

INDIANA'S INTEGRATED RESPONSE TO THE OPIOID EPIDEMIC

ABSTRACT

The purpose of Indiana's Integrated Response to the Opioid Epidemic is to use funds authorized by the 21st Century Cures Act to expand existing prevention, treatment, and recovery services for OUDs, identify and implement new evidence-based programs across the continuum of care to address OUDs and opioid use in general, and focus on providing intensive support to areas with limited access to treatment and related services. The proposed work will address OUD-related needs across Indiana, but will focus particularly on the needs of underserved populations throughout the state; underserved areas range from small, rural counties to large metropolitan areas, and share a disproportionate burden of the OUD epidemic. Within this group, programming also will focus on individuals or populations that are especially at risk from OUDs or for whom the impact of an OUD is disproportionately severe, including pregnant women, adolescents, and individuals leaving the criminal justice system in order to re-integrate into the community.

The proposed work focuses on six strategic goals that are predicated on the needs identified prior to and during the preparation of this application. These are: 1) Expansion of Residential/Inpatient Detoxification and Treatment, including increased capacity, training in MAT and EBPs, and provision of service linkages; 2) Deployment of Mobile Crisis Teams focused on overdose reversal, referral to treatment, crisis management, and short-term therapeutic solutions; 3) Development and Implementation of I-ECHO, a statewide training protocol for all healthcare professionals that will focus on OUD case management and specialized learning; 4) Development of a Recovery Coach Initiative that will engage peers and professionals with individuals who are in emergency rooms for OUD overdose to ensure systematic engagement with all aspects of the spectrum of care; 5) Expansion of Provider Access to Integrated Prescription Drug Monitoring and Electronic Health Records, with a particular focus on mitigating costs for lower-income healthcare organizations; and 6) Undertake Statewide Social Marketing and Health Communications Campaigns that intelligently are targeted to vulnerable population segments using culturally-competent language and strategies.

In implementing these strategies, we expect to a) increase the number of people in who receive OUD treatment; b) increase the number of people who receive OUD recovery services; c) increase the number of providers implementing MAT; d) increase the number of OUD prevention and treatment providers trained; e) reduce numbers and rates of opioid use, and; f) reduce numbers and rates of opioid overdose-related deaths.

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SECTION A: POPULATION OF FOCUS AND STATEMENT OF NEED

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The state of Indiana has been significantly impacted by the opioid epidemic sweeping through the United States. In 2015, Indiana experienced one of the worst outbreaks of HIV transmission in the nation's history, primarily driven by the sharing of needles among people in the rural community of Austin, Indiana, who were injecting the prescription drug Opana, a branded form of oxymorphone, an opioid analgesic (<https://medlineplus.gov/druginfo/meds/a610022.html>).

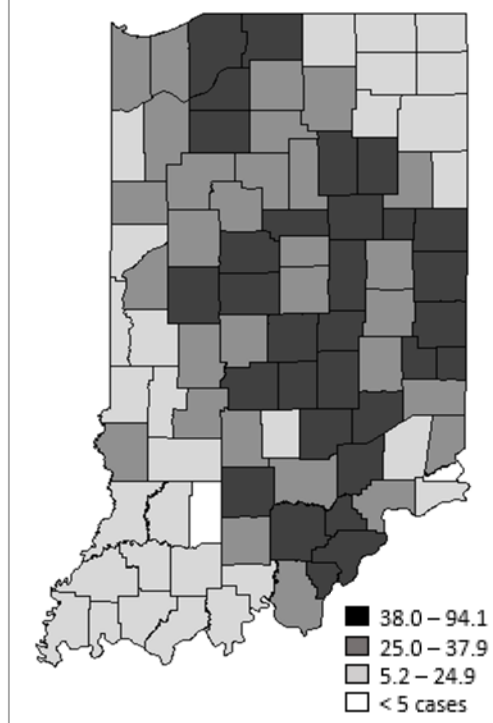
The context within which this outbreak occurred, marked by high rates of unemployment and poverty and minimal access to specialty medical care, is shared by many communities in Indiana, especially those located in rural counties.

The non-medical use of prescription opioid pain relievers and the use of illicit opioids such as heroin have led to an unprecedented increase in overdose deaths in Indiana. In 2013, deaths from drug overdoses in Indiana had increased five-fold since 1999, surpassing motor vehicle traffic-related deaths in 2008

(www.in.gov/isdh/files/2015_SER_Drug_Deaths_Indiana_Updated.pdf). In 2015, Indiana ranked 17th in the nation for the number of opioid overdose deaths per capita, and experienced 1,245 drug overdose deaths (<https://www.cdc.gov/drugoverdose/data/statedeaths.html>).

