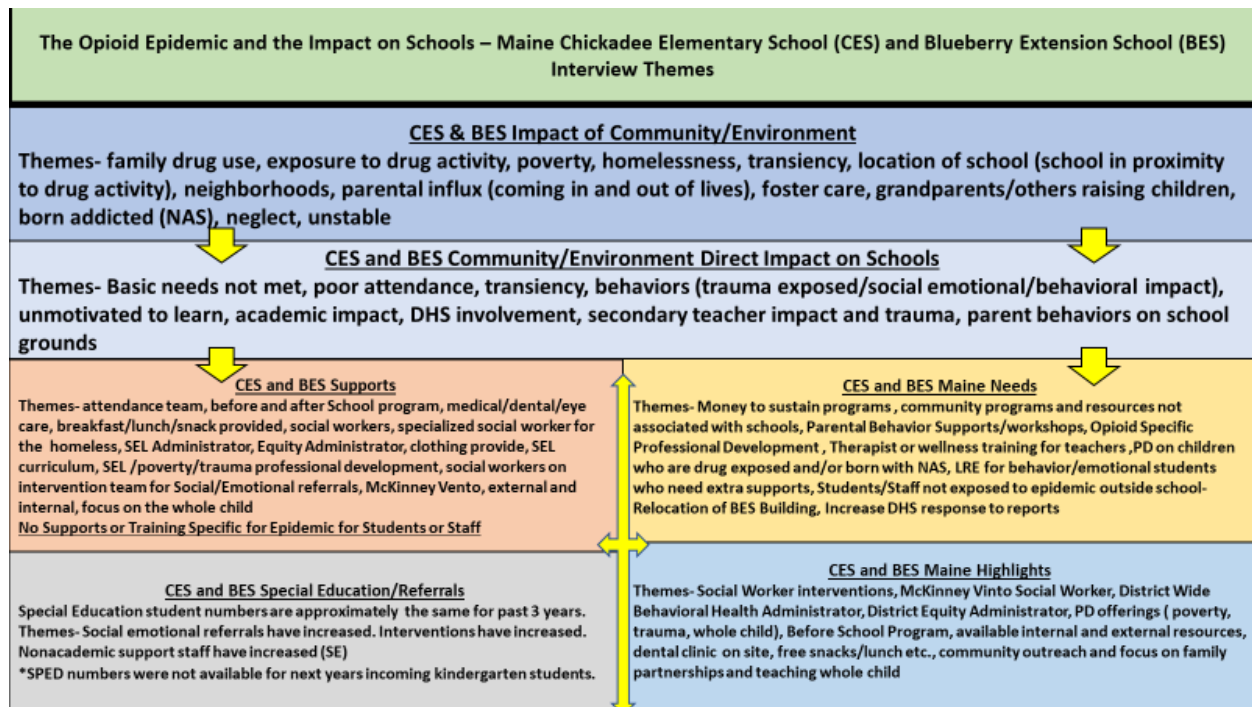


Figure 13. *Maine Template of Impact, Needs, and Supports*

Massachusetts Mayflower Elementary School

Massachusetts Mayflower Elementary School is experiencing struggles because of the opioid epidemic. According to local law enforcement, The school (MES) is located in an area that had approximately, 300 opioid fatal/nonfatal combined overdoses and over 750 drug arrest in 2018 (Anonymous, Personal Communication, January 24, 2019). Many of the students that attending the MES are living in homes that are directly impacted by the epidemic.

Overall Massachusetts Study Participants

With a total of 20 out of 32 possible participants, there was 63% participation. All interviews were voluntary and had appropriate signed consent. Twenty people affiliated with MES gave input to this study.

From December 12, 2018, through January 15, 2019, the researcher interviewed seven participants ranging from principals, special education administrators, teachers, and special education teachers. Table 25 illustrates the seven participants roles, date of interview, and type of interview. Six interviews were face to face meetings, while one interview was a Telephone.

Table 25

Massachusetts Interview Participants

Massachusetts Interview Participant	Role at MES	Date of Interview	Type of Interview
Massachusetts Participant 1	Administrator	12/18/18	Telephone
Massachusetts Participant 2	Administrator	1/15/19	In-Person
Massachusetts Participant 3	Teacher	1/15/19	In-Person
Massachusetts Participant 4	Teacher	1/15/19	In-Person
Massachusetts Participant 5	Special Education Teacher	1/15/19	In-Person
Massachusetts Participant 6	Teacher	1/15/19	In-Person
Massachusetts Participant 7	Administrator	1/15/19	In-Person

Table 26

Massachusetts Survey Participants

Title	Amount Participated
Kindergarten Teacher	4
Grade 1 Teacher	5
Grade 2 Teacher	2
Special Education	1
Administrator	3
Other (unspecified)	4

Table 27

Years Teaching/Working with Students

Years Teaching or Working in a School	Percentage
1-5 years	28%
6-9 years	6%
10-15 years	17%
16-20 years	22%
20 + years	28%

There is a range of knowledge and a number of years' teaching experience among the participants. With participants' roles ranging from administration, teachers, to special educators, the impact of the epidemic was captured through various lenses to triangulate data collected. Regardless, of the professional interviewed or surveyed, it is evident through data collection that this opioid epidemic is causing a crisis in the schools.

Opioid Epidemic and Impact on the Massachusetts Mayflower School

To understand the impact the opioid epidemic has on the Massachusetts Mayflower School, the analysis of data will be organized by the stated research questions.

RQ1- How is the opioid epidemic impacting kindergarten to grade 2 classrooms/schools located in opioid crisis regions?

As evident in the survey and interview data, the impact of the opioid epidemic on the schools and classrooms in the MES is substantial. The survey offers an overall understanding of the impact, while the interviews take a comprehensive look revealing the depth of the impact.

According to survey results, 11 of the 18 survey participants (61%) who answered the survey question have had students in their class impacted by the epidemic.

Table 28

Participants with Students Affected by the Opioid Epidemic

Participants who had students affected by the opioid epidemic in the past three years	Percentage
Yes	61%
No	0%
I do not know	39%

Table 28 highlights that 61% of the participants surveyed were confident that students in their classrooms were affected by the epidemic. With documented evidence of opioid-related impact, the following graph shows the percentages of those participants who have encountered the situation that ultimately impacted their classroom and student's ability to learn.

Table 29

Participant Experiences with Students Impacted by the Epidemic

Situations teachers have witnessed happen to students as a result of the Opioid Crisis within the MES (Survey Results)	Percentage who have encountered the situation with a student
Neglect	91%
Physical Abuse	36%
Verbal Abuse	55%
Death of Parent	36%
Death of Sibling	9%
Death of relative outside immediate household	18%
Observed an overdose	36%
Born addicted to opioids	45%
Removal from home because of addicted family member	82%
Living with relative other than a parent as a result of addiction	91%
Placed in foster care	73%
Department of Youth and Family Service Involvement	55%

An orphan as a result of household addiction	9%
Others (Write-In)	

In addition to survey results, several themes emerged in the interviews when the researcher asked, “How is the opioid epidemic impacting your classroom and school?” Out of the seven interview participants, several themes developed. Table 30 outlines the most reoccurring themes from the combination of all the interviews. The first column lists the developed theme and the second column breaks it down by the percentage of participants who mentioned the impact within the interview.

Table 30

Impact on the Classroom - Themes

Impact on Classroom /School – Themes	Percentage of Interview Participants who discussed the topic when asked – “How is the opioid epidemic impacting your classroom/school” or mentioned within the interview
Student Exposure to drug activity	100%
Basic Needs Not Met/Neglect	100%
Transiency	100%
Poverty/Homelessness	86%
Student Behaviors/NAS Behaviors	100%
Family /Parental Fluctuation	100%
Parent Behaviors	100%
Teacher Impact/Secondary Trauma	100%
Household Crime	86%
Academic Impact	71%

Other themes emerged that may not be listed on the chart. The categories are highlighted on the table because at least half of the participants mentioned that specific theme as having an impact on the school and classroom. In 100% of the interviews, student exposure was a

constantly recurring theme. The experiences and exposure the students engage in, and witness was the most impactful area for discussion among participants.

Evidence and data collected reveal that environmental exposure to drug activity has a direct impact on the school and classrooms. Interview participants revealed that MES student exposure to opioid drug activity has an impact on the classroom and the school. The following areas were described in the above table (30). The impact mentioned in interviews is briefly explained below with notable participant quotes.

Environmental Factors that Impact Students who attend Massachusetts Mayflower Elementary School

“The impact of the opioid epidemic is intense and is seen here through extreme behaviors. Kids are clearly living with trauma. Many kindergartners this year that have come in from situations where you can see the direct effect of a mother or father who's incarcerated, mother and father who are addicts, kindergartners who have come in under the care of other relatives that have communicated to us that addiction is part of the issue. Or already part of the foster care program, or under state custody. And we've seen a real influx this year in not just troublesome, problematic behaviors, but very extreme behaviors from children who are clearly in crisis from the trauma of dealing with this epidemic in their everyday lives” (Massachusetts P2, Personal Communication, January 15, 2019).

According to participants, a significant number of students at the MES are exposed to drug activity through their experiences at home. Interviews with teachers and administrators reveal that environmental factors such as exposure, family drug use, poverty, homelessness, parental fluctuation, born addicted, neglect and instability are impacting the classroom.

Opioid Exposure and Basic Needs Unmet

Each participant, seven out of seven, believe outside opioid exposure as having a direct impact on the classroom. Students at MES are exposed by watching their parents engage in drug activity and the related crime involved with drug addiction. Incarcerated parents and opioid use exposure were a prominent theme throughout the interviews as having an impact on the classroom. In addition to exposure, neglect and basic needs unmet were a result of exposure.

Multiple participants explained situations that their students had witnessed. Those interview notes revealed that multiple students witnessed an overdose death of their parents, are living in homes with the suspicion of drug deals, have parents incarcerated because of drugs, or have watched adults inject drugs. As a result, students are not only exposed to these activities but feel the aftermath of neglect and go to school with their basic needs unmet. For example, a second-grade student watched her mother fatally overdose on heroin. The teacher explained the situation and the impact, “we had a student whose mother overdosed, and the second grader, the daughter, was the one who found her mother. As you can imagine the impact” (Massachusetts P5, Personal Communication, February 9, 2019). Another teacher adds:

I had a student that used to get locked in a closet all night long so mom could go out and prostitute to make money for drugs. He knows this and he talks about it. He used to be kept in a closet. He is emotionally needy and not needy at the same time. He wants to hug but then he wants to hate you. He doesn't know what it means to have a relationship with other people. He mom is now dead and he will tell you his mom died because she did too many drugs (Massachusetts P4, Personal Communication, February 9, 2019).

Every interview participant had a story that explained a tragic situation that has directly impacted students in the classroom. According to participants, because of the situations the

students were exposed to, students were coming to school without necessities and with undeniable evidence of neglect.

Transiency, Homelessness, Poverty, Attendance

“We have a huge number of homeless kids. Our children are incredibly transient, they move all around the city and back and forth between other cities. We see lots of kids in foster care because of parents' addiction” (Massachusetts P7, Personal Communication, January 15, 2019).

Transiency, homelessness, poverty, and attendance were recurring themes throughout the interview. Students who attend MES come and go throughout the school year. Teachers believe drug activity is a reason for many of their students' homelessness and poverty. Students move from school to school within the district, outside the district, shelter to shelter. An administrator explained, “the epidemic is causing homelessness, and they stay in our school, but attendance is always affected because of transportation, they have to get here. And that can often be a hardship. So, we're definitely seeing it's effect in attendance” (Massachusetts P1, Personal Communication, December 17, 2018). The inconsistencies are impacting the students and classroom. The following noteworthy quotes explain the severity of the situation:

We have a huge number of homeless kids. Our children are incredibly transient, they move all around the city and back and forth between other cities. We see lots of kids in foster care, I have lots of cases of kids in foster care because of parents' addiction, and it's repeating the cycle (Massachusetts P7, Personal Communication, January 15, 2019)

I have three or four students with 10 or more absences, which is a pretty big percentage of their first grade experience. Lots of kids coming and going. I think this year, I have lost three of my students to a move, and I've gained two or three more who've moved into

the district. I know other teachers who have lost, gained, lost, gained the same student over the school year (Massachusetts P7, Personal Communication, January 15, 2019).

We also see a lot of transients. We have families that are moving in and out of the area.

We have put in a lot of time into creating services and finding the right match for teachers, and then all of a sudden, they up and move to a different part of the city or they move to a different town or move to a different state. We know many are directly related to issues, such as incarceration, drugs, or a transition in terms of the home.

(Massachusetts P2, Personal Communication, January 15, 2019).

So, kids are transient all the time. I have had one student who already has moved three times this year, in this school year alone. She will unenrolled, which means they are no longer part of our school system. She has enrolled in another school, never goes. She never shows up to the other school and then comes back here three weeks later.

(Massachusetts P4, Personal Communication, January 15, 2019)

An additional problem that emerged from this theme was that homeless students are coming to school from all over Massachusetts. A teacher explained that she “had a student who had to travel an hour and a half drive every morning and every afternoon because the family had been placed in a shelter that was somewhere two hours away. (Massachusetts P5, Personal Communication, January 15, 2019). Another teacher explained that her students had to walk to and from school because the homeless shelter was two miles away. “I have had students that have been homeless, and it has been a challenge for sure. They have to walk to school two miles from the homeless shelter” (Massachusetts P4, Personal Communication, January 15, 2019). She later adds that “the students were of course late every day because they're walking two miles

to and from school every day, and other students who are even further away were picked up late every day because their mother had to come and get them from the shelter across the state”

(Massachusetts P4, Personal Communication, January 15, 2019). Another teacher explained that her student would show up at 12:30 because she lived so far away. “mom was struggling getting her here. Her attendance was highly affected; her academics were highly affected because she had such big gaps. She'd miss 3-4 days in row. Or come in at 12pm, 12:30, one o'clock when we go home at 3” (Massachusetts P3, Personal Communication, January 15, 2019).

Student Behaviors

I have been teaching for 25 years and I'm finding that in the last few years children are coming in with more ADHD, low motivation, ODD and many other forms of behavioral disorders. These children are coming to us and are unable to problem solve even the most simple of problem, and "fly" off the handle at the slightest offense. I am seeing more and more parents with life-altering anxiety, depression and lack of motivation in raising their children, forcing the grandparents to get involved (Anonymous Survey Participant, February 2019).

Teachers and administration are concerned about student behaviors. Their concerns are highlighted in both the survey results and interviews. Increased sadness, anger, low motivation, and hyperactivity are findings in the surveys. Interview participants spoke primarily about children with documented NAS and the associated behaviors such as academic delays, difficulty deescalating, explosive, reactive, poor executive functioning, difficulty processing and a few described the behaviors associated with NAS as a combo of symptoms similar to ADHD and an autism combination.

The survey results are displayed below. 11 out of 18 survey participants are directly linking behaviors to students who have been impacted by the epidemic, while 17 out of 18 are

confirming that the following behaviors have increased in the past three years but are unsure why or cannot prove the epidemic is the underlying reason.

Table 31 depicts behaviors in the students exposed to the epidemic and behavior increases of students living in opioid crisis regions.

Table 31

Student Behaviors

Student Behaviors	Survey results- Percentage of teachers (etc.) who have encountered the behaviors of a student impacted by the epidemic	In the past three years, increases in listed behaviors in the classrooms located in crisis regions
Withdrawal	45%	53%
Increased sadness	82%	65%
Anger	82%	88%
Hyperactivity	73%	82%
Inattention during a lesson	82%	82%
Low motivation	82%	71%
Tantrums	82%	94%
Deficient cognitive ability	73%	65%
Deficient motor ability	64%	73%
Behavioral problems	91%	94%
Speech, language, and communication disorders	55%	59%
Emotional and social disabilities	91%	88%
Poor executive functioning	73%	76%
Anxiety	82%	100%
Other		

According to the survey results, there is an increase in anxiety, tantrums, and behavioral problems in the past three years. Most of the behaviors associated with opioid exposure has increased. According to an anonymous survey participant, the behaviors at MES have increased dramatically. Not the simple non-compliant behaviors, but violent behaviors that traumatized students are unable to rationalize/communicate with others. Another survey participant added

that more students are mentally, physically and emotionally unprepared to successfully engage in school than ever before.

In conjunction with survey participants, interview participants also highlighted student behaviors. According to an administrator, “we've seen a lot of screaming and yelling and panic type behaviors. Kids who are avoiding coming to school, avoiding being left alone, avoiding being in groups” and the administrator continues to describe behaviors as “PTSD behaviors, kids who are not as acclimated to the school setting, kids who are fearful, kids who are having difficulty socially. We've seen a lot of anxiety” (Massachusetts P2, Personal Communication, January 15, 2019).

Additionally, participants highlight behaviors associated with NAS as ranges of ADHD, autism type behaviors, hyperactivity, challenging behaviors, aggressive and defiant. Difficulty regulating was also mentioned numerous times. Consequently, the most frequent theme associated with NAS was an unidentifiable disability that children born with NAS would fall under. The following quotes emphasize the concern:

I feel like we have a lot more children, and that could be for multiple reasons as we are discussing, are either a non-specific, specific learning disability or children who before second grade, are labeled as a developmental delay. It's not like they're coming in and we're saying, "Oh, they have autism" or, "Oh, they have a health disability." It's almost indefinable. There's something going on, we can't really figure out what it is (Massachusetts P2, Personal Communication, January 15, 2019).