Figure 1 identifies the counties in Indiana with the highest rates of non-fatal emergency room visits due to opioid overdoses in the past five years. All but one of the counties ranking in the top third are wholly or partially considered rural (outside an urbanized area as defined by the U.S. Census) according to the Health Resources and Services Administration classifications (<https://datawarehouse.hrsa.gov/Tools/MapToolQuick.aspx?mapName=RuralHealthAreas>). The counties range from a small rural community of just over 7,000 people to the largest metropolitan area in Indiana, with almost one million residents – the city of Indianapolis. There is significant diversity within these communities, but each exhibits a disparity between the burden of substance use disorders and the need for specialized care and easy access to those medical services. Thus, throughout this application, we describe our population of focus – those communities are likely at greatest risk for harms related to opioid use disorders (OUDs) – as **underserved communities in Indiana.**

Figure 1: Non-Fatal Emergency Room Visits Due to Opioid Overdose, 2011-2015, Rates per 100,000



Source: Indiana State Health Department

Researchers recently reported that the incidence rates for neonatal abstinence syndrome (NAS) and maternal opioid use have increased nearly 5-fold in the United States between 2000 and 2012. They found that these increases were disproportionately larger in rural areas. In 2013, the incidence of NAS among rural infants was 7.5 per 1000 births, compared to 4.8 for urban infants. Similarly, the number of hospital deliveries complicated by maternal opioid use increased to 8.1 per 1000 deliveries among rural mothers, compared to 4.8 for urban mothers (Villapiano et al., 2016). This research highlights the urgent need for the provision of services to this population.

Three of the most urban counties ranking within the top third for non-fatal emergency room visits have significant racial diversity, with populations ranging from 63.1% to 84.0% White, while the remaining 28 counties have less diversity than the overall state population, ranging from 87.1% to 98.1% White. Two-fifths of the high-risk counties' largest minority population are Blacks, while several counties have larger populations of individuals with Asian, Other, or multiple races. All but three of the counties have smaller Hispanic populations than the overall state population. The outliers include the small rural county of Clinton (14.5% Hispanic) and the large metropolitan county of Marion (9.7% Hispanic) (see **Table 1**).

The American Indian/Alaskan Native population in Indiana comprises 0.3% of the total population. A portion of this population is made up of the Miami Nation of Indiana. The Miami are not a federally recognized tribe. The Pokagon Band of Potawatomi Indians is a federally recognized tribe of 3,150 members. The land held by the tribe in federal trust is all located in Michigan, and the tribal government is located in Dowagiac, Michigan. The tribe considers the Pokagon Homeland to be made up of four counties in southwest Michigan and six counties (La Porte, St. Joseph, Elkhart, Starke, Marshall and Kosciusko) in northwest Indiana. Three of these counties are described in **Tables 1 to 3** as they fall within the top third of counties at highest risk for OUDs. The Pokagon Band Behavioral Health Services is licensed by the State of Michigan to provide outpatient counseling for mental health and substance abuse. Although the tribal government and services are located in Michigan, the Indiana Division of Mental Health and Addiction (DMHA) has developed a relationship with the Pokagon tribal government to ensure their input in mental health and addiction service provision to this population.

Table 2 presents information on the ages, languages, and sexual orientation of the residents in the highest-risk counties. All but three of the counties (Johnson, Marion, and St. Joseph) have median ages older than the overall statewide median age. These are the three most populous counties in the top-third ranking for highest risk of all counties in the state. The other counties have median ages ranging from 38.1 in Bartholomew County to 43.3 in the small rural county of Blackford. The female population of childbearing age (15 to 44), makes up approximately one-fifth of the total Indiana population. In the targeted counties, females of childbearing age range from 16.4% of the total population in rural Pulaski County to 22.2% of the total population in Marion County.

Four of the targeted counties have larger segments of their population who speak Spanish in the home than the statewide average. Percentages range from 5.1% of residents of Bartholomew County to 12.5% of the Clinton County residents.

The U.S. Census does not ask about sexual orientation or gender identity on their surveys. To estimate the size of this population in the high risk counties, U.S. Census data on same-sex unmarried households is presented in **Table 2**. This provides the percent of unmarried households where both partners identify as male or both individuals identify as female. The most recent data available (2015) do not report on same-sex married households, although same-sex marriage has been legally recognized in Indiana since 2014. Less than one percent of the households in the high risk counties have same-sex partners, with the largest percentages found in Scott (0.8%), Jay, and Marion (0.7% each) Counties.

Levels of poverty and other socioeconomic indicators are presented in **Table 3**. Among the counties with the highest rates of non-fatal emergency room visits, rates of poverty for individuals range from 5.8% of individuals in Boone County to 21.1% of individuals in Marion and Wayne Counties. Families who are headed by females, with no husband present, are at great risk of experiencing poverty. Rates for these families range from 10.2% in Union County to 47.3% in Wayne County.

The U.S. Census Bureau estimates that in 2015, 12.8% of Indiana Hoosiers did not have private or public health insurance. In the counties at highest risk for OUDs, the rates range from 7.8% of Boone County residents to 16.9% of residents in Wayne County. Indiana has participated in the expansion of Medicaid services under the Affordable Care Act, expanding coverage to any person between the ages of 19 and 64 whose income was less than 138 percent of the federal poverty level. To participate, residents are required to make monthly contributions based on income, which equals approximately two percent of annual family income. It is unclear at this time how changes to the Affordable Care Act will unfold.

Most of the counties in the top third for highest rates of non-fatal emergency room visits have higher rates of individuals over 25 years who do not have a high school diploma than the overall state rate of 12.2%. The rates of individuals without a high school diploma within the counties of focus range from 6.0% in Hancock County to 19.6% in Fayette County.

Table 1. Selected Racial and Ethnic Demographic Data for Highest Risk Counties, 2011 - 2015 (5-year estimates)

County	Total population	% White	% Black	% Am. Indian or Alaska Native	% Asian	% Other	% 2 or more races	% Hispanic (any race)
Bartholomew	79,488	87.1	2.0	0.3	4.9	4.2	1.6	6.2
Blackford	12,476	97.4	0.6	0.1	0.2	0.0	1.6	1.4
Boone	60,511	94.4	1.2	0.2	2.3	0.2	1.6	2.5
Clark	113,181	88.3	7.0	0.1	0.9	1.1	2.5	5.0
Clinton	32,835	92.8	1.2	0.2	0.3	4.5	1.0	14.5
Decatur	26,240	96.2	0.8	0.1	1.3	0.7	0.9	1.8
Fayette	23,773	96.3	2.0	0.0	0.3	0.7	0.7	1.0
Floyd	75,900	90.4	4.9	0.3	1.0	1.0	2.3	2.9
Grant	68,896	88.6	6.7	0.2	0.7	0.6	3.1	4.0
Hancock	71,328	95.3	2.0	0.3	0.5	0.1	1.6	2.0
Howard	82,765	88.2	7.1	0.3	1.2	0.8	2.4	3.0
Huntington	36,863	97.0	0.7	0.4	0.8	0.4	0.7	2.0
Jay	21,255	98.1	0.6	0.2	0.3	0.1	0.8	2.9
Jennings	28,113	97.3	1.4	0.1	0.2	0.3	0.7	2.3
Johnson	145,645	92.8	2.2	0.1	2.0	1.2	1.7	3.4
La Porte	111,280	84.0	10.9	0.2	0.5	1.7	2.6	6.0
Lawrence	45,814	96.7	0.4	0.2	0.6	0.6	1.6	1.5
Madison	130,280	88.1	7.8	0.1	0.4	1.2	2.4	3.6
Marion	926,335	63.1	27.1	0.3	2.4	4.3	2.8	9.7
Montgomery	38,172	96.2	0.9	0.3	0.5	0.7	1.4	4.5
Morgan	69,403	97.4	0.4	0.1	0.6	0.3	1.2	1.4
Pulaski	13,047	96.4	0.5	0.1	0.4	0.9	1.7	2.8
Randolph	25,596	97.1	0.4	0.1	0.1	0.5	1.8	3.2
St. Joseph	267,246	79.5	12.9	0.3	2.0	2.1	3.1	8.0
Scott	23,783	97.4	0.3	0.1	0.4	0.6	1.2	1.7
Shelby	44,441	94.4	1.3	0.3	0.7	2.4	0.9	3.9
Starke	23,117	95.6	0.7	0.1	0.3	1.9	1.4	3.5
Union	7,299	96.3	0.2	0.0	0.6	0.0	2.9	0.7
Wabash	32,358	96.0	0.8	0.7	0.3	0.9	1.2	2.3
Washington	27,930	98.1	0.1	0.4	0.2	0.1	1.1	1.4
Wayne	67,866	90.0	4.8	0.1	0.8	1.4	2.9	2.7
Indiana	6,568,645	84.2	9.2	0.2	1.9	2.3	2.2	6.4

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Table 2. Selected Age, Language, and Sexual Orientation Demographic Data for Highest Risk Counties, 2011 - 2015 (5-year estimates)

County	Median age	% of population – females age 15 - 44	% who speak only English	% who speak Spanish at home	% who speak other language at home	% of households with same sex partners
Bartholomew	38.1	18.6	89.6	5.1	5.4	0.3
Blackford	43.3	16.6	98.3	1.2	0.6	0.4
Boone	38.8	18.5	95.6	1.6	2.8	0.2
Clark	38.7	19.6	95.2	3.5	1.3	0.4
Clinton	38.4	18.1	86.9	12.5	0.5	0.3
Decatur	39.5	17.9	96.0	1.5	2.5	0.6
Fayette	42.2	17.0	99.1	0.6	0.4	0.2
Floyd	39.6	19.3	96.0	2.5	1.5	0.3
Grant	40.0	20.0	96.9	1.6	1.5	0.4
Hancock	39.8	18.7	97.8	1.4	0.8	0.2
Howard	41.5	18.0	96.1	2.2	1.7	0.2
Huntington	39.8	18.8	97.3	1.1	1.6	0.2
Jay	39.5	17.8	95.7	2.2	2.1	0.7
Jennings	39.4	18.4	98.3	1.0	0.7	0.5
Johnson	37.3	19.7	94.0	2.3	3.6	0.4
La Porte	39.9	16.9	94.0	4.0	1.9	0.3
Lawrence	41.9	17.5	97.4	1.0	1.6	0.3
Madison	39.8	18.2	96.6	2.4	1.1	0.4
Marion	34.1	22.0	87.5	8.3	4.2	0.7
Montgomery	40.2	17.2	95.0	3.6	1.4	0.3
Morgan	40.9	18.2	98.0	1.2	0.8	0.4
Pulaski	41.3	16.4	98.0	1.0	1.0	0.2
Randolph	42.2	17.1	98.0	1.5	0.5	0.3
St. Joseph	36.5	20.4	90.6	5.5	4.0	0.3
Scott	40.3	18.6	97.1	2.1	0.7	0.8
Shelby	41.0	17.8	95.7	3.1	1.2	0.4
Starke	41.6	17.7	96.1	2.3	1.5	0.0
Union	42.1	17.5	98.5	0.4	1.1	0.4
Wabash	42.4	17.3	97.1	1.8	1.0	0.1
Washington	40.7	17.7	98.0	0.7	1.3	0.4
Wayne	40.9	18.1	95.3	2.3	2.5	0.2
Indiana	37.3	19.7	91.7	4.6	3.7	0.4