My student impacted show a lot of traumatized type behaviors. The hyper-vigilance, the symptoms of ADHD that aren't exactly fitting of that diagnosis in my mind. And just

running the gamut on the emotional ways, the highest of highs and the lowest of lows in a fairly unpredictable manner for a first grader. (Massachusetts P6, Personal Communication, January 15, 2019).

I have a student born addicted and his adoptive mom is really struggling because his behaviors at home. At school, he's medicated during the day for ADHD. However, there's a lot more going on than just the ADHD, which is why they don't work. I think the trauma is just too much in his brain, and being born addicted to it, God knows what that has done to him. I can't imagine (Massachusetts P4, Personal Communication, January 15, 2019).

Behaviors of my student born addicted ranges of ADHD, autism, hyperactivity, challenging behaviors, throwing things, trying to stab teachers with scissors and pencils. My student this year, who was born addicted, has some autism as well as behavior and some other undiagnosed things. He's currently in the process of being tested for learning disability and is working with Tufts Hospital to see if there are some other issues that might be coming up. He doesn't know how to play, doesn't know how to make friends. His social skills are lacking for sure. He hides under tables sometimes. He will just all of a sudden burst out in tears, screaming, just out of nowhere. He doesn't want to do the work, things like that (Massachusetts P4, Personal Communication, January 15, 2019).

As evident by the participants' stories, the behaviors of students exposed to the opioid epidemic are impacting classrooms at MES. Teachers and administration are concerned about student behaviors. Their concerns are highlighted in both the survey results and interviews.

Parental Fluctuation and Parents Behaviors

“We have students who are having a really difficult time with their foster children. Kids had been removed from drug abuse in the home and the kids are struggling to get acclimated to a new foster family. These kids are longing for a relationship with their biological parents. They may or may not understand the mechanisms at work here. And then we also have children who have been removed from really challenging situations that the state has custody and can't find foster care. So we have kids who are kind of bouncing back and forth between different homes, that have been removed from homes due to drug abuse and they are bouncing back and forth between temporary foster homes and group homes and it's just created a lot of instability in not only kids lives, but also in our ability to provide a consistent system for them because of how unstable their lives are” (Massachusetts P2, Personal Communication, January 15, 2019).

As noted by interview participants, the instability and parental abandonment are causing stress and anxiety to the students of MES. Students are continually moving from one caregiver to the other, from one foster home to the other. Not knowing who the child is going home to or where the child will end up is impacting their focus and ability to relax. As a teacher described below, it is hard to worry if students are listening to my math lesson when they are wondering if their mom is safe and still going to be home when they leave school. The following quotes describe the impact of parental fluctuation and abandonment on the school at MES:

Mom got kicked out. Mom would come back. Grandma said she was being bad again.

Oh she's back again. Just back and forth, and back and forth. You know, I could tell the minute that kid walked in my classroom if mom was back in the picture or if mom had been kicked back out again. That's really hard to watch. Why can't I worry about this kid paying attention to my math lesson when she wants to know, "Is my mother still living

with me? Is my mother still safe?" That sort of thing. (Massachusetts P4, Personal Communication, January 15, 2019):

I have a number of students, in second grade, where the students have lived with grandparents or an aunt or uncle, usually an aunt. People other than the parents. I have somebody who's in foster care. Mom is trying to get back custody. I know there are obstacles to that and that's a situation and I suspect a substance abuse problem where the foster mom is very on top of things, very organized, student comes to school regularly, looking great, and when there's a visit with mom, things seem to go very poorly (Massachusetts P5, Personal Communication, January 15, 2019).

A first grader was removed from her mother because her mother was battling ... I think she did go to jail for drug related offenses. But the grandmother has communicated to us that she's been battling addiction. The mother is still allowed supervised visits. And so, the grandparents are trying to manage what's best for the child, but also trying to manage maintaining a relationship with the mom and the child is kind of caught in the middle and you can see that she's been in chaos. The little girl is in chaos (Massachusetts P2, Personal Communication, January 15, 2019).

In addition to the parental fluctuation and abandonment, parental behavior is causing a problem at MES. Parents are coming to school assaulting administrators leading to evacuations and lockdowns. Furthermore, many participants mentioned that parents are coming to school high and are projecting odd behaviors. For example, a woman came to school to pick up her children numerous times with her two pet squirrels, Julia and Peanut, on a leash, in her blouse, and resting on her shoulder.

An administrator was one of the four participants who mentioned a story involving the parent and pet squirrel:

We have a mum who we strongly suspect is using drugs. And this particular family decided to take it upon themselves to start having pet squirrels in the home. And they get the squirrels by capturing them. Mum would sneak the squirrel into school by keeping the squirrel in her blouse, in her shirt. We had a parent meeting in the conference room with the squirrel. Mom had it under her shirt and it was freaking us out. It was ridiculous. The squirrel actually came up out of her shirt, up and crawled up and was sitting on her head. And she had it on a leash. It was insane. I was beside myself. I think I was hyperventilating. But this was totally normal to her. On a different occasion, she came in when the child had torn apart the classroom and was making animal noises and grunting. And she came in with the squirrel. The squirrel, again, was on a leash. She was trying to help the child pick up the classroom and the squirrel's running around the classroom making more of a ruckus. It was just ... It was crazy. It was mind-boggling. And then you wonder, did the squirrel bite the child? What is happening in this household? You have no idea. (Massachusetts P1, Personal Communication, December 17, 2019).

On a different day, a father went to an IEP meeting and was preoccupied with discussing Hitler and other dark historical events then quickly changed moods, having a swearing screaming fit out of nowhere, scaring administration and teachers involved. Most instances of odd behaviors are parents who are known drug users.

Teachers are nervous because they are exposed to these odd behaviors and as one teacher mentioned, “we are not taught this stuff in teacher prep.” As described by an administrator, parent behaviors “are really escalating---swearing and the screaming to actual physical assault.

In fact, we have had two physical assaults this year on administration” (Massachusetts P1, Personal Communication, December 17, 2019).

According to interview participants, parent influx and behaviors are having a direct impact on the classroom. Parents are adding to the stress of the day, not just their children but the teachers, staff, and administration.

Secondary Teacher Trauma

I can't think of any teacher in my school who has not felt absolutely beaten down by all of this. We love our students and we want what's best for our students, and it's hard to go home at the end of the day and not be thinking about, "Are they safe? Are they getting dinner tonight? What adult is with them right now? Will I see them again tomorrow?" (Massachusetts P6, Personal Communication, January 15, 2019).

Teachers at MES explained that they are stressed, exhausted and feel a sense of helplessness. They do not feel as if they have the proper training to address the needs of the students exposed to the opioid epidemic.

A teacher explained that a student watched her mom’s murder. The teacher reached out for help to the central office administration. She was hoping for support for herself and the student but instead, they gave her a pamphlet to read, and that was the only support she was offered. Another teacher explained that in her short tenure at MES, “three teachers had to take medical leaves for PTSD” (Massachusetts P4, Personal Communication, January 15, 2019).

Another teacher adds:

It's exhausting. It is absolutely and completely exhausting. I mean, I'm young. I'm only 26, and I come home from work just exhausted. I go to bed at eight o'clock because I just feel so fried from trying to understand what my kids are going through, how to figure out

how to help them, that is the emotional part of it of just, "Oh, my gosh. They're sitting here crying. They're not crying over my math lesson, there's something else in the picture." I so badly want to be the constant for them, the support for them, but obviously I need to be taking care of myself a bit more in that process, too (Massachusetts P6, Personal Communication, January 15, 2019).

Teachers are exhausted and feel that they need more support in helping the challenging population they work with.

Preparation, Support, and Professional Development at Massachusetts Mayflower Elementary School

The teachers are not equipped to deal with the amount of trauma sitting front of them and that they're not supported enough to deal with that. And it's a hard job. It's a hard job in our district because accountability is so high. In a district like this, we are under the microscope all the time. And it's extremely difficult to teach when you have children that are struggling with trauma. Because to those children school does not matter. The trauma that they're dealing with is so much bigger than learning and passing the MCAS. They could care less about school because their world is so shattered...But state concerns is that we need to increase those MCAS scores (Massachusetts P7, Personal Communication, January 15, 2019)

To understand the preparation, support, and professional development at the Massachusetts Mayflower School, the analysis of data will be organized by the stated research questions.

RQ1A- How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering schools?

According to survey data and interviews, MES is not proactively preparing for the influx of students affected by the epidemic. The following sample quotes are from the interviews. This

was the response when the researcher asked, “what is your school/district doing to prepare for the influx of students affected by the opioid epidemic entering your school?”

- I do not feel like my school district has done anything for me at this point in time. I mean, I'm a fairly young teacher. I had my training fairly recently. I have not had any trauma training or anything specific to the opioid crisis (Massachusetts P6, Personal Communication, January 15, 2019).
- I could be wrong, but I don't think the district is doing anything to prepare us. I don't feel very supported or I don't know that there's much proactivity going on. We all know about it. We talk about it. But nothing is getting done (Massachusetts P5, Personal Communication, January 15, 2019).
- I don't think we're doing very much that I'm aware of. I mean, we've discussed it a little bit here in this building throughout our principal and administration, and I've had private conversations with them when things have happened in the room. But I don't think we are doing anything that I'm aware of. (Massachusetts P3, Personal Communication, January 15, 2019).
- Nothing that I know of (Massachusetts P7, Personal Communication, January 15, 2019).

According to survey participants, MES and the district are not doing anything to proactively preparing for the influx of students impacted by the epidemic.

RQ1b- How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?

According to survey data and interview participants, MES is not developing and implementing professional development to address the needs of students impacted by the opioid epidemic. According to documents and personal communication, MES provides 15 opportunities for PD in the school year and 4 full days are included in those 15 opportunities. MES has spent one-half day out of the 15 days on social-emotional learning and trauma. Examples of other professional development opportunities focus on the standards-based report card, MAP skills, Watson Training, Community Works, Access training, and SPED Law (Anonymous, Personal

Communication, January 17, 2019). The majority of the offerings are academically focused on professional development.

The researcher reached out to the central office to find out other professional development opportunities and if anything was offered to address the social-emotional and trauma needs of the students at MES and the administrator's response was, "schools have autonomy to develop their own PD." (Anonymous, Personal Communication, December 19, 2018). In an attempt to understand, the researcher followed up with three administrators in the building and asked, "What type of PD do you offer your staff around social-emotional learning and trauma-informed educating?" The responses of the administrators interviewed are as followed:

I think the district is just starting to recognize the need for social-emotional support. And to be candid, it's been trickling in. But I think all schools in this district, and I think the district office themselves, should recognize that we are not catching up to the need. Social emotional learning in general is something that has been on the forefront of education for the last few years and I think we're a little bit behind the curve on that. Not just kids with PTSD, but also just the idea of teaching the whole child and recognizing the social emotional aspect of education. But I think that we fall really short in that regard. It's been acknowledged, the need for more professional development and support has been acknowledged. But it's not there yet. (Massachusetts P2, Personal Communication, January 15, 2019).

The response from another administrator:

We're just starting to get into that. I'm actually looking for a more blanket way. We're looking at it kind of piecemeal right now. So for example, I'm talking to my counselors

and saying, "What are some best practices that you're seeing through colleagues or from other schools that we can talk to our teachers about?" I know we use CPI training over here. We use Second Step. There's different programs that we have pieces in place, but there's not one blanket program that the district uses across the city. We have two intervention blocks built into our school day that used to be solely for academic intervention for us. We recognize the importance of social-emotional intervention as well, so this is a time that we have our counselors intervening during these two blocks. We recognize that kids are not going to learn if they're not in a good place to learn. So, counselors are intervening during those intervention blocks as well. (Massachusetts P1, Personal Communication, December 17, 2018).

Furthermore, when the researcher asked the special education administrator the same question, the special education administrator explained that her professional development is based on the Massachusetts Department of Education requirements and corrective actions:

We haven't had any. Like this Friday, we'll be in PD with the city's attorney because we have to get some training on some of the laws for special ed. So, this one is about the laws of special ed. It depends on what the DOE says. So, if we are getting cited for things, then we tend to have PD on that. And that's dictated by the state. So, the state says you're not doing this right, then our PD will be about that so that we don't have as many corrective actions to fix. . (Massachusetts P7, Personal Communication, January 15, 2019).

The researcher told an MES administrator that there was communication with the central office. The researcher explained that the central office suggests that schools have autonomy to provide professional development on whatever they would like, including trauma-informed practices and

social-emotional learning. The administrator's response was, "as an administrator in this district, yes, we have the autonomy to be able to provide professional development for our staff. But there's not necessarily that training for us as administrators either. We need training as administrators. We need training as a district." Through no fault of MES administrators, lack of training for administrators at MES has resulted in lack of training for teachers.

Through discussion, the participants recognize the need for social-emotional learning and trauma-informed education, but the supports are lacking, and the Massachusetts Department of Education has input on professional development. The administration has autonomy to provide professional development, but if they do not know social-emotional learning and trauma-informed education, they cannot provide the appropriate professional development to staff.

RQ2a- How are schools located in crisis regions supporting the needs of the students affected by the opioid crisis?

MES supports the needs of students affected by the opioid epidemic by providing before and after school programs, food, and clothing. MES also added additional counselors and paraprofessionals to assist the counselors during times of crisis. However, teachers feel that there needs to be more support for the students affected by the opioid crisis.

When asked how teachers are supporting the needs of students affected by the opioid crisis, most expressed words of helplessness. For example, a teacher does not know what to do when a first-grade student, playing with Barbies, reenacts a drug bust and pretends to flush drugs down the toilet. Another teacher does not know what to do when students talk about parents' deaths. "Last year, I had a mother that was killed in front of my student, so I specifically asked central office for support and I was handed a packet to read and that was it. It came from downtown and that was the most we got. That was after reaching out, specifically reaching out for help about this. I did not know what to do!" (Massachusetts P4, Personal Communication,

January 2018). The teacher explained she had to seek help from a doctor on her own because she wanted to make sure it was addressed correctly.

Other teachers do not know what to do when kids come to school and verbalize a traumatizing event. Many teachers throughout the interviews expressed concern and helplessness. Here is a notable quote from a teacher:

We're just not trained for this. When you go to school to be a teacher, no one teaches you how to deal with any of these behaviors, any of the absences, the tardiness, things like that or how to deal with like my student this year whose mother passed away, talks about it all the time. I don't know how to handle that, as a classroom teacher. What do I say to him? Do I let him talk about it but not in front of the other kids? Then the other kids, he'll talk about it at recess. How do I handle it with them? It's definitely straining and dealing with the behaviors is exhausting. You go home at the end of the day and you just want to sleep, every day, at 3:15 PM. Yeah. (Massachusetts P4, Personal Communication, January, 2018).

Interview participants feel unprepared to teach children impacted by the opioid epidemic.

Additionally, survey participants feel the same. Figure 14 outlines the results of the survey.

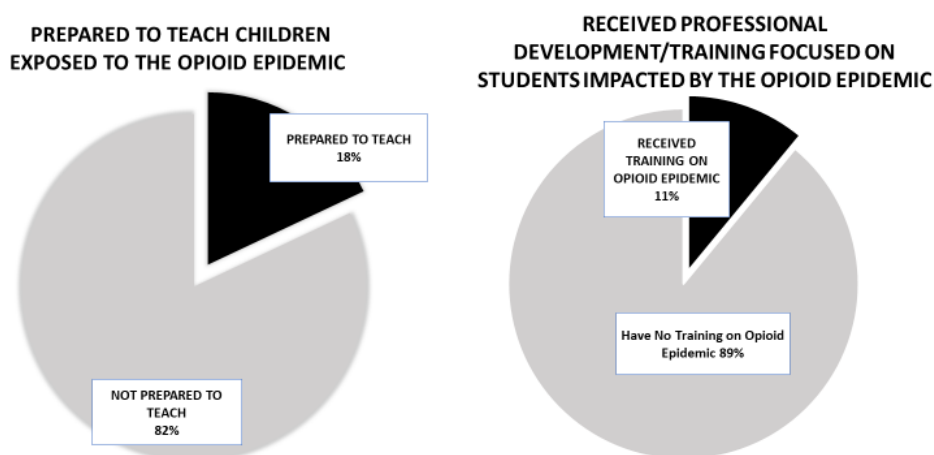


Figure 14. Teacher Preparedness to Teach Students Impacted by the Opioid Epidemic

The pie graph illustrates that 18% of participants feel prepared to teach children if the opioid epidemic and 11% received training or professional development focusing on students impacted by the epidemic. According to survey and interview participants, MES is not proactively preparing for the impact of the opioid epidemic nor providing specific professional development around the crisis.

Understanding of the Impact of Students exposed to the Opioid Epidemic at Massachusetts Mayflower Elementary School

To understand the impact of students exposed to the opioid epidemic has on the Massachusetts Mayflower School, the analysis of data will be organized by the stated research questions.

RQ2- How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the epidemic?

Participants at MES are not familiar with the special education needs of children affected by the epidemic. Survey participants were asked if they were trained in each specific disability

area associated with opioid exposure, their understanding of NAS and knowledge of the disabilities related to NAS, and their comfort level teaching children with specific disabilities associated with opioid exposure (born or living in the environment). Additionally, survey and interview participants were asked if they knew what NAS was and if they were familiar with the disabilities associated with NAS. The survey results showed that 24% of participants know what NAS is and 11% of participants are familiar with the disabilities associated with NAS. Figure 15 illustrates the survey participant knowledge of NAS and disabilities associated.