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

Table 3. Selected Socioeconomic and Education Data for Highest Risk Counties, 2011 - 2015 (5-year estimates)

County	% of individuals below poverty level	% of families with female householder below poverty level	% with no public or private health insurance coverage	% of pop 25+ with no high school diploma
Bartholomew	12.8	27.0	11.4	9.7
Blackford	14.0	36.6	14.8	14.4
Boone	5.8	14.4	7.8	6.6
Clark	10.8	19.9	12.6	12.8
Clinton	14.1	29.1	13.7	13.8
Decatur	14.2	38.5	13.0	11.4
Fayette	20.6	40.9	16.1	19.6
Floyd	12.8	37.6	10.8	10.8
Grant	18.7	36.7	13.1	13.7
Hancock	6.5	17.6	8.5	6.0
Howard	17.8	36.1	11.6	11.9
Huntington	12.0	23.8	11.3	10.3
Jay	16.3	37.1	13.0	15.8
Jennings	15.9	32.3	12.0	16.1
Johnson	9.9	29.3	9.7	8.0
La Porte	17.4	42.9	11.6	13.4
Lawrence	13.0	33.3	14.4	12.7
Madison	17.1	31.6	13.1	12.7
Marion	21.1	36.2	15.6	15.0
Montgomery	14.2	32.7	12.6	11.6
Morgan	12.1	36.4	10.9	11.8
Pulaski	14.2	28.2	12.7	13.9
Randolph	18.0	43.0	15.3	14.4
St. Joseph	17.8	37.7	12.6	12.0
Scott	17.8	39.8	11.2	17.0
Shelby	12.2	29.3	12.6	12.8
Starke	16.0	29.2	11.1	17.7
Union	10.4	10.2	12.0	12.0
Wabash	14.4	43.5	9.8	11.9
Washington	15.2	35.7	12.5	15.9
Wayne	21.1	47.3	16.9	16.0
Indiana	15.4	33.6	12.8	12.2

Source: U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates

A-2

As this is a state-level project, the population of focus is broadly conceptualized as underserved communities in Indiana, with additional focus on those who are at especially high risk of OUD-related harms (e.g., pregnant women, adolescents, and offenders re-entering the community). The specific counties identified in Section A-1 are those that experienced the highest rates of non-fatal opioid overdoses in the last five years. Because data privacy rules curtail any county-level report with data on fewer than 5 cases, actual deaths attributable to opioid overdose are not

available at a county level (see general data in **Figure 6**), rendering the rates of non-fatal overdoses the best measure of direct, negative OUD outcomes. Thus, by definition alone, the population of focus for this grant experiences serious disparities in OUD-related outcomes relative to the overall state population.

Many of the underserved counties include higher rates of individuals with low income levels (13 counties) and those who are uninsured (10 counties) than the state rates (see **Table 3**); lower income rates also can serve as a proxy measure for Medicaid enrollment. Research indicates that individuals on Medicaid are more likely to receive prescriptions for opioid pain medications and to have opioids prescribed at higher doses and for longer periods of time than the non-Medicaid patients. Opioid medication overdose deaths are also more common among Medicaid-eligible patients (Behavioral Health Coordinating Council, 2013). The selected counties include one densely-populated county (Marion), but the remainder are primarily rural. In rural settings, isolation and lack of transportation compound the problems encountered by this population. While these barriers to access and service can be illustrated in Indiana by distance of travel from the point of opioid overdose death to the nearest OTP (see **Figure 10**), there has been substantial research at a national level examining barriers to healthcare access for rural individuals. Transportation access and provider locations can serve as meaningful barriers to access and use in rural areas (Arcury et al., 2005), along with lack of quality or specialty care and social isolation (Goins et al., 2005). Even when rural providers want to work on continuing education, there are numerous barriers to their doing so (Curran et al., 2006). Based on this information, one reasonably can presume that there are differences in access and service utilization for the underserved counties identified in this proposal – this is supported not only by national and regional research literature, but also by inductive correlative assessment of the non-fatal opioid overdose ER visits.

Each component of the project is designed specifically to mitigate these disparities in access, service use, and health outcomes among the population of focus while also supporting and bolstering the statewide OUD prevention, treatment, and recovery infrastructure.

Expansion of residential/inpatient treatment and detoxification will create capacity and reduce waitlist times, minimizing barriers experienced by communities of focus in accessing needed care. Mobile crisis teams will place the burden of transportation for OUD and mental health crises on trained staff who will meet individuals in need where they are. Project ECHO (I-ECHO) will mitigate the barriers related to lower-quality specialty care in rural areas by providing innovative means of specialty health education related to OUDs.

The recovery coach and peer support initiative (IRPSI) will work toward ensuring continuing care and, specifically, will work to avoid individuals re-entering communities without access to treatment and recovery services. The expansion of INSPECT, Indiana's PDMP, will target underserved and rural areas where the cost of integrating the data into the electronic health record is prohibitive. Finally, environmental prevention strategies will identify the unique characteristics of individuals living in these underserved counties in order to provide targeted behavior change and health communication messaging.

Specific needs are identified in Section A-3 in greater contextual detail and also are demonstrated in **Figure 11** as linkages to programs, and subsequently, in **Figure 14**, to measurable objectives.

A-3.