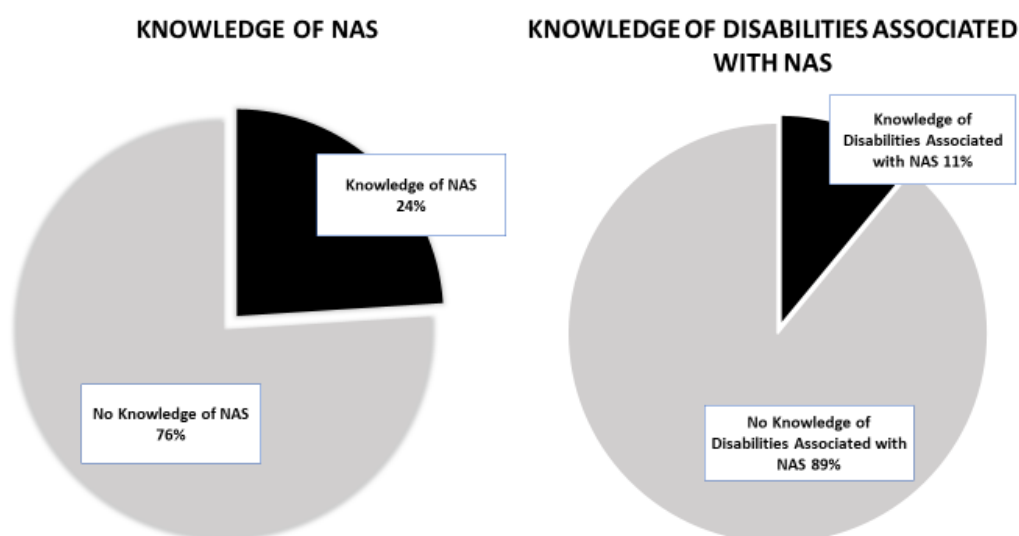


Figure 15. Knowledge of NAS and Associated Disabilities

Furthermore, interview participants knew of their experiences with children born addicted to opioids. The behaviors that interview participants observed in students with NAS are listed below:

- Aggressive behaviors
- Autism/ADHD combo

- Socially inappropriate
- Academic delays
- Emotional needs
- Unable to deescalate
- Explosive
- Reactive
- Anxiety
- Neurological problems

Additionally, survey participants were asked about their training related to opioid exposure disabilities. Table 32 outlines the results.

Table 32

Trained and Prepared – NAS and Environmental Exposure to Drugs

Documented Disability/Situations related to NAS or living in a drug-exposed home	Percentage trained in the listed disabilities /experience	Percentages of Participants prepared or somewhat prepared to successfully teach a student with the identified disability
Behavioral Disorders	23%	70%
ADHD	23%	88%
Cognitive Disabilities	53%	82%
Social-Emotional Disabilities	73%	71%
Experienced Trauma	80%	59%
Mental illness including psychiatric disorders	18%	35%
Exposure to the opioid epidemic (born with NAS or living in opioid-addicted household)	11%	18%

There is a discrepancy between training and preparedness. Specifically, survey participants feel more prepared to teach students with the outlined disability than they were

trained to do so. Many interview participants explained they are allowed to seek professional development on their own and focused independently on trauma and social-emotional learning.

The above table shows consistent results from survey participants.

Changes in Special Education or Referrals at Massachusetts Elementary School

To understand changes in special education and referrals at the Massachusetts Mayflower School, the analysis of data will be organized by the stated research questions.

RQ2b- How have special education services and referrals been affected or changed as a result of the opioid epidemic?

The MES special education percentages have remained consistent over the past 3 years (Anonymous, Personal Communication, December 8, 2018):

- In 2015, 16% of the school was receiving special education services.
- In 2016, 19% of the school was receiving special education services
- In 2017, 16% of the school was receiving special education services

The special education administrator explained that the special education numbers are staying the same, but students on 504s are increasing. More students have 504's than IEP's that would once qualify for an IEP. In conjunction with the special education administrator, another school administrator explained, "students need probably a minimum of 20 interventions at least be exhausted, then we would start to think about the possibility of SPED" (Massachusetts P1, Personal Communication, December 17, 2018). Five out of seven interview participants feel the need for special education has increased based behaviors and numbers of children in need in their classes, but the actual special education numbers remain the same. According to a special education teacher, "through my own personal lens, special education referrals have increased significantly. Caseloads seem to be getting larger and larger. I know in our incoming kindergarten class this year, we have 18 already on IEPs. That's a crazy number for kindergarten

to come in with. That's like 3x's what we normally have" (Massachusetts P5, Personal Communication, January 15, 2018). The incoming kindergarten class was mentioned in a number of interviews.

There is a projection that special education numbers will increase according to preschool numbers. According to interview participants, the incoming kindergarten class has 3 x's the number of children coming in with special education needs that in the past. According to staff and already mentioned above, behaviors are unidentifiable, and like nothing, they have ever seen before. Interview participants wonder if the epidemic is to blame.

Massachusetts Mayflower Elementary School Highlights

MES has supports in place to address some of the school needs. MES has programs to make sure their students have opportunities for before and after-school programs, free breakfast and free lunch, truant officer, family resource center, and counselors.

The truant officer is a district-wide position with the focus on eliminating chronic absenteeism. The officer visits homes, calls, emails, with a goal of locating students who did not show up for school for an extended period. The truant office finds missing students and brings them to "court." The court decides if the reason for extended absences is excusable. The officer role is to eliminate the likelihood of lost children. The school tries to keep track of absences by having this officer available.

An additional highlight is MES is using the scheduled intervention blocks to have counselor check in with students. The academic intervention block incorporates a social-emotional well-being check-in. Each day that students have an opportunity to meet with counselors.

Addressing students' basic needs by providing food, clothing, and care are areas to highlight at MES.

Massachusetts Mayflower Elementary School Needs

Finding professional development and paying for it is another situation - we certainly struggle financially. And we would love to be able to provide all of the time and training possible, but locating it, affording it, paying for it and scheduling it, it's a challenge. It really is. And I think our teachers would tell you that we have done some PD but not enough (Massachusetts P2, Personal Communication, January 15, 2019).

Throughout the interview's, participants mentioned needs they feel would benefit them as a school when combating the epidemic. Themes from participants that emerged are the following:

- Social-emotional and trauma-informed curriculum and professional development opportunities.
- A budget that would support SEL and trauma-informed initiatives.
- Administrative training on SEL and trauma to inform staff.
- More special education teachers to minimize caseloads
- More counselors
- Support from central office when needed to address major student concerns
- Because of transiency among schools, district-wide consistencies for policy
- Training on opioid epidemic and NAS
- Solutions for homelessness and better transportation opportunities

Massachusetts Mayflower Elementary School Summary

Figure 16 summarizes the impact the opioid epidemic is having on MES which is directly influenced through the student's community and environment. The illustration follows up with

an overview of supports, needs, special education, and highlights. Each section of the illustration answers the research questions and combines the abundance of data discussed in the case study above. The visual provides a visual overview to summarize the section and illustrate a relationship amongst the research questions and the direct impact the opioid epidemic has on the Mayflower Elementary School.

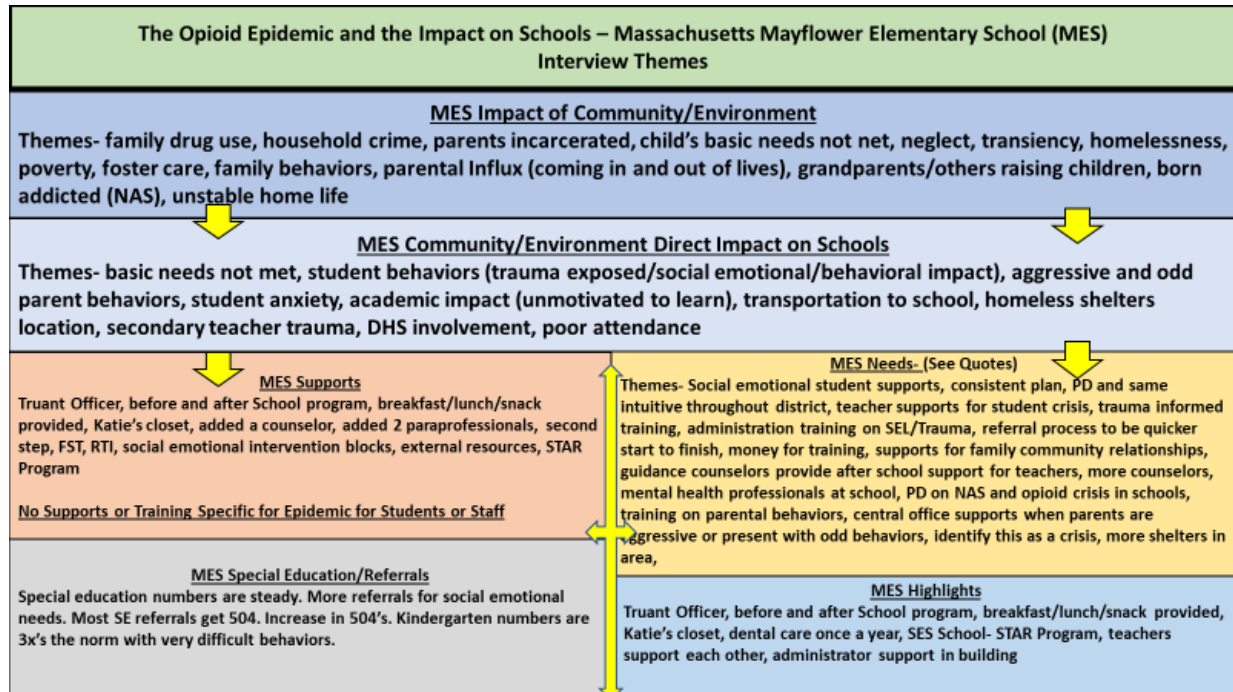


Figure 16. Massachusetts Template of Impact, Needs, and Supports

Combined Results, Themes, and Patterns – All Three Schools

Opioid Epidemic and Impact on School located in Crisis Regions

The research questions will be revisited in the following section by combining all themes and data from the three schools in the three states -New Hampshire Granite School, Maine Chickadee Elementary School/Blueberry Extension School, and the Mayflower Elementary School. Patterns and generalizations will be highlighted and illustrated in a diagram showing connections while answering the appropriate research questions.

RQ1- How is the opioid epidemic impacting kindergarten to grade 2 classrooms/schools located in opioid crisis regions?

In a combination of all interviews from the New Hampshire Granite School, Chickadee Elementary School/Blueberry Extension School, and the Mayflower Elementary School, Table 33 shows the most prevalent themes mentioned within the interviews. Regardless, of the school, state, and region the themes remained consistent.

Table 33

Impact on Classroom Themes

Impact on Classroom /School – Themes	Percentage of Interview Participants who discussed the topic when asked – “How is the opioid epidemic impacting your classroom/school” or mentioned within the interview
Student Exposure to drug activity	100%
Basic Needs Not Met/Neglect	97%
Transiency	97%
Poverty/Homelessness	97%
Student Behaviors/NAS Behaviors	100%
Family /Parental Fluctuation	100%
Parent Behaviors	100%
Teacher Impact/Secondary Trauma	79%
Academic Impact	65%

Student exposure to opioid drug activity was the most discussed theme. Participants from all three locations have stories about the exposure has on their students and the impact it has in the classroom. Other themes came up in the interview, like budget, preparedness, and teacher retention but the above themes were dominant throughout. Combined survey results show that 65% of participants had at least one student impacted by the opioid epidemic (Table 34).

Table 34

Participants with Students Affected by the Opioid Epidemic

Participants who had students affected by opioid epidemic in past three years	Percentage
Yes	65%
No	3%
I do not know	32%

Of the participants that had students in their class impacted by the opioid epidemic, Table 34 shows the percentages of that 65% that have witnessed the listed situation happen to students as a result of the epidemic.

Table 35

Participants Experience with Students Impacted by the Epidemic

Situations survey participants have witnessed happen to students as a result of the Opioid Crisis	Percentage who have encountered the situation with a student
Neglect	93%
Physical Abuse	52%
Verbal Abuse	76%
Death of Parent	56%
Death of Sibling	18%
Death of relative outside immediate household	33%

Observed an overdose	51%
Born addicted to opioids	59%
Removal from home because of an addicted family member	85%
Living with relative other than a parent as a result of addiction	87%
Placed in foster care	68%
Department of Youth and Family Service Involvement (DYS)	79%
An orphan as a result of household addiction	15%

A visual diagram collates the data and findings in an attempt to accentuate patterns and show generalizations (Figure 17). The diagram illustrates the impact the opioid epidemic has on Kindergarten to second-grade classrooms and schools located in opioid crisis regions of the Northeast. The diagram illustrates the impact the opioid epidemic is having on schools in crisis regions of the Northeast based on interview themes and survey data of the New Hampshire Granite Elementary School, Maine Chickadee Elementary School/Blueberry Extension School, and the Massachusetts Mayflower School combined.

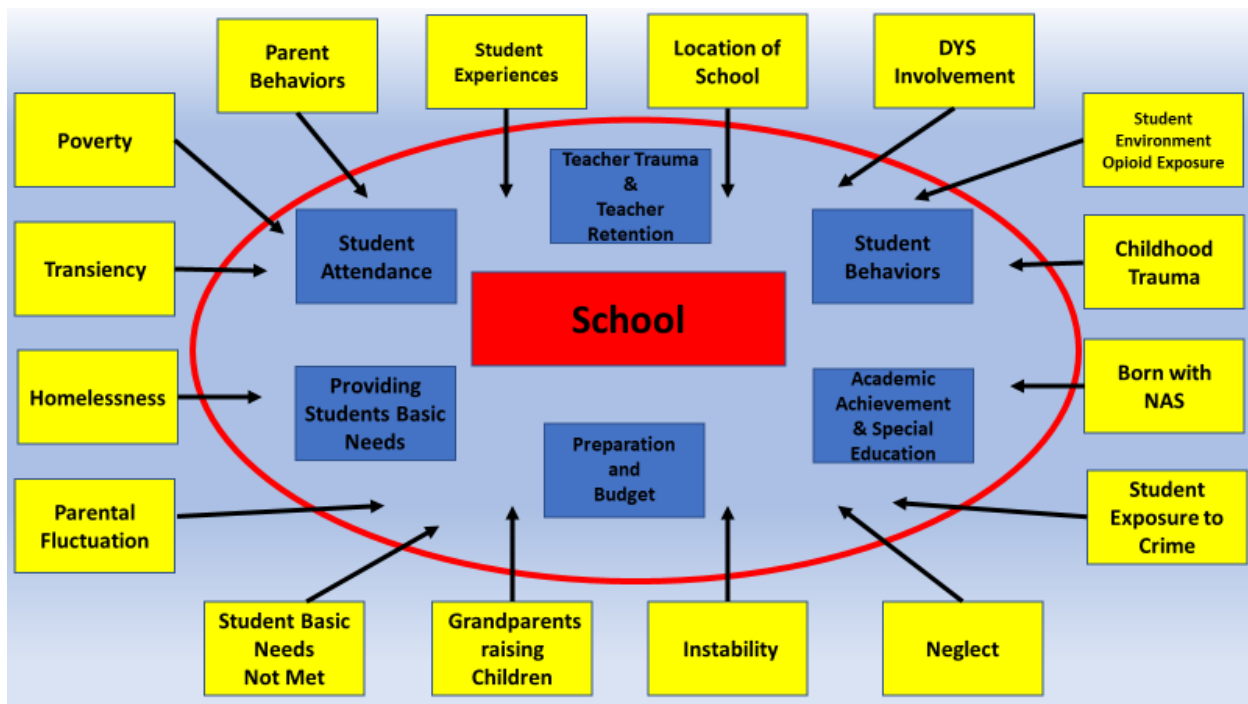


Figure 17. The impact of the opioid epidemic on schools in crisis regions of the northeast

Demonstrated above, the yellow rectangles on the outer area of the diagram represent the outside environmental and community factors that influence the schools. The red oval and everything inside the red oval represents the school community, and associated school impact is emphasized in the blue rectangles. The blue rectangles are the impact the environmental factors have on the school. Each area impacted will be described below. Generally, all of the environmental factors in the yellow have a direct impact on the school. In the following sections, some of the impacted areas will be discussed in more detail to show the relationship with each other.

Student Attendance

According to the combined themes for the three schools, student homelessness, transiency, poverty, neglect, instability, parental influx including grandparent custody and guardian instability directly impact the school through attendance.