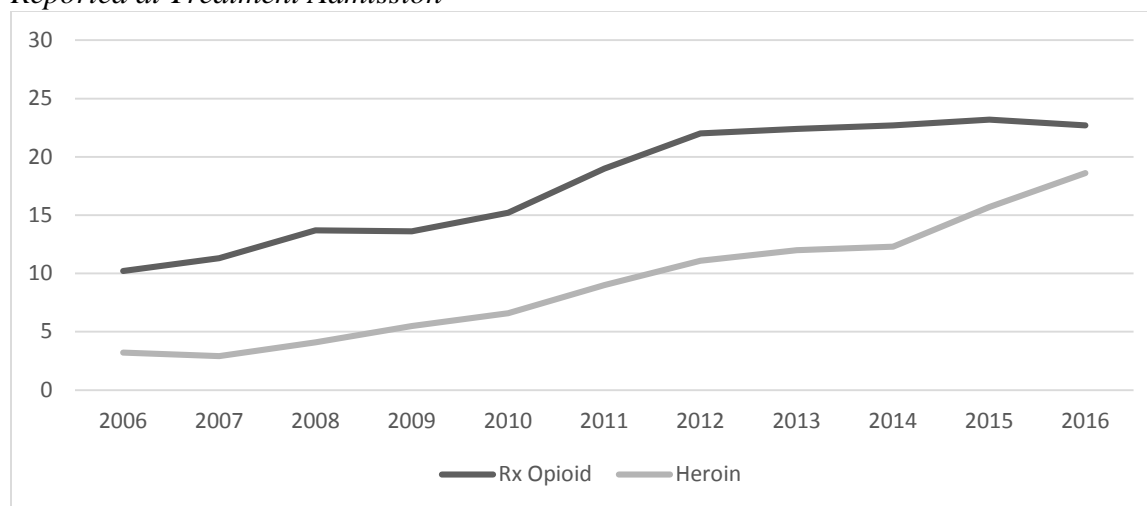
Statewide Opioid Use Prevalence

In 2016, 6.0% of high school seniors in Indiana reported past month use of prescription drugs not prescribed to them, and 0.5% reported using heroin in the past month (Gassman et al., 2016). According to the 2015 National Survey on Drug Use and Health (NSDUH), 0.3% of Indiana residents 12 years or older had used heroin in the past year, including nearly one percent of the individuals 18-25 years old (0.8%) (<https://www.samhsa.gov/data/population-data-nsduh/reports?tab=38>). In addition, the 2014 NSDUH estimated that 4.4% of Indiana residents 12 years or older had abused prescription opioids in the past year. As with heroin, the age group most likely to report nonmedical use of prescription opioids was 18-25 years. Almost one in ten young people 18-25 years old (9.5%) reported nonmedical use of prescription pain medication in the past year. Five percent of adolescents 12-17 years reported past year misuse of prescription pain medication, and 3.4% of adults over 25 years did so (<https://www.samhsa.gov/data/population-data-nsduh/reports?tab=38>).

Opioid Treatment Data

Nearly one-quarter of the individuals receiving substance abuse treatment in Indiana in 2016 (22.7%) indicated prescription opioid drug use at time of admission and over one-third (35.9%) indicated either heroin or prescription opioid drug use (or both). The percentage of treatment episodes with reported opioid use has increased substantially over the past decade (see **Figure 1**).

Figure 1. *Percentage of Indiana Treatment Episodes with Prescription Opioid or Heroin Use Reported at Treatment Admission*



Source: Substance Use and Mental Health Services Administration, TEDS, 2006-2015

Pregnant women represent a high-risk population even within underserved communities. Although state-level data are not available, nationally, from 1992 to 2012, treatment admissions for pregnant women (all substances) remained stable at approximately four percent. However, the proportion of pregnant women entering treatment who reported any prescription opioid misuse increased substantially (from 2% to 28%) (Martin et al., 2014).

In Indiana, in 2013, women were almost twice as likely as men to report nonmedical use of pain medication at the time of treatment admission. Whites and Non-Hispanics also reported much higher rates than other races/ethnicities. Individuals aged 25-34 were most likely to report nonmedical use of pain medication at treatment admission (29.7%), followed by individuals 18-24 years old (22.8%) (see **Table 4**). Females were more likely than males to report heroin use at treatment admission (14.8%). Whites (26.0%) and individuals aged 25-34 (29.7%) were also more likely than comparison groups to report heroin use at treatment admission (see **Table 5**). Further, the percentage of Whites reporting heroin use at the time of treatment admission has increased nearly three-fold since 2009, and has remained the highest percentage among all races since 2010 (see **Figure 2**).

Table 4. *Percentage of Indiana Treatment Episodes with Nonmedical Prescription Drug Use Reported at Treatment Admission, by Gender, Race, Ethnicity, and Age Group*

Gender	Male	18.0%
	Female	29.7%
Race	White	26.0%
	Black	4.6%
	Other	15.6%
Ethnicity	Hispanic	7.0%
	Non-Hispanic	23.0%
Age Group	Under 18	10.0%
	18-24	22.8%
	25-34	29.7%
	35-44	21.1%
	45-54	13.2%
	55+	11.0%

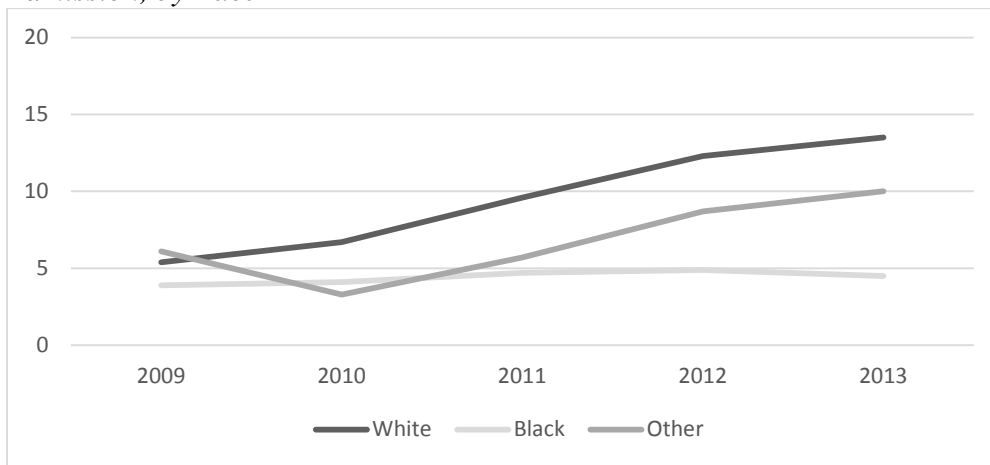
Source: Substance Use and Mental Health Services Administration, TEDS, 2013

Table 5. *Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Gender, Race, and Age Group*

Gender	Male	10.4%
	Female	14.8%
Race	White	13.5%
	Black	4.5%
	Other	10.0%
Age Group	Under 18	1.8%
	18-24	15.6%
	25-34	16.6%
	35-44	8.4%
	45-54	4.9%
	55+	7.0%

Source: Substance Use and Mental Health Services Administration, TEDS, 2013

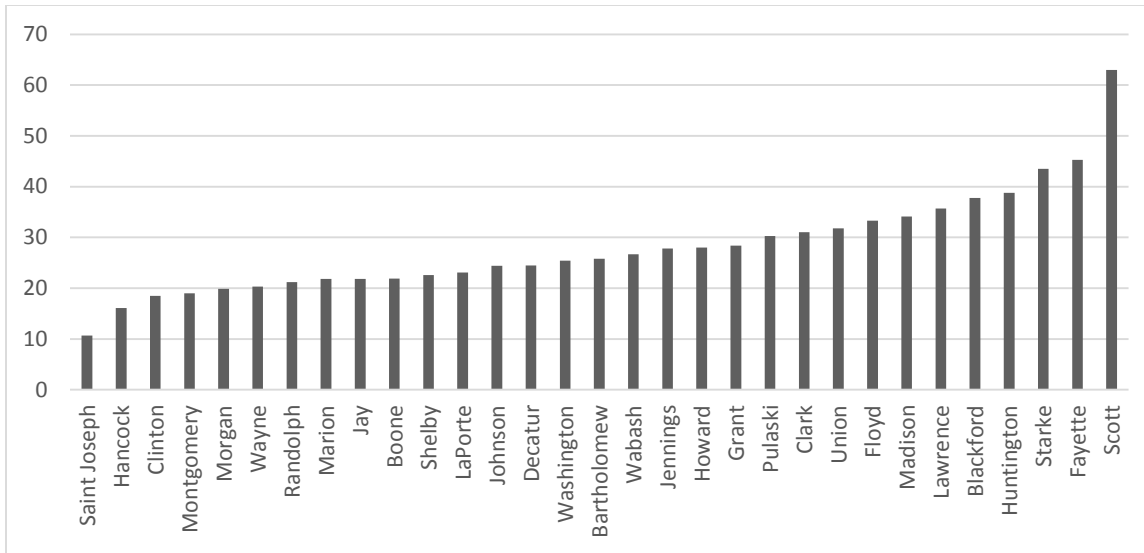
Figure 2. Percentage of Indiana Treatment Episodes with Heroin Use Reported at Treatment Admission, by Race



Source: Substance Use and Mental Health Services Administration, TEDS, 2009-2013

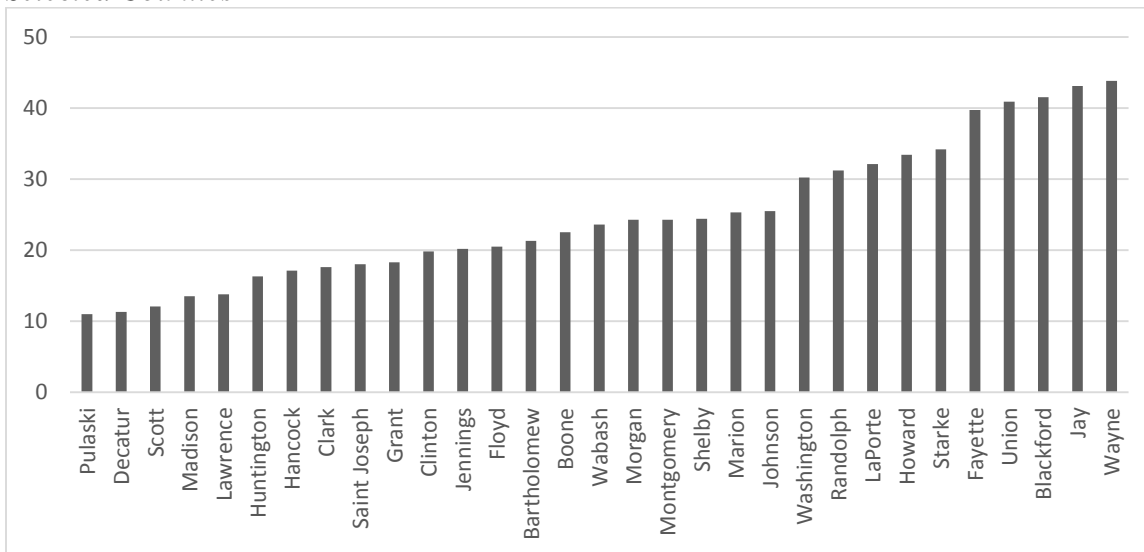
In the counties identified as being especially impacted by the OUD epidemic and/or underserved in Section A-1, the percentages of treatment episodes with prescription opioid use ranged from 10.7% in Saint Joseph County to 63.0% in Scott County, while the percentages of treatment episodes with heroin use ranged from 6.9% in Lawrence County to 45.2% in Union County (**Figures 3 and 4**).