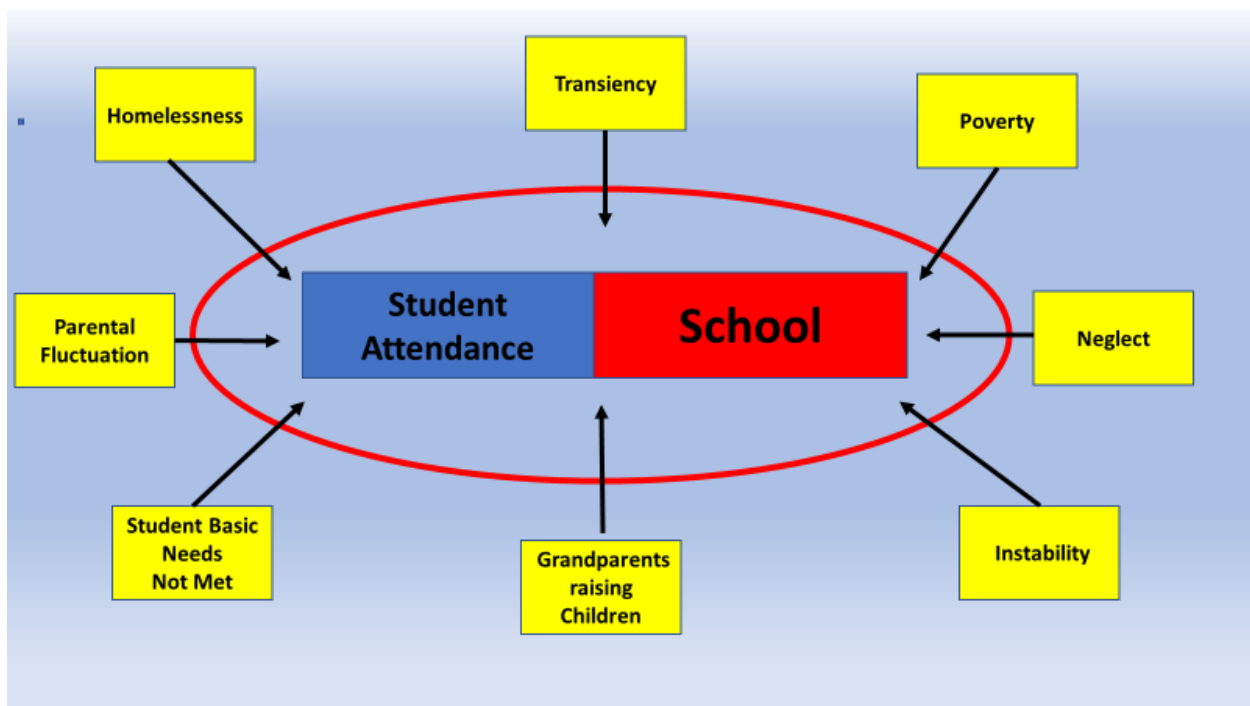


Figure 18. Opioid epidemic impact on Attendance

Because of the opioid epidemic students are moving from school to school, between districts, states, homeless shelters, and guardians. Students are not going to school, and some end up lost within the system.

Additionally, students impacted by the epidemic are in constant influx causing instability and anxiety. Teachers cannot keep routines. Consequently, if the students are in the process of testing for special education services, they can fall through before services are provided. Academic achievement is impacted by not attending class. New Hampshire and Maine administrators both mentioned that they provide students as young as second-grade grade with alarm clock so they can wake themselves up and go to school independently:

We've got an attendance team. They will buy alarm clocks for kids. They will make phone calls to kids. They will do incentives for kids, especially the older kids, 'cause younger kids, obviously, it's all about the parent getting the kid up and off to school. But, when they start getting in the fourth grade, some of them can do it themselves, and, unfortunately, that's probably their best chance if we give them some tools to do it themselves (Maine P1, Personal Communication, December 8, 2018).

We have a huge issue with tardiness and we're working on that. I bought a bunch of alarm clocks for kids to help them be independent. But again, think about it. It's important. My kids got out of bed and went to school because I made sure that they did that, but if your life is in turmoil for whatever reason most likely connected to the opioid crisis and if your kid's not ready for school it really is not a priority for you. And they look at me when I give parents a hard time about it, they look at me like leave me alone,

I'm doing the best I can. But it's my job to, let's go, get those babies here (New Hampshire P1, Personal Communication, January 11, 2019).

Administration from both Maine and New Hampshire have similar problems with parents getting their children to school, and both provided similar solutions for purchasing students alarm clocks. Transiency of students that attended the three schools was the most discussed theme in this section. There was a lot of discussions consistently among all three schools about the frequency of students coming and going, enrolling and the unenrolling, and concern when students suddenly stop showing up and reappearing in a few weeks or months.

Basic Needs Not Met

A reoccurring theme revealed during the interviews, at all three schools, was the lack of student's basic needs for survival. Students exposed to the opioid epidemic are coming to school without their basic needs met. Consequently, students are coming to school for food, safety, clothing, stability, human interaction, and even sleep. All three schools are trying to meet students' basic needs first and foremost before any attempt at academics. Participants emphasized that students will not learn if their basic needs are not met. An added responsibility for schools but needed if there will be any expectation for learning. The following diagram outlines the environmental factors such as homelessness, poverty, DYS, instability, neglect, poverty, and parental behaviors and choices directly impact the school by adding another responsibility to schools to meet their students' basic needs.

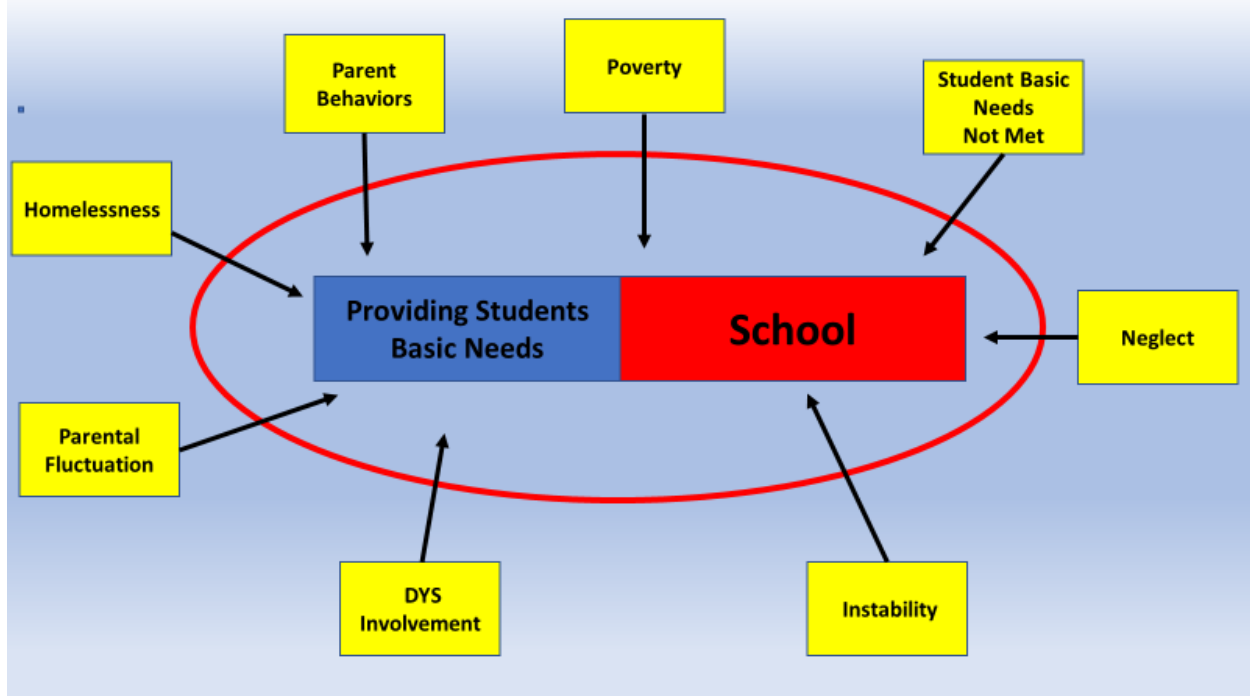


Figure 19. Opioid epidemic impact on school's responsibility to provide basic unmet needs

Student Behaviors

Student Behaviors have increased as a result of the opioid epidemic and in opioid crisis regions within the last three years. Not only have more children been identified as born with NAS, but all students have also exhibited more intense behaviors. Table 36 outlines the behaviors participants have witnessed.

Table 36

Student Behaviors

Student Behaviors	Survey results- Percentage of teachers (etc.) who have encountered the behaviors of a student impacted by the epidemic	In the past three years, increases in listed behaviors in the classrooms located in crisis regions
Withdrawal	69%	55%

Increased sadness	88%	73%
Anger	87%	91%
Hyperactivity	78%	82%
Inattention during a lesson	80%	83%
Low motivation	78%	74%
Tantrums	75%	79%
Deficient cognitive ability	73%	66%
Deficient motor ability	58%	59%
Behavioral problems	93%	96%
Speech, language, and communication disorders	65%	61%
Emotional and social disabilities	85%	85%
Poor executive functioning	80%	68%
Anxiety	84%	92%

The table shows behaviors in the students exposed to the epidemic and behavior increases of students living in opioid crisis regions.

All the associated outside opioid environmental factors can impact students' behaviors.

Figure 20 displays how outside factors that can influence student behaviors.

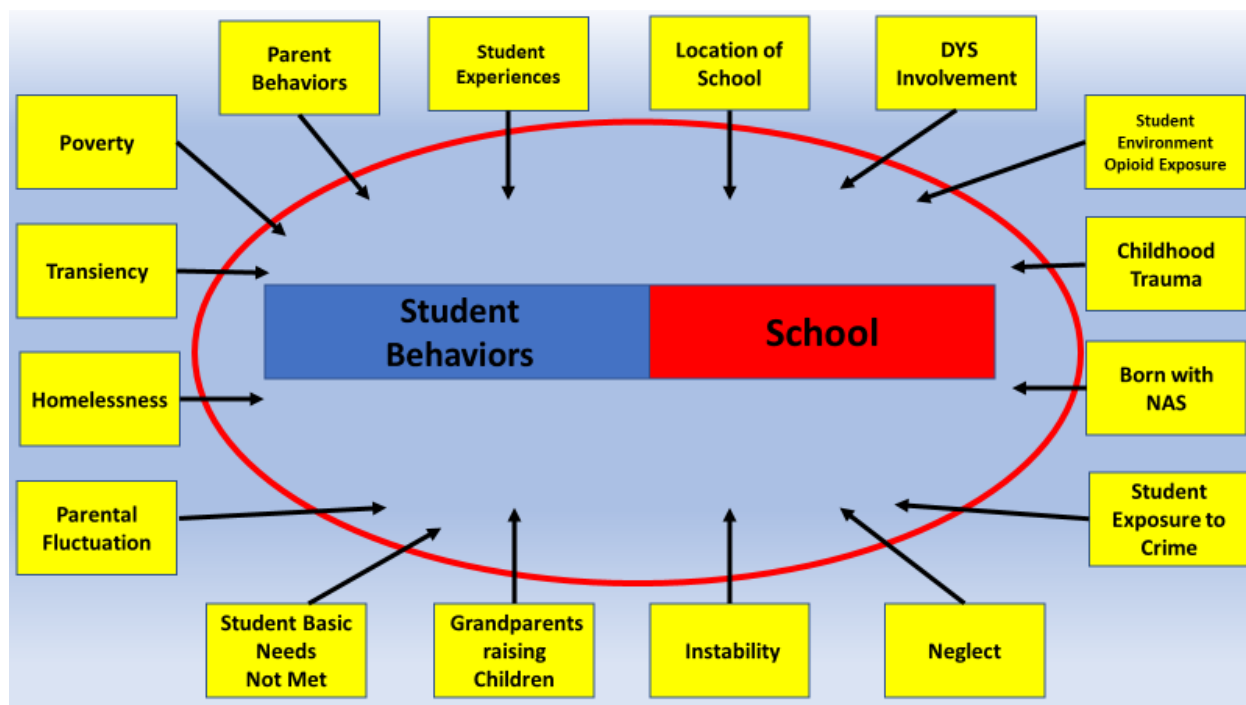


Figure 20. Opioid epidemic impact on student behaviors

Interestingly, all three schools describe behaviors of children born with NAS as presenting with behaviors that are undefinable and unable to classify under the federal special education guidelines. Many participants described the behaviors as a combination of Autism, AHDH, and developmentally delayed.

Academic Achievement and Special Education

According to participants, outside environmental factors can have a direct impact on student achievement. The life these students are living and their experiences outside of school, exposure to drugs, crime, neglect, and parental/guardian instability, are having a direct impact on academic achievement and motivation to learn. In addition to the above behaviors, participants explain that students are coming to school anxious, unmotivated, distracted and show visible signs of trauma and other emotional disabilities. Figure 21 shows that all the students outside environmental factors can impact academic achievement.

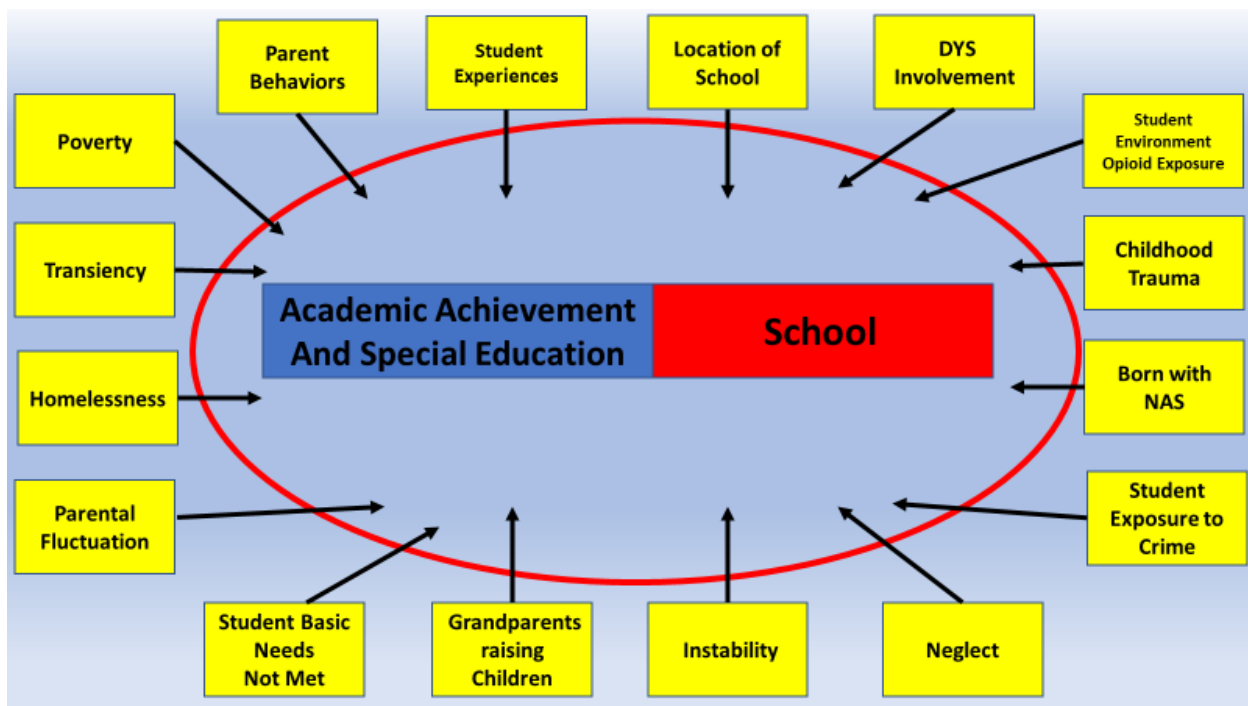


Figure 21. Opioid epidemic and impact on academic achievement and special education

RQ2b- How have special education services and referrals been affected or changed as a result of the opioid epidemic?

According to data collection, the percentage of students who receive special education services have remained the same, but two out of the three schools have increased interventions before students can qualify. According to a Massachusetts administrator, “students need probably a minimum of 20 interventions at least be exhausted, then we would start to think about the possibility of SPED” (Massachusetts P1, Personal Communication, December 17, 2018). In addition a Maine Administrator adds, “while I don't see our sped number going up, referrals for support are going up, but the level of supports that we've had to put in place to keep them in the classroom without special education services and keeping kids in the least restrictive environment has gone way up” (Maine P1, Personal Communication, December 8, 2018). Furthermore, all three schools mentioned that students coming into kindergarten with IEPs had increased dramatically this year. According to a Massachusetts special education teacher, “Caseloads seem to be getting larger and larger. I know in our incoming kindergarten class this year, we have 18 already on IEPs. That's a crazy number for kindergarten to come in with” (Massachusetts P5, Personal Communication, January 15, 2019). In addition to Massachusetts, both Maine and New Hampshire participants indicate to the same situation coming from pre-school:

I just had a meeting with my sped team this morning, we have 28 kindergartners coming in in the fall that are identified with special needs. 28 coming from the child find! I need another kindergarten teacher, and I need another special ed teacher because that's an entire caseload of students right there (New Hampshire P1, Personal Communication, January 11, 2019).

I just heard that in a meeting that, we're inheriting kids that have more needs than ever before, kids are showing up for kindergarten with greater needs than ever before. And I'm sure, my assumption is that it is linked to this epidemic (Maine P3, Personal Communication, January 25, 2019).

All three school are impacted by the number of kindergarteners or incoming kindergarteners that need special education services.

Secondary Teacher Trauma and Retention

Teachers in all three schools acknowledged the same challenges. Teachers are no longer as concerned about academic achievement, but rather ensuring that students basic needs are met and student's well-being is cared for. Teachers are empathetic that their students have experienced many life traumas in their young age and want to save them. Teachers are feeling helpless and exhausted by the ramifications and impact the epidemic is having on their students. Teachers are purchasing clothing, jackets, crocheting hats and giving students their lunches. A Massachusetts special education teacher said, "I know for a fact that many of the teachers on my team spend a lot of time outside of school hours worrying about their kids, thinking about their kids. I had a team of people who crocheted and knitted hats and mittens and scarves for my students this year because we know that that's something that they need and can't always get" (Massachusetts P1, Personal Communication, January 15, 2019). In New Hampshire, a teacher adds, "You wanna save them. I've brought in clothes, I've brought in food, I've had my kids go through their toys. I fed one girl for four months at lunch last year, given my own lunch to kids... It's wearing" (New Hampshire P6, Personal Communication, January 23, 2019).