Figure 3. Percentage of Treatment Episodes with Prescription Opioid Use Reported at Treatment Admission, Selected Counties



Source: Substance Use and Mental Health Services Administration, TEDS, 2016

Figure 4. Percentage of Treatment Episodes with Heroin Use Reported at Treatment Admission, Selected Counties



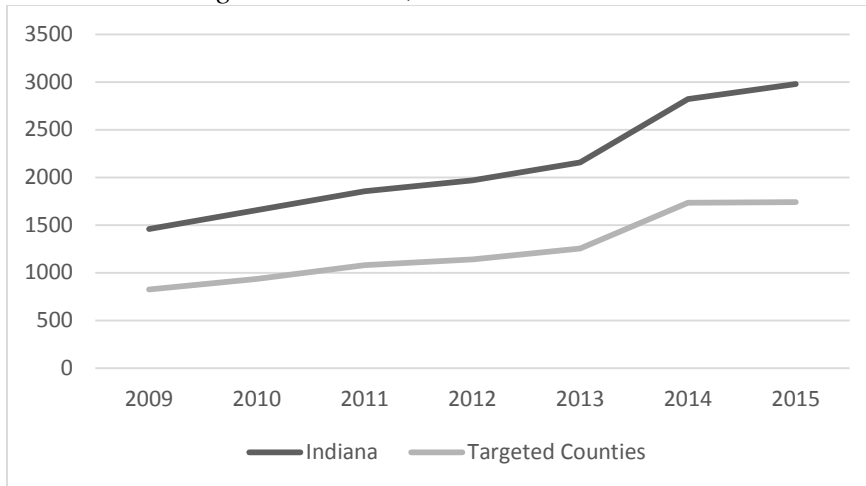
Source: Substance Use and Mental Health Services Administration, TEDS, 2016

Other Opioid Metrics

The number of non-fatal emergency department visits due to opioid overdoses has doubled in Indiana over the last seven years for which data are available, increasing from 1,460 to 2,977 (see **Figure 5**). Over the last five years for which data are available, the number of fatalities due to opioid overdoses has ranged from 168 deaths in 2013 to 274 in 2015 (see **Figure 6**). Because

data by county are not available when fewer than five deaths occur in a year, it is not possible to determine the distribution of instances per county for opioid overdose deaths.

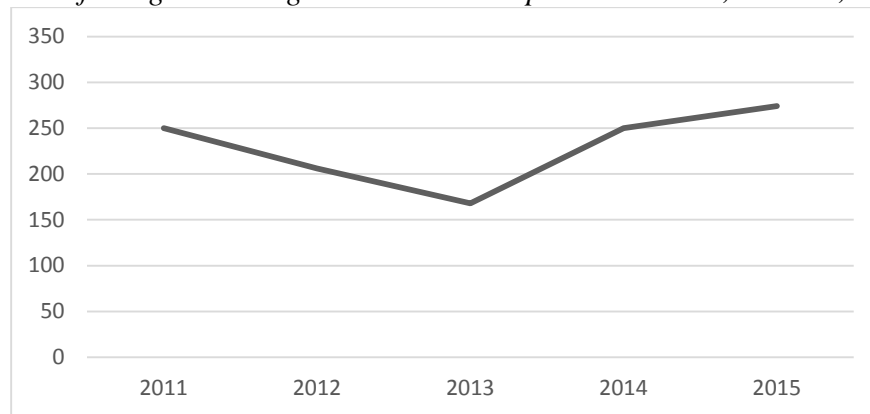
Figure 5. *Number of Non-Fatal Emergency Department Visits Due to Opioid Overdoses, Indiana and Targeted Counties, 2009 – 2015*



Source: *Indiana State Department of Health*

Note: *Totals were not provided for counties with fewer than 5 cases in a given year.*