Teachers also feel a sense of helplessness and are overwhelmed because crises are brought to their attention and they seek help through DYS and nothing happens. Their students

continue to go home to horrible situations. For example, from September through December a New Hampshire participant called DYS 11 times on one family with no interventions until the 11th report and then the children were removed. “From September to December we made 50 reports to DCYF. Eleven of those were just from one family. They finally got taken out of the house. We kept reporting and reporting and reporting and it's three kids in the family” (New Hampshire P, Personal Communication, January 23, 2019). A Maine participant shares the same helpless feeling of frustration. “I have to talk to DHS often, about different kids and family situation, but they are so overloaded, they have told me point blank when I've called, ‘I can't even think about this right now because I have to go spend a night at a hotel with a baby’ so nothing happens” (Maine P, Personal Communication, January 2019). One Massachusetts teacher explained that she stood in front of a bus because she was so upset one of her students was sent home after calling DYS. She tried to stop the bus from taking her student home.

As participants mentioned, teaching students of the epidemic is draining. Massachusetts and New Hampshire interviews revealed that multiple teachers had to take medical leaves for post-traumatic stress disorder and panic attacks. A New Hampshire administrator (2019) explained that “last year I had two very young teachers admitted to the hospital with panic attacks, never had panic attacks before in their life. There are days that I'm sure some of them just don't want to come back and try this again” and a Massachusetts teacher (2019) explained her feeling and added that three of her colleagues that had to take a medical leave, “three teachers had to take medical leaves for PTSD.”

Teachers also discussed parents' behaviors as frightening and odd and do not know how to handle various situations when encountered by a parent under the influence. Parents have verbally or physically assaulted administrators in all three locations. Figure 22 illustrates the

outside environmental influences that directly impact the school and result in teacher stress trauma and possible teacher retention. Students trauma, unresponsiveness of DYS, parent behaviors, and basic needs unmet impact the teacher experience, trauma, and possible retention.

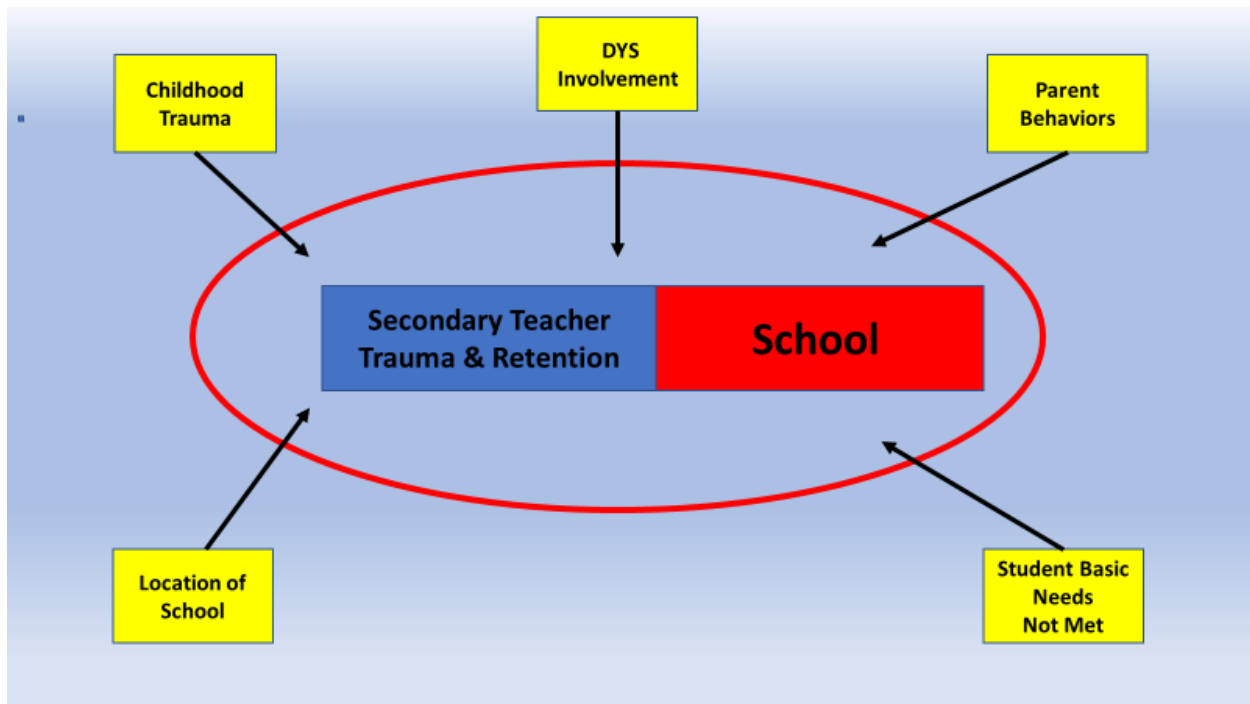


Figure 22. Opioid Epidemic and Impact on Secondary Teacher Trauma

School Supports and Professional Development

RQ1A- How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering schools?

Unanimously, participants in all three schools do not feel that their schools are proactively preparing for the influx of students affected by the opioid epidemic entering schools. A Massachusetts teacher responds, “I could be wrong, but I don't think the district is doing anything to prepare us. I don't feel very supported or I don't know that there's much proactivity going on. We all know about it. We talk about it. But nothing is getting done (Massachusetts P5, Personal Communication, January 15, 2019). A New Hampshire teacher feel the same, “I would say nothing. I think they know it's a problem, I just think it's ... in this district itself, it's really

overwhelming, where we don't know where to start" (New Hampshire P6, Personal Communication, January 23, 2019).

RQ1b- How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs impacted by the opioid crisis?

Although there has been no professional development specifically to address the opioid crisis, generally, all three schools have acknowledged a need for social-emotional curriculum and trauma-informed education that would help students of the epidemic. The three schools are in various stages of implementation. Massachusetts Mayflower Elementary School has acknowledged a need to start social-emotional learning, New Hampshire Granite School will be working with a trauma consultant to become a trauma-sensitive school over the next two years, and Maine has an ultimate focus on social-emotional learning and equity. Numerous participants would be interested in specific training around the opioid epidemic.

Q2a- How are schools located in crisis regions supporting the needs of the students affected by the opioid crisis?

Universally, all three schools are supporting the needs of the students affected by the opioid crisis by providing students with their basic needs such as food, warmth, safety, medical, dental, eye care, and clothing. Each school provides a different variation of the listed services but all schools are provided students with their basic needs. Schools are proactively providing the services children are neglecting to get at home. The schools in New Hampshire (GES) and Maine (CES/BES) have mental health clinicians in the schools, and both have McKinney Vento social worker to keep track of the homeless population. Additionally, all three schools have before and after-school programs for students.

RQ2- How familiar are teachers on the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the epidemic?

Table 37 displays the documented disabilities related to NAS and living in a drug-exposed home and the percentages of participants trained in the disability. The first column is the disability, the second column is the percentage trained, and the third column is the preparedness of the participants. The chart outlines the result from all three cases combined.

Table 37

Trained and Prepared- NAS and Environmental Exposure to Drugs

Documented Disability/Situations related to NAS or living in a drug-exposed home	Percentage trained in the listed disabilities /experience	Percentages of Participants prepared or somewhat prepared to successfully teach a student with the identified disability
Behavioral Disorders	53%	57%
ADHD	29%	71%
Cognitive Disabilities	45%	60%
Social-Emotional Disabilities	73%	61%
Experienced Trauma	83%	57%
Mental illness including psychiatric disorders	25%	33%
Exposure to the opioid epidemic (born with NAS or living in opioid-addicted household)	8%	20%

Participants have the most training in trauma and social-emotional disabilities and feel the most prepared to teach students with ADHD. Mental illness is another symptom of children exposed to opioid abuse, and unfortunately, only 25% of participants have been trained in mental illness, and 33% feel prepared to teach someone with mental illness. Only 8% of training specifically to the opioid epidemic and NAS and only 21% of participants feel prepared to teach a student that was born with NAS or has been exposed to opioid use.

When asked through the survey how many participants knew what NAS is and the disabilities associated with NAS, Figure 23 illustrates the combined results.

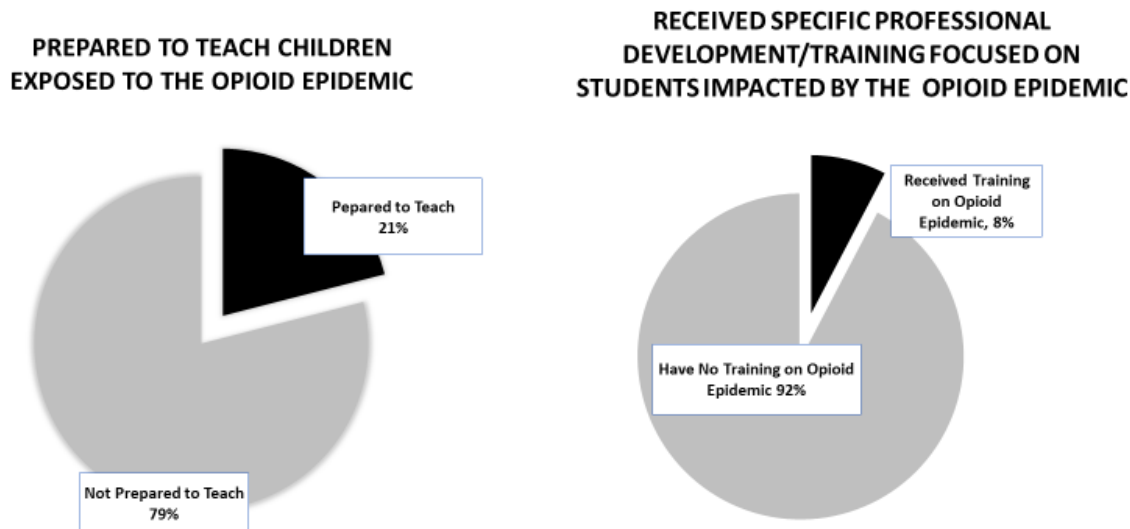


Figure 23. Teacher preparedness to teach students impacted by the opioid epidemic

The results indicate that only 8% of participants have received any training or professional development of the opioid epidemic, and only 21% are prepared to teach students exposed to the epidemic either by NAS or environmental exposure.

Additionally, the following pie indicates how many survey participants know what NAS is or the disabilities associated with NAS.

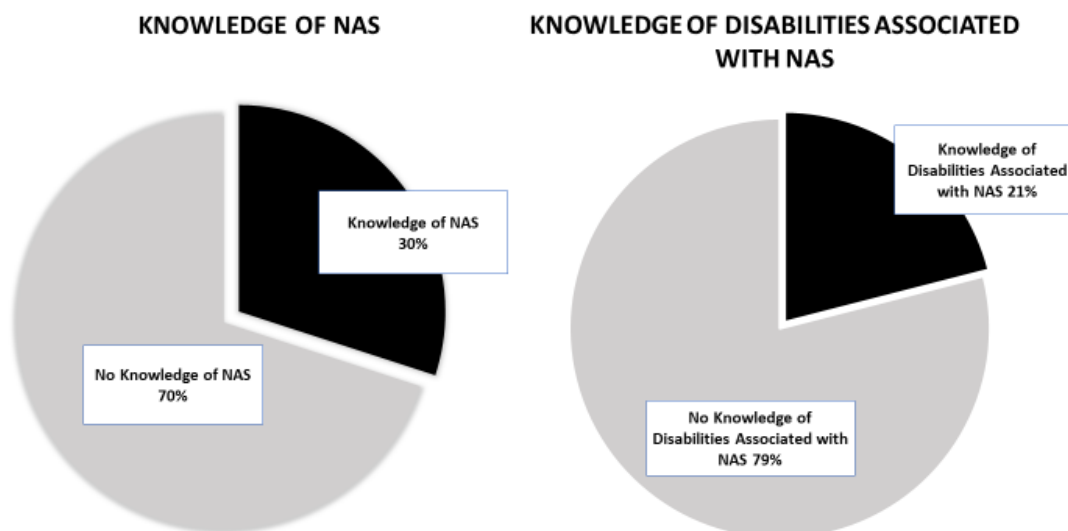


Figure 24. Knowledge of NAS and Associated Disabilities

Only 30% of participants know what NAS is and only 21% of participants are familiar with the disabilities associated with NAS.

Preparation and Budget

An additional theme in all three locations was the relationship between preparation and budget. Participants acknowledge that the school/district they are working in is unprepared for the implications of the epidemic. Specifically, teachers do not feel trained, and most participants felt that in order to be successful as a school, they would need to hire more staff such as special education teachers, teacher assistants, social workers/mental health providers. Participants also feel that they need specific training to address the needs of their students impacted by the epidemic.

Table 38 outlines the direct impact the external environmental factors have on school and budget. Students are coming to school with all the external impacts highlighted on the diagram in yellow. Participants feel that they need more support and the support that they desperately need is costly. Additionally, all three schools mentioned that there is an increase in students with disabilities coming in from preschool. Based on concluded research and the projected NAS trends in the three states, that number of students attending with disabilities will most likely continue to increase. In a final note, this diagram shows that environmental exposure outside the school's control will continue to impact the school and preparation. The needs and resources to address the issue will ultimately come down to the budget and available funds.

ACEs Study and Findings

As illustrated in the following tables, each of the case studies has unique impacts, supports, needs, special education trends, and highlights (Table 38, 39, and 40).

Table 38

New Hampshire GES – Impact, Needs and Supports

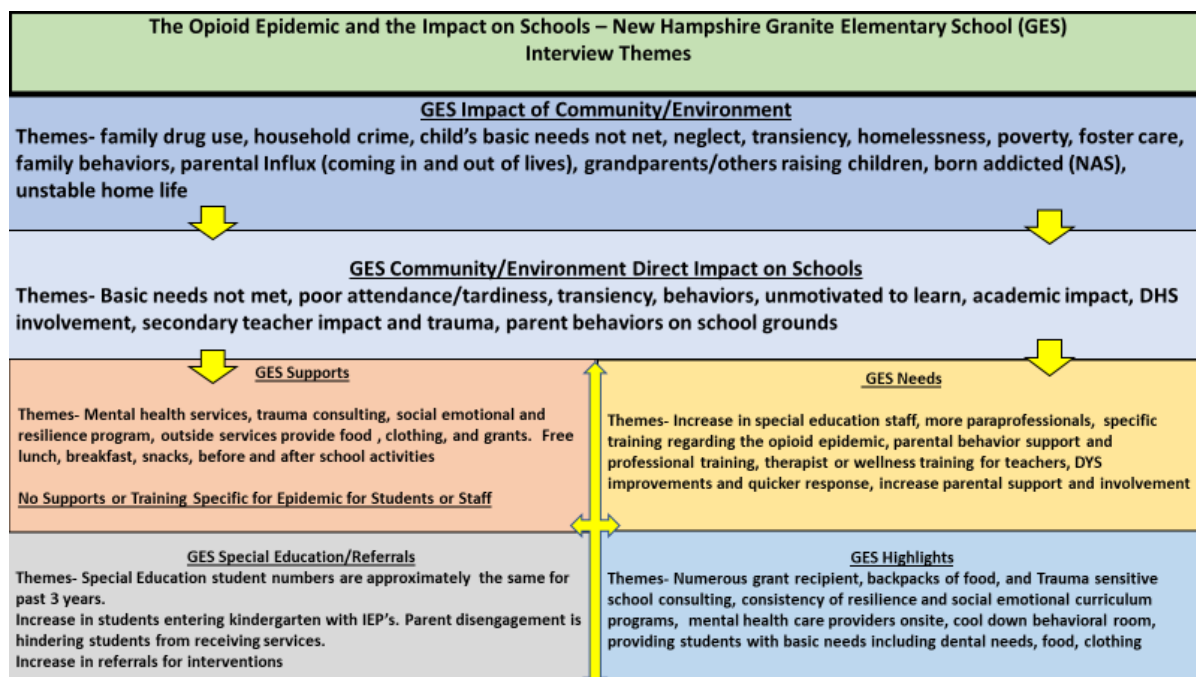


Table 39

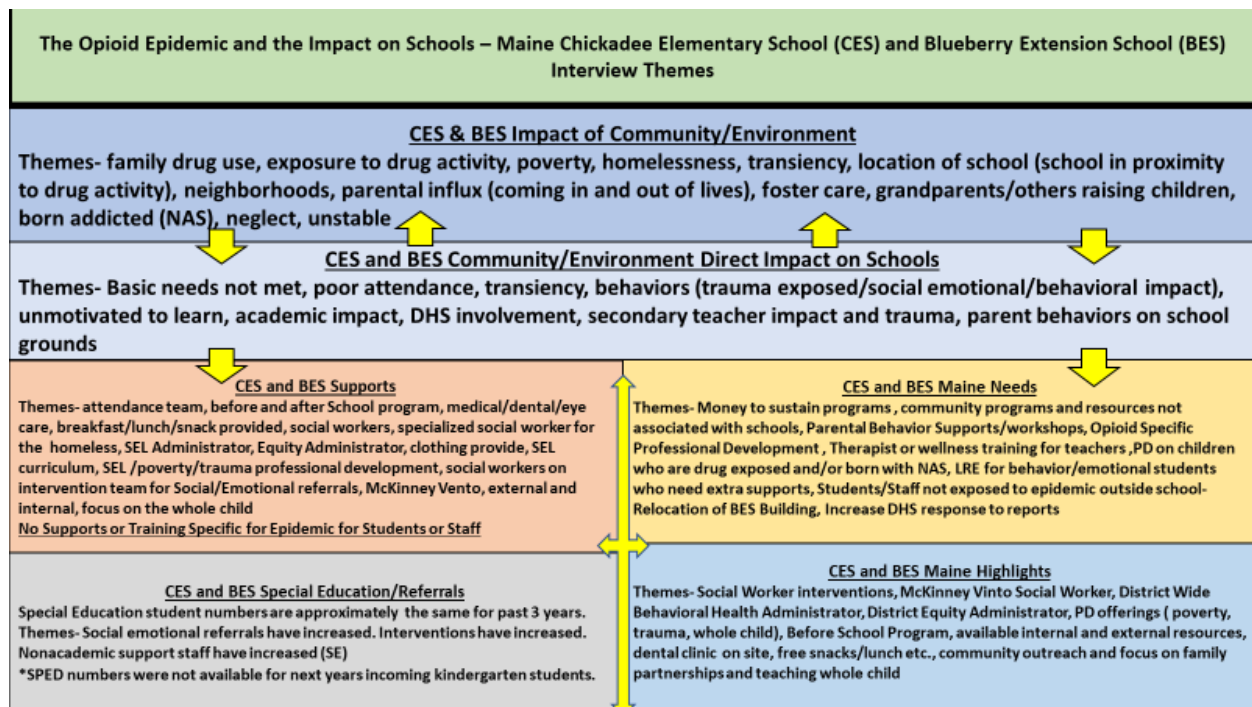
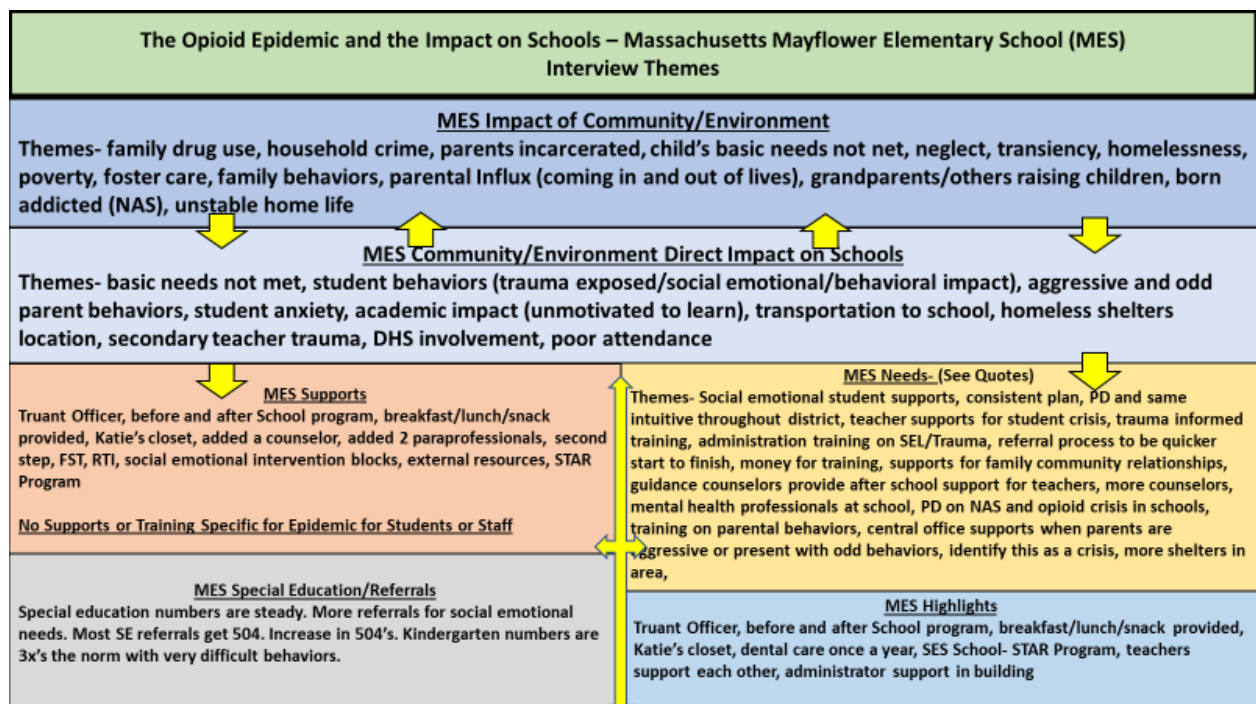
Maine CES/BES- Impact, Needs, and Supports

Table 40

Massachusetts MES- Impact, Needs, and Supports

Some patterns and trends should be highlighted and similar overall themes were developed throughout the research. In a combination of the three charts, ACE Pyramid, and impact diagram a final chart and theory were developed.

The ACE Pyramid is utilized as a framework for the research study (Figure 25). The adverse life experiences children of the epidemic are undergoing has a direct impact on the schools located in opioid crisis regions. Specifically, adverse life experiences are the external environmental factors a significant number of students in opioid crisis regions are encountering, resulting in a direct influence on the schools.

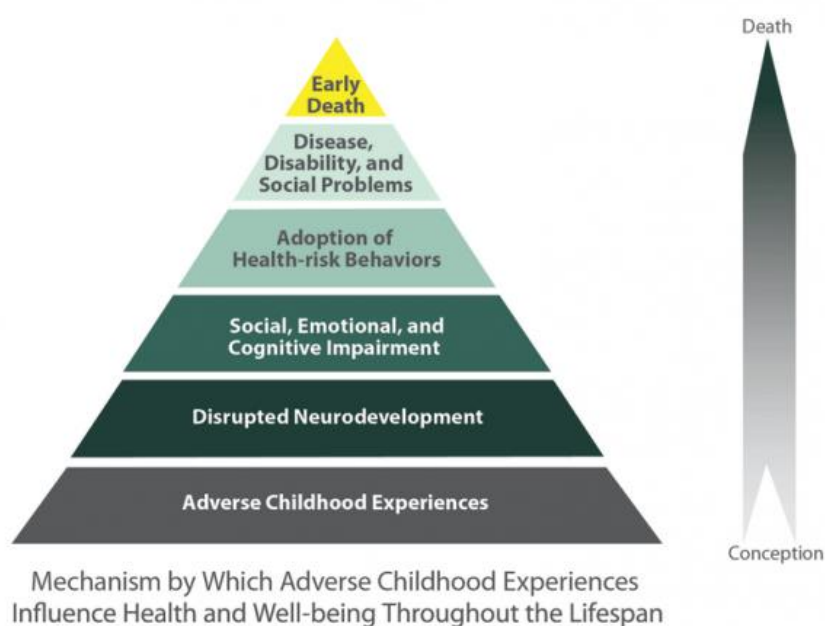


Figure 25. ACE Framework

The theoretical framework, Adverse Childhood Experience (ACE) Pyramid, serves as a guide for this research in understanding the phenomenon of the opioid epidemic and the relationship it has with the needs of the students born affected/living with environmental influences of this epidemic. Explicitly, the bottom three tiers (Adverse Childhood Experiences,

Disrupted Neurodevelopment, and Social, Emotional, and Cognitive Impairment) framed this research. The ACE's Study in synthesis with this research study, conclude that adverse life experiences, that the children of the epidemic are exposed to is causing an impact on schools and disrupting affected students' neurodevelopment. The following graph shows the environmental factors, childhood adverse life experiences, that directly impact the school.

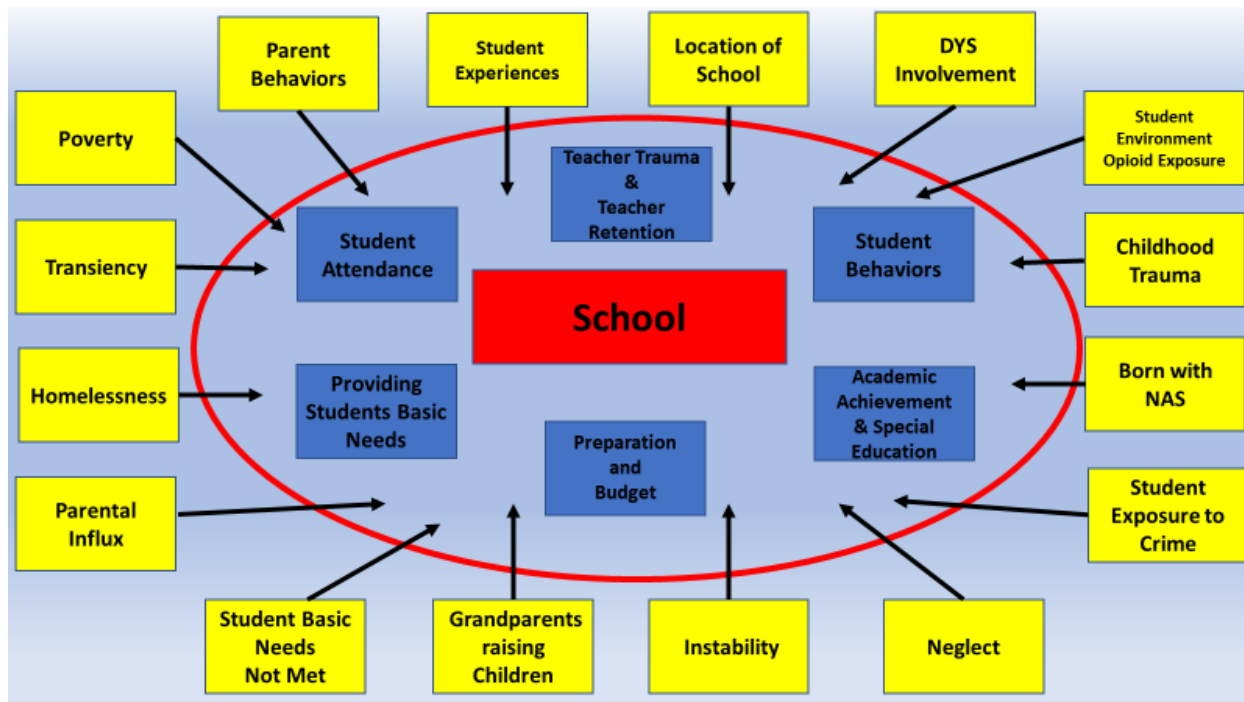


Figure 26. Opioid Epidemic Impact on Schools

Consequently, the identified adverse life experiences Figure 26 directly connect with the tiers of the ACE pyramid. The adverse life experiences that the students in opioid crisis regions are experiencing is disrupting neurodevelopment. Therefore, the schools directly impacted by the opioid crisis need to focus on social and emotional development because according to the ACE's pyramid, students impacted by the adverse life experience such as the environmental factors of the opioid epidemic, are at risk for social, emotional, and cognitive disabilities.

In conclusion, a comprehensive diagram was developed to visually depict research findings and how they relate to the ACE's Pyramid, and the opioid epidemic's impact on the school (Figure 27).

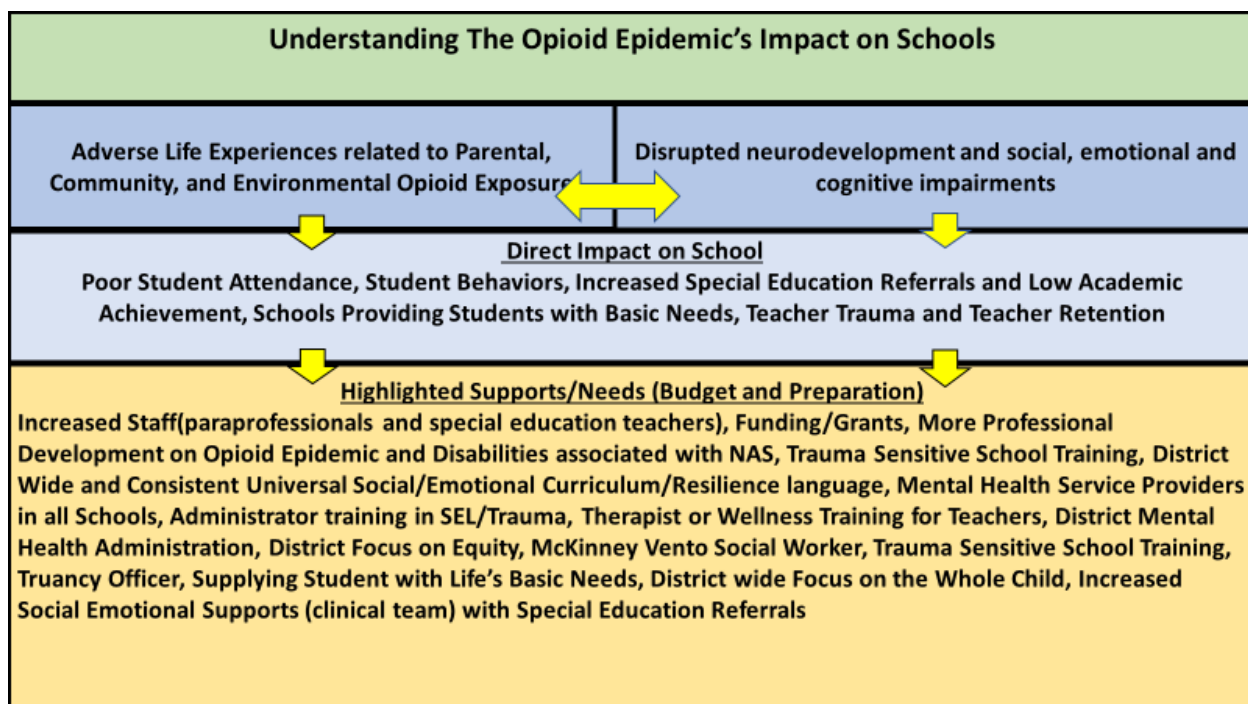


Figure 27. Research Findings and ACE's Study

As illustrated in Figure 27, in combination with the ACE's pyramid, adverse life experiences related to parental, community, and environmental opioid exposure are related to disrupted neurodevelopment and social, emotional, and cognitive impairments. Environmental opioid exposure and needs of students are directly impacting schools through poor student attendance, student behaviors, increased special education referrals, low academic achievement, and teacher trauma. Additionally, schools in crisis regions also have an added responsibility to supply students with their neglected basic needs.

Highlighted combined supports of the three schools is outlined in the chart. Specifically, the highlighted supports that would benefit any school exposed to the opioid epidemic are:

- District Mental Health Administration
- District Equity Administrator
- McKinney Vento Social Worker
- Trauma Sensitive Schools
- Truancy Officer
- Resilience Curriculum
- Supply Students with Basic Needs
- District-wide focus on the Whole Child
- Increased Social Emotional Supports with Special Education Referrals
- RTI Interventions - Clinical Team for Emotional and Behavioral Referrals- nurse, mental health providers, social workers

Funding, training, and an emphasis on proactive preparation will be key for schools to successfully confront this epidemic. In the three schools studied, several tactics essential to addressing the epidemic were found to be lacking:

- Increased Staff – Special Education Teachers, Mental Health Service Providers (on site), Paraprofessionals
- Professional Development on Opioid Epidemic and Disabilities associated with Opioid Exposure/NAS
- District Wide and Consistent Programs because of Transiency (Social/Emotional Curriculum, Reliance Program/Curriculum/Common Language, Trauma Sensitive Schools, and Training)
- Therapist and Wellness Training for Teachers
- Support for Teachers – student exposed to a traumatizing event
- Funding/Grants

Conclusion

The evidence in this study clearly reveals that schools are on the front lines in the war against the opioid epidemic and require additional and adequate support to address the needs of the children, teachers, staff, and administration. The children, staff, teachers, and administrators are severely impacted by the ramifications of the epidemic and are overlooked and in the shadows, not receiving support that is needed to function sufficiently. Effective resources are available to assist the addicted victims of the epidemic, but we are missing the support to ensure the cycle does not continue. The results of this study suggest that there should be an enhanced focus on the children of the epidemic and increased awareness among the nation of the lost victims of the epidemic. Unfortunately, the lost victims are not only the children, but the teachers and staff who are working diligently and tirelessly to combat the opioid epidemic in schools located in opioid crisis regions.

CHAPTER 5: DISCUSSION

This multiple case study research explores the impact that the opioid epidemic has on three schools located in opioid crisis regions of the Northeast and investigates each school's preparedness and the impact of the crisis on special education. This chapter includes a discussion of significant findings of the literature on outside opioid environmental impacts, Neonatal Abstinence Syndrome (NAS) and academic achievement, behavioral influences, support of students' basic needs, adverse life experiences, teacher retention, and lack of proactive preparation. This chapter concludes with a discussion of the limitations of the study and areas for future research.

While this research investigates preparedness and impact on special education in crisis regions, the depth of the findings suggests that this is not a crisis an Individual Education Program (IEP) can address alone. The impact of the opioid epidemic is a much larger penetrating problem starting with environmental exposure, neglect, and parental abandonment leading to significant impacts on the school, teachers, and administrators. The depth of the knowledge gained from the study concludes that until additional support systems are put in place and priority is placed on fighting the epidemic in schools, the complexity of the problem will continue to lead to devastation in districts located in crisis regions.

This chapter contains discussion and future research opportunities to support the answers to the following research questions:

1. How is the opioid epidemic impacting Kindergarten to second-grade classrooms/schools located in opioid crisis regions of the Northeast?
 - a. How are schools located in opioid crisis regions proactively preparing for the influx of students affected by the opioid epidemic entering the school?

- b. How are schools located in opioid crisis regions developing and implementing professional development for administrators, teachers, and school staff to address the needs of students impacted by the opioid crisis?
- 2. How familiar are teachers with the special education needs such as social-emotional, behavioral, and cognitive disabilities of children affected by the opioid epidemic?
 - a. How are schools located in opioid crisis regions supporting the needs of students affected by the opioid crisis?
 - b. How have special education services and referrals been affected or changed as a result of the opioid epidemic?

Key Findings

According to research findings, the impact the opioid epidemic has on schools located in opioid crisis regions of the Northeast is significant and far-reaching. Lack of organizational systems, preparation, and proactive plans to support the schools, administrators, teachers, and students impacted by the epidemic in these regions have resulted in helplessness and inadequate care for those affected. This multiple case study research indicates that many of the outside environmental factors children experience because of the opioid epidemic have a direct impact on the school community. According to the ACE Study (2014), many of these factors are considered adverse life experiences and therefore directly impact students in opioid crisis regions. The environmental factors and adverse life experiences of the students impacted by the epidemic include:

- Poverty
- Transiency
- Homelessness
- Parental Influx
- Basic Needs Unmet
- Grandparents Raising Children
- Instability
- Neglect
- Exposure to Crime
- Born with NAS
- Childhood Trauma
- Environmental Opioid Exposure
- DYS Involvement
- Location of School
- Student Experiences
- Parent Behaviors in Schools

The conclusion of the study indicates that the aforementioned environmental factors and adverse life experiences have a direct impact on the school, classroom, teachers, staff, and administration. These environmental factors have a direct impact on attendance, school's ability to provide students with basic needs, preparation, budget, academic achievement, special education, student behaviors, and teacher secondary trauma. Unfortunately, there have been no proactive measures or supports put in place to address the growing and dire needs of the schools depicted in Figure 28.

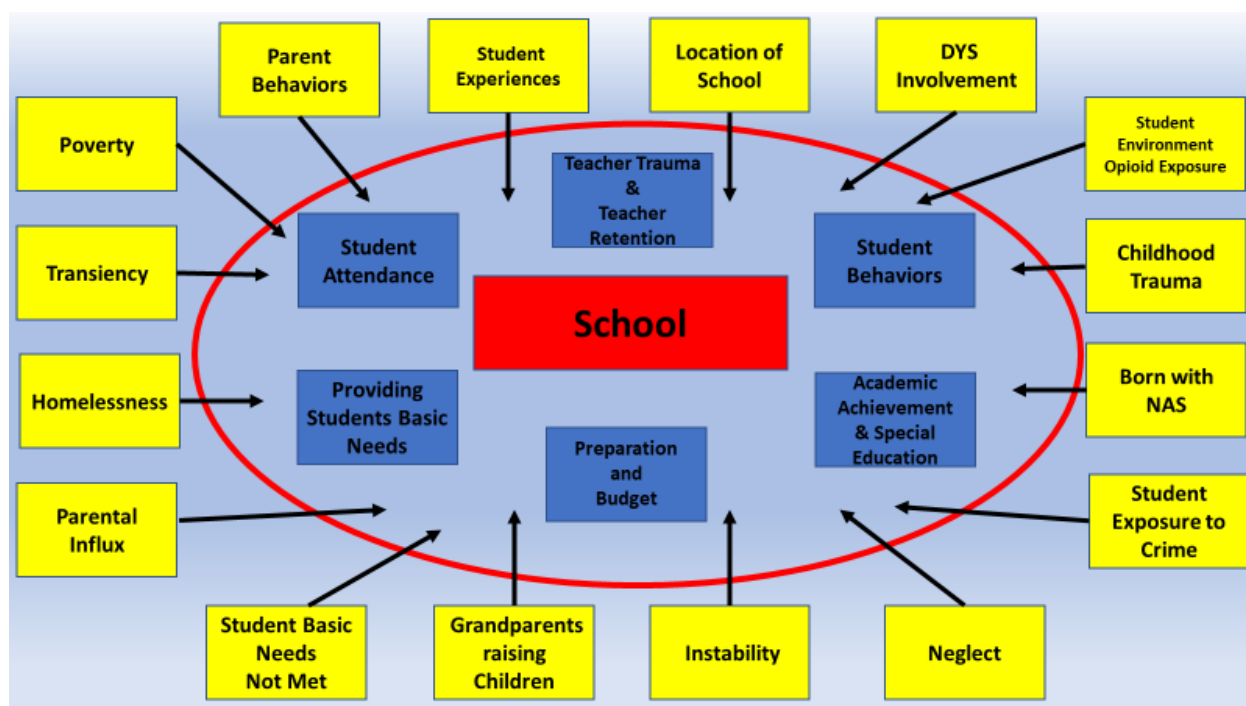


Figure 28. Outside influence on school

Another aspect of the school's lack of preparation is related to the lack of professional development available to staff and teachers on the topic. However, there is recognition among the leaders from the three districts in this study that there is a need for widespread social-emotional learning and trauma-informed practices, although each school is in a different stage of implementation.

The three studied schools are supporting student victims of the opioid epidemic by tending to their basic needs because, according to participant teachers and administrators, students impacted by the epidemic are attending schools without these needs met. Schools are providing students with food, warmth, clothing, dental care, medical care, eye care, safety, and love, all of which have become a costly and burdensome responsibility of the schools, teachers, and administration. For a significant number of students impacted by the epidemic, the school is the safe haven from which to escape the neglect of the home and parental abandonment.

Additional findings of this study suggest that, although the number of special education students has remained level, there is a projected increase in numbers of children on IEP's for the incoming kindergarten class next year in all three locations. According to teachers, administrators and counselors, behaviors and special education categories are unclear and indescribable. Children are presenting with disabilities from many of the federal disability categories. The most prevalent blend of disabilities identified by research participants of the many children born addicted to opioids includes autism, ADHD, and is developmentally delayed. Additionally, many teachers and administrators interviewed are often not informed if a child was born with NAS but make that educated assumption when children present with blended disabilities and parents are not willing to disclose that information. This is an area that may warrant further investigation.

Increasing behavior and social-emotional referrals are leading to an increase in interventions. Specifically, schools are providing more social-emotional interventions at Tier 1 and Tier 2 of the Right to Intervention (RTI) process resulting in less special education services provided.

Growing helplessness among school leaders and teachers overshadows the attempted support from schools impacted by the epidemic. Participants from all three states claim there is not a common, cohesive support system in place to turn to or navigate when they need help and support to address the needs of students impacted by the epidemic. The lack of a cohesive system arranged or plans in place accompanied by the many failed attempts or inconsistent efforts throughout the school systems has led to a feeling of helplessness by the participants. Table 41 highlights the key findings of the research:

Table 41

Significant Research Finding

Significant Research Findings
<p style="text-align: center;">Student</p> <p>NAS and Influence on Academic Achievement and Behaviors</p> <ul style="list-style-type: none"> • According to participants, children born with NAS are presenting with disabilities that are not clearly one category of the federal disability categories, but a combination of multiple categories. • According to participants, the most described blend of disabilities defined by research participants of the children born addicted to opioids included autism, ADHD, and developmentally delayed. • Other behaviors include withdrawn, distracted, unable to focus, poor executive functioning skills. <p>Impact on Academic Achievement and Special Education</p> <ul style="list-style-type: none"> • According to participants, schools can expect incoming kindergarten class will have more students on IEP's than typical. • According to participants, students impacted by the epidemic have social, emotional, and behavioral impairments. • Special education numbers have been level for the past three years, but interventions to address needs have increased
<p style="text-align: center;">Teacher</p> <p>Teacher Trauma and Stress</p> <ul style="list-style-type: none"> • According to research participants, teachers are experiencing added stress and secondary trauma leading to medical leaves. Student trauma, parental behaviors, and low DYS responses are impacting teacher's well-being. • According to research participants, parents' behaviors on school grounds have been reported as aggressive, defiant, inappropriate, frightening and odd. Parent behaviors are impacting teachers and administration.
<p style="text-align: center;">School</p> <p>Outside Environmental Influences of the Opioid Epidemic Impact School and Learning</p> <ul style="list-style-type: none"> • According to research participants and documents, a significant number of students in opioid crisis regions are living in poverty, are experiencing homelessness, transiency, neglect, instability, parental abandonment and fluctuation. Additionally, grandparents are raising children, children are experiencing trauma, and basic needs are unmet. Those outside factors are impacting attendance, tardiness, behaviors, and academic achievement at school. <p>School are Responsible for Providing Students Basic Needs</p> <ul style="list-style-type: none"> • According to research participants, a significant number of students in opioid crisis regions are neglected because of parent drug abuse, parental abandonment, and

<p>poverty. Schools have the added responsibility to provide students with their basic unmet needs such as food, water, clothing, warmth, sleep, dental, medical, and safety. According to research participants, schools are supporting students by providing resources to meet their basic needs.</p>
<p style="text-align: center;">District Leadership</p> <p>Lack of Proactive Preparation</p> <ul style="list-style-type: none"> • Lack of organizational systems, preparation, and proactive plans to support the schools, administrators, teachers, and students impacted by the epidemic in crisis regions result in helplessness and inadequate supports • According to participants and professional development documents, there is little evidence that schools are providing professional development that focuses on the specific needs of students impacted by the opioid epidemic. According to survey data, 8% of teachers received professional development on the opioid epidemic, and only 18% feel prepared to teach children exposed to the epidemic. According to survey data, only 30% of teachers know what Neonatal Abstinence Syndrome (NAS) is, and only 21% know the disabilities associated with NAS • According to participants, the implementation of social-emotional, trauma-informed, and resilience curriculum is inconsistent. Different school is implemented by different programs. Lack of consistency is difficult when students are transient, frequently attending various schools in the same district.
<p style="text-align: center;">Society</p> <p>Adverse Childhood Experiences related to Opioid Epidemic</p> <ul style="list-style-type: none"> • Adverse childhood experiences increase social, emotional, and cognitive impairments. Children's exposure to the opioid epidemic increases the likelihood of an adverse childhood experience. Adverse childhood experiences are impacting the student, school, teacher, and school districts of crisis regions.

Table 41 illustrates the continuum of impact the opioid epidemic has on the community from the student through society. Schools have limited influence on societal and environmental factors but can proactively begin to address and prepare for the increase of children entering schools impacted by the epidemic. Strategies to address the impact and the findings listed in table 41 should be acknowledged and prioritized through district leadership because teachers and school-based administration are struggling to support the growing needs of students.

Environmental factors and outside influence infiltrate the students and staff of schools in crisis regions. Based on rapidly increasing NAS birth trends (CDC, 2015) and overdose rates, the impact felt upon schools, located in opioid crisis regions, is expected to get worse. Preparation and the development of plans for cohesive supports must be prioritized.

Interpretation of Findings

The role that stress has on children's brain development and cognitive and social growth is often cited as a critical factor in why children living with adverse life experiences perform poorly in school. Stress alters children's language, social, and cognitive development and is not easily controlled by educators because so much of it derives from family life and events outside of school (Jensen, 2009). Understanding the impact of the experiences of the children of the opioid epidemic is critical to understand the influence on students' visible behaviors at school. Themes emerged within the research, the details of which are described in this Chapter.

Outside Environmental Influences of the Opioid Epidemic Impact School and Learning

Positive home environments are crucial for children to experience success during their school years. A home that will increase a child's cognitive ability is immersed in warmth and affirmation. Positive attributes of a stable home environment increase a child's ability to regulate their own emotions, assists them in developing secure attachments, and improves their chances of behaving correctly in social situations (Bradley & Corwyn, 2002). Unfortunately, children living in homes exposed to drugs, crime, instability, and neglect are negative attributes and lead to the inability to regulate emotions, form secure attachments, and consequently, lead to poor behaviors. A significant number of participants throughout the research correlate their students' behaviors and inability to regulate emotion to their students' home and drug exposure.

The literature reveals that parental opioid addiction has placed as many students at risk for school failure and academic struggles as children born prenatally exposed to opiates. Students who are exposed to parental drug addiction will require school-based support services to be successful in school (Herranz, Vélchez, Ledo & Sierra, 2014; Nunes et al., 2000). As described in depth in Chapter Four, this study's findings emphasize that outside negative environmental influences, most likely the results of parental addiction, including poverty, instability, childhood crime exposure, childhood trauma, parental behaviors, and neglect, have placed students at risk for academic struggles. An increase in student interventions is needed to improve the likelihood of learning and success.

NAS and Influence on Academic Achievement and Behaviors

Since 2010, a combination of researchers found that the several symptoms were associated with infants born with Neonatal Abstinence Syndrome (Ross, Graham, Money, Stanwood, 2015)---preterm birthweight and obstetric complications, respiratory insufficiency, heart defects, reduced growth, deficits in cognitive and motor ability, attention deficit hyperactivity disorder, lower IQ, behavioral problems, inattention, hyperactivity and speech, language, and communication disorders. The combination of various studies provides evidence that opioid exposure during pregnancy results in developmental and cognitive deficiencies. These limitations would qualify the children for special education services once the infant reaches school age (Beckwith & Burke, 2015; McGlone & Mactier, 2015; Nygaard, Moe, Slinning & Walhoyd, 2015; Ornoy et al., 2010; Yaun et al., 2014).

Other studies emphasized that children who were prenatally exposed to drugs suffered from higher externalizing and internalizing behaviors such as aggressive, delinquent, anxious, depressed, and withdrawn type behaviors. These components are known to place children at a

higher risk for special education despite their academic capability (Delaney-Black et al., 2000). Study participants defined student behaviors as aggressive, withdrawn, anxious, and inattentive. According to the multiple case study, NAS behaviors are impacting schools in opioid crisis regions. Children born with NAS are described by participants as indescribable, presenting with a combo of ADHD, autism, developmentally delayed, and suffering from lower IQ's. Mental illnesses, suicidal thoughts, distractibility, and the inability to deescalate were also described as observable behaviors of students born with NAS. A combination of the literature reviewed and results from this study confirm that NAS behaviors are directly impacting classrooms and influence academic achievement.

Supporting Students Basic Needs

Maslow's Theory of the Hierarchy of Needs (1968) includes the suggestion that only upon fulfilling the lower needs of food, water, warmth, rest, security, safety, and belonging, can a person realize growth or experience learning. Families living in poverty are 3.4 times more likely to suffer from a lack of food and these basic needs. Lack of nutrition significantly affects a child's academic gains (Berliner, 2009). Without these basic needs, such as safety and belonging, met, they will be less apt to engage in academics and learning (Maslow, 1968). This study discovered that not only are children coming to school hungry and tired, they are also unable to focus on academic requirements because immediate basic needs for safety are not being met because of toxic stress at home. According to the study participants, children are coming to school scared, depressed, hungry, tired, and in a consistent state of anxiety. Children exposed to the opioid epidemic do not feel safe. Schools have the added responsibility to try to meet students' basic needs to care for students properly and encourage learning.

Adverse Life Experiences and Increase in Social, Emotional, Cognitive Impairments

The ACE Pyramid was derived from the CDC-Kaiser Permanente Adverse Childhood Experiences Study (2014) and explains the “mechanism by which adverse childhood experiences influence health and well-being throughout the lifespan” (CDC, 2014). The framework guides this research and emphasizes the case study findings by highlighting that adverse childhood experiences can lead to disrupted neurodevelopment and social, emotional, and cognitive impairments. As the study results yield, children are experiencing adverse life experiences, such as living with an addicted household, influence the students’ health and well-being. The disruption in neurodevelopment results in social, cognitive, and health impairments that will directly affect the child’s educational experiences and then increase the need for academic, social, emotional, and behavioral interventions once in school. According to the CDC-Kaiser Permanente Adverse Childhood Experiences (ACE) Study (2014), a household member that has a problem with drinking or a household member that misuse drugs qualify as adverse childhood experiences. Additionally, the literature suggests that children who experience trauma, neglect, abuse, and abandonment all cause increased chances of emotional, behavioral, and cognitive disabilities would require educational interventions (Herranz, Vílchez, Ledo & Sierra, 2014; Nunes et al., 2000).

As the multiple case study indicates, there is an increase in social-emotional interventions at tier 1 and tier 2 of the RTI process resulting from behavioral, trauma, and emotional needs of students impacted by the epidemic. The need for more interventions at school is a direct result of adverse life experiences from the opioid epidemic. The opioid epidemic is increasing childhood adverse life experiences and consequently increasing the need for interventions in schools.

Teacher Retention

On average, 30% of teachers leave the profession within their first five years of teaching (Darling-Hammond & Sykes, 2003; Ingersoll, 2001, 2003). Considerable evidence shows that teacher shortages have historically impacted our most disadvantaged students, such as students living in poverty. The areas researched in this case study are areas of the Northeast impacted by poverty and homelessness.

According to participant interviews, teachers who are faced with secondary trauma and stress of the opioid epidemic are at high risk for burnout. In multiple interviews in all three locations, through tears, helplessness, and anguish, teachers shared stories of their students' experiences. Teachers expressed that they are stressed, tired, and bring the impact of their student's experiences home with them, continually thinking of their students' safety and wellbeing. In the interviews, many young teachers with less experience contemplated their future and the ability to continue working in a high-stress location. According to participants in both the Massachusetts and New Hampshire schools, multiple teachers have left or have been placed on medical leave because of Post-Traumatic Stress Disorder or panic attacks. The consequence of the epidemic is significantly impacting teacher retention, teacher trauma, and the health of teachers.

Lack of Proactive Preparation

Available literature indicates that there seem to be minimal proactive measures to ensure our teachers are educated and ready for the growing social, emotional, behavioral, and cognitive needs of the youngest victims of the opioid epidemic (Feely, 2016; Rayno, 2015; Roberts, 2015; Chapter 52- Massachusetts Acts of 2016). The study confirms the literature claim of minimal proactive measures and reaffirms the need to prepare schools and districts in opioid crisis regions

for the future implications of the influx of children entering school exposed to the ramifications and outside influences of the epidemic.

Implications for Theory and Research

Adverse childhood experiences (ACEs) are severe childhood traumas that result in toxic stress that can damage a child's brain. This toxic stress may prevent a child from learning, from appropriate social interactions with other children, and can result in long-term health problems. Adverse life experiences, as defined by the ACE's study (2014), could include emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, household substance abuse, incarcerated household member, witnessing violence in and outside of the home, and being homeless. As results indicate, many students exposed to the opioid epidemic have been impacted by at least one of the listed adverse childhood experiences, while many children of the epidemic have experienced more than one. Research indicates that frequent or lengthy exposure to ACEs can generate toxic stress which can harm the developing brain of a child and impact in overall health. According to the theory behind ACEs and childhood trauma (2014), toxic stress can impact student's ability to learn, increase the difficulty maintaining friendships, cause health problems, increase problems with memory, and lowers tolerance for stress, which can result in behaviors such as withdrawal, fighting, and defiance. As the research study indicates, children experience all of those impacts as a direct result of the involvement in adverse life experiences.

In conjunction with the ACE study, the premise behind Maslow's Hierarchy of Needs (1968) is that a hierarchy of needs motivates human beings. It is therefore suggested that before individuals meet their full potential, they need to gratify a series of needs. Students who are impacted by the epidemic enter the schools in need, but educators have a limited influence on the home lives, adverse childhood experiences, and environmental exposure students of the opioid

epidemic are experiencing. According to the results of this case study, once students enter the schools, teachers, and administrators assess and evaluate the needs of their students and decide if the student is ready to learn or if there are needs take precedent before there are any attempts of learning. ‘Is this student getting all of their basic physical needs met? Are they hungry? Do they need water? Clean clothing? Sleep? Warmth?’ Once teachers and administrators determine the needs of students, they are adapting to those needs.

The next tier of Maslow’s Hierarchy of Needs (1968) is safety. Staff are engaged with students exposed to the opioid crisis who are experiencing unstable and scary situations. Staff spends time evaluating situations daily to determine the safety and security of their students. They investigate and ask themselves, ‘How safe are the students in their homes? Did the child experience a traumatizing event or adverse life experience?’ The ACE’s study (2014) and Maslow’s Hierarchy of Needs (1968) are theoretical implications tied to the theory behind this research and the direct impact on students coming to school unable to learn. The ramifications of adverse childhood experiences and unmet needs are influencing the schools in opioid crisis regions. Schools in opioid crisis regions are responsible are supplying students with food, clothing, dental, medical needs, warmth and safety in order for students to be aware of their potential for growth and ability to learn. Without the prioritizing the importance of providing students with their essential needs, students would not be capable of learning.

Implications for Practice

There is a crucial need to start preparing for the impact of the epidemic on schools. Given the notations of escalating needs in this study, the impact of the epidemic will continue to get worse before it improves. Numbers of children born with NAS are increasing. According to local statistics (Anonymous, Personal Communication, January 24, 2019; Anonymous, Personal

Communication, February 6, 2019), although fatal overdoses are declining, the number of nonfatal overdoses are increasing. More people are using opioids, and addiction continues to increase. Women of childbearing age addicted to opioids will continue to get pregnant.

According to the National Institute on Drug Abuse (NIDA), every 25 minutes, a baby is born suffering from NAS. Specifically, since 2000, there has been a fivefold increase in NAS births in New England, and that number continues to rise (CDC, 2015). With the trends doubling every three years of children born prenatally exposed to opioids we could see the numbers of NAS births skyrocket. If trends continue to double every three years, as they are predicted to, by the end of 2019, New England could have at least ten infants born with NAS out of every 100 births. All of these children born into the epidemic will be increasingly present in classrooms.

As every community, not only in the Northeast but across the country, continues to battle this current opioid crisis, children born addicted to opioids and children living in a home devastated by opioids will be in classrooms. Children exposed to environmental factors including drug activity, adverse childhood experiences, or are born addicted to opioids are at risk for cognitive, social-emotional, and behavioral needs. All teachers, staff, and school districts will be responsible for accommodating students. In addition to assessing cognitive and social-emotional needs, schools should have plans for homelessness, transiency, parental behaviors, student neglect, home instability, and teacher trauma. Awareness, preparation, and funding are essential to the success not only of the students but also for the retention of teachers and administration. Schools in crisis are struggling due to a broken system that should be analyzed at the administrative/superintendent level. Teachers and school-based administration can only do so much without a more extensive support system and along with consistent district-wide practices

and policies to address the need for schools in opioid crisis regions. The implications for practice are therefore substantial.

As the epidemic spreads, all school districts, not only those that are currently in opioid crisis regions, will need to be proactive in preparation for the massive increase of students affected by this societal emergency. A mental health clinical administration at the superintendent level with expertise in providing mental health care and with the leadership skills to implement a district-wide program would be essential. Mental health personnel at each school under the mental health administrator would benefit not only the students but also there to provide support for the teacher. With the right system in place, teachers, staff, and school-based administration would know where to go to address the significant needs of their impacted students and staff. In addition to having a mental administrator and mental health providers in each school, districts should specifically prioritize plans in place to provide mental health services to students involved, plans to track student homelessness to ensure all students are accounted for, and plans for providing students with essential basic needs.

District staff should be prepared and educated on the educational and social-emotional needs of children traumatized by the devastation of opioid addiction, and know where to turn to as crises arise. Additionally, because of transiency, all schools within a district should have universal language around social-emotional learning, resilience, and trauma-informed education. The consistency of school support's and initiatives should be prioritized. The proper education and interventions to meet the needs of students with social, emotional, and cognitive impairments will not be a requirement of special educators alone, but an initiative for all inclusion classrooms and every teacher and staff member within a school district. An education

and background knowledge in disabilities and mental health impairments would benefit all staff.

The schools in opioid crisis regions have significant challenges and implications for practice.

Participants in this study highlighted the following supports, listed in Table 42, as beneficial for schools exposed to the epidemic. The supports are implications to practice and will require leadership, funds, and resources.

Table 42

Supports in Action and Needed Supports of Districts

Supports in Action	Type of Support
District Mental Health Administrator	Personnel
McKinney Vento Social Worker	Personnel
Trauma Sensitive Schools	Curriculum/Consultant
Truancy officer	Personnel
Resilience Curriculum	Curriculum
Provide Basic Needs to Students	Resources
Social-Emotional Curriculum	Training and Curriculum
District-wide focus on the whole child and Equity	Professional Development
RTI Interventions Clinical Team- Nurse, Mental Health Providers, social workers	Personnel and Training
Needed Supports	Type of Support
Increased Special Education Teachers	Personnel
Mental Health Providers On-Site at each school (staff and student needs)	Personnel
Professional Development on Opioid Epidemic and Disabilities Associated with Opioid Exposure and NAS	Training
District Wide Consistent Programs <ul style="list-style-type: none"> - Social/emotional Curriculum - Resilience Program/Common Language - Trauma Sensitive Training 	Curriculum and Resources
Therapist and Wellness Training for Teachers	Resources and Professional Development
Teacher Supports - Childhood trauma	Resources and Professional Development
Grants and Funding	Resources

Personnel, training, resources and professional development are needed to support the schools in crisis. All suggested supports require leadership, a plan, and funding. The scope of the crisis in schools related to the epidemic is significantly impacting students, academic initiatives, and the wellbeing of staff. Without consistent district-wide systems in place, the impact will continue to get worse as the number of children impacted by the epidemic will grow.

Recommendations for Future Research

While the researcher believes that using a multiple case study method was the correct choice for this study, to saturate a deeper understanding of the phenomenon by looking in-depth into individual cases and schools, a mixed method approach with a quantitative focus may be the next step. A mixed method investigation could expand the geographic location, increase participants, and understand the overarching impact the epidemic has on schools in various locations throughout the Northeast and United States.

Based on interview themes and numerous findings, there are many possible areas for future research. Specifically, a quantitative study would be beneficial to explore the increased number of children on IEPs in opioid crisis regions entering the public school from early intervention and preschool programs for the 2019 – 2020 academic year as the incoming kindergarten class in all three locations have many more students with IEP's than is typical. A quantitative research study would, therefore, take a more global investigation into those IEP statistics. Based on CDC trends of NAS births, if patterns and trends double every three years as expected, the numbers of children who will need support systems should start to increase with the children born in 2015 and onward.

In conjunction with the increased trends of preschool students with IEPs entering kindergarten in the next academic year, the behaviors and disability categories should be

investigated. Participants in this study claim that children born with NAS have indescribable behaviors that do not fit neatly into any of the federal disability categories. Therefore, there should be a concrete development into behavior identifiers and academic awareness in order to accommodate the curriculum appropriately to differentiate both instruction and behavior management for students born with NAS. An investigation into NAS student assessments would also be beneficial in understanding behaviors, achievements, and area of disabilities. Noting common trends, deficiencies, and ability levels in a mixed method investigation may yield patterns in behaviors and academic abilities.

Another area for future investigation could be a phenomenology into teacher and administrators' experiences working in schools located in opioid crisis regions. An in-depth understanding of their experiences could shed light on implications for teacher retention and secondary trauma.

Additionally, future research could include a rural study of the opioid epidemic and the impact on schools. The study could mimic this multiple case study investigations and findings could compare the ramification of the opioid epidemic on rural schools of the Northeast vs. urban schools of the Northeast. A hypothesis could be made that the outside influences and adverse experiences could be different based on the location of the school.

Limitations

There were limitations to this multiple case study research. In all three locations, the researchers access to internal data and documents was an identified limitation. In some locations, participants would share internal district documents willingly and would provide the researcher access to TEAM drives. At other locations, participants would share data and documents with the

researcher through the interviews or emails but would not provide all official documentation that was requested.

The researcher had a participating anonymous local law enforcement agent providing data at two out of the three locations, and access to online community data in the third location. Local law enforcement in the third location would not return calls or emails.

Additionally, the researcher recovered data from each state's department of education websites. Some data was more readily available and more accessible to the various department of education websites than others. Each state was unique in data that was publicly provided.

The sample size of this research is also a limitation. In the Northeast, there are many school districts and schools located in opioid crisis regions. This research only collected data and investigated three out of the many schools in crisis. In the future, this study could be expanded to each state in New England.

Biases in the researcher, although bracketed, exist based on the researcher's experiences working in opioid crisis regions. Before 2015, the researcher was a teacher in an area of the Northeast that was beginning to experience challenges as a result of the epidemic.

Conclusion

The youngest and often overlooked victims of the opioid epidemic are the children. The children of families battling addiction are also fighting their way through the devastation of abandonment and lack of necessities needed for existence. The children of the epidemic are in survival mode and come to school suffering. Consequently, adults working in schools take on the responsibility of trying to save the students coupled with the desire to minimize the suffering, neglect, and anguish that the students feel. In failed attempts to save and to help students, the adults begin to feel hopeless. Currently, there are minimal supports available or systems in place

to alleviate the hopelessness felt by both students and staff in schools dealing with the ramifications of the opioid epidemic. Without proper supports, plans, and preparation, this problem will continue to penetrate schools and the lives of a generation of children.

Appendices

Appendix A	Letter of Consent
Appendix B	Certificate of Consent
Appendix C	Participant Survey
Appendix D	Dovetails Resilience Poster
Appendix E	Zones of Regulation

Appendix A

Letter of Consent

Welcome to my research study!

Thank you so much for your time. My name is Kathryn Welby, and I am a doctoral student at Southern New Hampshire University and an Assistant Professor of Practice in Education at Merrimack College. I am in the midst of my dissertation, *The implications of the opioid epidemic on select elementary schools in crisis regions of the Northeast; a multiple case study investigation*. I am collecting data and would appreciate your help and time completing this survey. At the end of the survey, you will be asked if you would like to participate in an interview. Both the survey and interview are voluntary. If you are chosen for an interview, the interview will take place at the school you work in, by Skype, or through a phone conversation with me, the principle investigator. All your help is truly appreciated!

You have been selected to participate in my research study because the school you work at is located in an area of the Northeast that has a higher than national average of opioid overdose rates. I am interested in understanding the impact the opioid epidemic has in the classrooms and special education implications. You will be presented with information relevant to the topic and asked to answer some questions about it. Please be assured that your identity and district will be kept entirely confidential and will be combined with other districts to create an overall understanding of the opioid epidemic and district implications. I will use the information obtained in this survey to further investigate via district teacher interviews. Again, your district and your identity will not be identified.

The goal of this study is to acquire information on the current situation regarding family opioid abuse and its effects on schools. One of the objectives of the research is to create recommendations for an action agenda to support students and teachers as they face the consequences of the opioid epidemic in the classroom. My hope is that lives will change for the better by creating an awareness of resources needed and advocate for proactive services. At the completion of my dissertation, my next steps will depend on the results. If needed, I hope to raise responsiveness on the possible educational implications the opioid epidemic will have on the classroom while proactively helping districts with accommodations for the students in need. Some of these finding may be used for various publications.

This proposal has been reviewed and approved by the SNHU IRB, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the IRB, contact irb@snhu.edu or 603-645-9695.

The survey should take you approximately 10 minutes to complete. You have the right to withdraw at any point during the study, for any reason, and without any prejudice. If you would like to contact me to discuss this research, please e-mail me at k.welby@snhu.edu.

By clicking the button below, you acknowledge that your participation in the study is voluntary, you are 18 years of age, and that you are aware that you may choose to terminate your participation in the study at any time and for any reason.

Your participation is very much appreciated.

Sincerely,
Kathryn Welby
k.welby@snhu.edu
978-853-2980

Appendix B
Certificate of Consent

I understand that I have been asked to participate in a research study investigating the impact of the opioid epidemic on schools.

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study.

Print Name of Participant _____

Signature of Participant _____

Date _____

Day/month/year

Appendix C

Participant Survey

Demographic Information

1. State in which you teach:

- Connecticut
- Massachusetts
- Maine
- New Hampshire
- Vermont
- Rhode Island

2. Grade you teach:

- Pre-K
- Kindergarten
- Grade 1
- Second-grade
- Special Education
- Specialist / Other
- Other- Please Explain:

3. Years of Teaching Experience

- 1-5 years
- 6-10 years
- 10-15 years
- 15-20 years
- 20 + years

4. Are you a certified Special Education Teacher?

- Yes
- No

Background Information – Classroom

1. In the past three years (2015- present), have any students in your class been affected by the opioid epidemic?

- Yes
- No
- I do not know

2. How have the students in your class been affected by the opioid epidemic? Please check all that apply:

- Neglect
- Abuse
- Death of a Parent
- Death of a sibling
- Death of a relative
- Observed an overdose
- Born addicted to opioids
- Removal from household because of an addicted family member
- Living with a relative as a result of family addiction
- Living in a foster home as a result of family addiction
- Department of Youth and Family Involvement
- Is an orphan because of household addiction
- None have been affected
- Other: Please Explain Below

3. Have the students affected by the opioid epidemic shown any of the following behaviors?

Check all that apply:

- Withdrawal
- Sadness /depression
- Anger
- Hyperactivity
- inattention
- Low motivation
- Tantrums
- Deficits in cognitive ability
- Deficits in motor ability
- Behavioral problems
- Speech, language and communication disorders
- Emotional and social disabilities
- Poor executive functioning skills
- No Affect
- Other: Please explain below:

4. Do you know what Neonatal Abstinence Syndrome (NAS) is?

- Yes
- No

5. Do you know the documented disabilities a child born with NAS may present within the classroom?

- Yes
- No

Teacher Preparedness:

On the first statement (a) of each series, please respond yes or no .

On the second statement (b) of each series, please rate your response on the following scale:

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

1 (a). I receive professional development/training to help me educate students with ADD/ADHD.

- Yes
- No

1 (b). I am prepared to teach students in my classroom diagnosed with ADD/ADHD.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

2 (a). I receive professional development/training to help me educate students with behavioral disorders.

- Yes
- No

2 (b). I am prepared to teach students in my classroom diagnosed with behavioral disorders.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

3 (a). I receive professional development to help me educate students with a cognitive disability.

- Yes
- No

3 (b). I am prepared to teach students in my class diagnosed with cognitive disabilities.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

4 (a). I receive professional development/training to help me educate students who have social-emotional disabilities.

- Yes
- No

4 (b). I am prepared to teach students in my classroom diagnosed with social-emotional disabilities.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

5 (a). I receive professional development/training to help me educate students who have experienced trauma

- Yes
- No

5 (b). I am prepared to teach students in my classroom who have experienced trauma.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

6 (a). I receive professional development/training to help me educate students with mental illnesses including psychiatric disorders.

- Yes
- No

6 (b). I am prepared to teach students in my classroom with mental illnesses including psychiatric disorders.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

7 (a). I receive professional development to help me educate children who have been exposed to the opioid epidemic either through family devastation/addiction or born with Neonatal Abstinence Syndrome.

- Yes
- No

7 (b). I am prepared to teach children who have been exposed to the opioid epidemic either through family devastation/addiction or born with Neonatal Abstinence Syndrome.

5- Strongly Agree 4- Agree 3- Neither 2- Disagree 1- Strongly Disagree

1. Open Answer Questions

1. How has the opioid epidemic affected your classroom?

2. What if anything is your school/district doing to prepare you for the influx of students that may be entering your classroom who have been exposed to the opioid epidemic (born addicted to opioids/living in a home devastated by opioids)?

3. If you have any stories to share about the effects of the opioid epidemic on your classroom/school/ or district, please share here:

****If you are willing to participate in an interview (either in person, skype, or on the phone), please provide your contact information here:**

Name_____ **Email Address**_____ **Phone**

Number_____

Appendix D

Dovetails Resilience Poster



Appendix E

Zones of Regulation



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