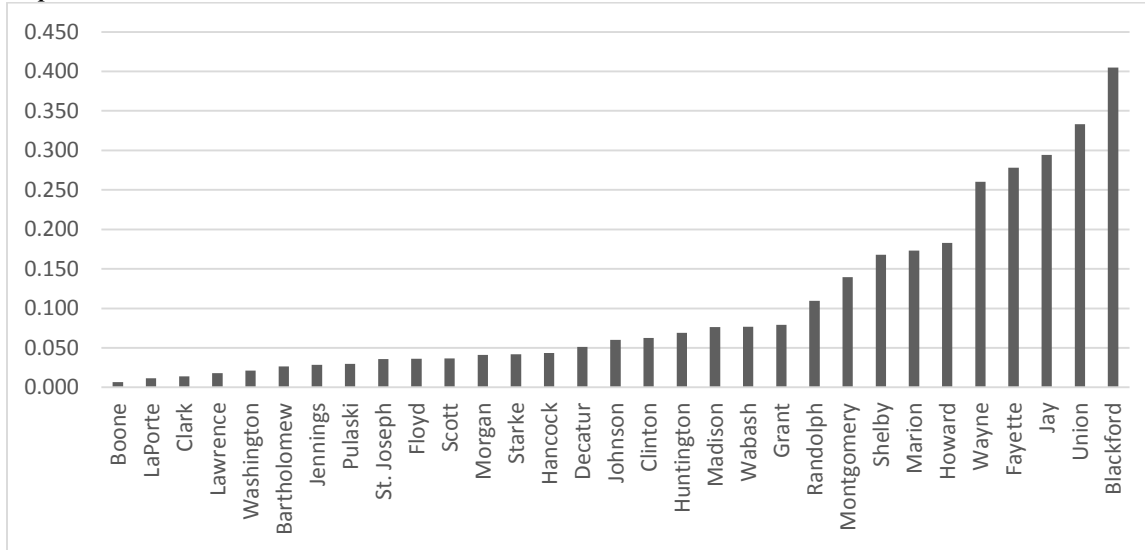
Figure 6. *Number of Drug Poisoning Deaths Due to Opioid Overdose, Indiana, 2011 – 2015*



Source: *Indiana State Department of Health*

The ratio of forensic laboratory submissions to number of births is another indicator of the scope of the problem of opioid misuse. Laboratory submissions are made for confirmational testing for opioid exposure, although the data can vary due to other influences, including level of law enforcement activities. Out of just over 80,000 births in Indiana in 2015, almost 6,000 tests for opioid exposure were conducted, for a statewide ratio of 0.074. In selected counties, the ratios range from 0.006 to 0.405 (see **Figure 7**).

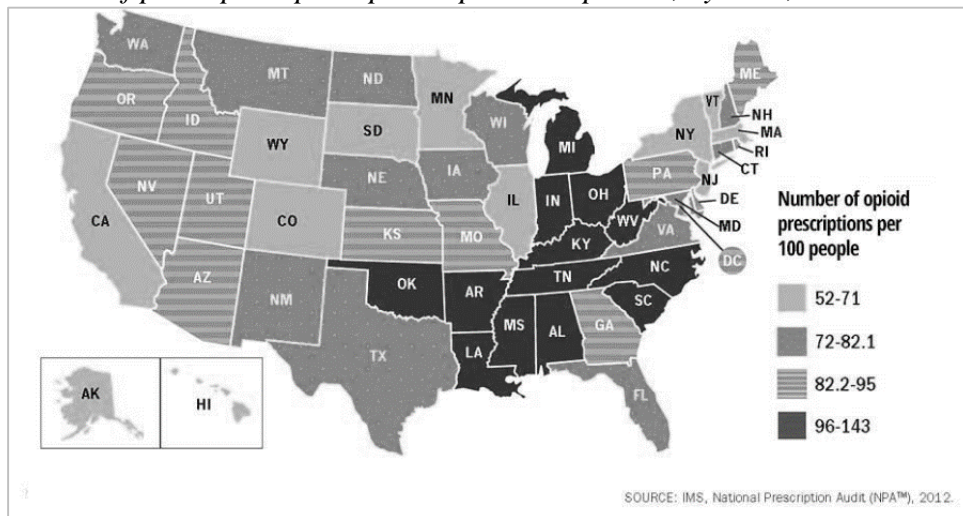
Figure 7. Ratio of Forensic Laboratory Submissions for Confirmational Testing for Opioid Exposure, Selected Counties, 2015



Source: Indiana State Department of Health

Opioid prescribing rates in Indiana are among the highest in the nation, with Indiana ranking ninth out of 50 states for per capita rate of painkiller prescriptions dispensed in 2012 (see **Figure 8**). The CDC notes that health issues causing pain do not vary greatly from state to state, and do not explain the variability in prescribing rates (<https://www.cdc.gov/drugoverdose/data/prescribing.html>).

Figure 8. Number of per capita opioid prescriptions dispensed, by state, 2012.



Source: Centers for Disease Control and Prevention

Current Resources

The Indiana Family and Social Services Administration (FSSA), Division of Mental Health and Addiction (DMHA), is the Single State Substance Abuse Agency, and receives and manages the

federal Substance Abuse Prevention and Treatment Block Grant. The block grant enables DMHA to provide funding for addiction treatment services to over 28,000 low-income (below 200% of poverty) individuals. Services are provided via contracts with 25 independent community mental health centers and 9 certified addiction treatment providers. In addition, in 2015, DMHA implemented the Recovery Works program, which supports access to treatment, housing, and transportation services in all 92 counties to offenders re-entering communities.

DMHA certifies all addiction treatment providers in Indiana. Indiana has 80 addiction treatment providers that are accredited by a national accreditation entity; typically, these providers have more than 11 staff. Indiana also has 161 smaller outpatient addiction treatment providers that are not accredited and have less than 11 staff; sometimes these providers consist of one practitioner.

There are 14 Opioid Treatment Providers (OTPs) in Indiana, located in ten counties; 13 are overseen by DMHA, and one is at a VA hospital. All but three of these centers are located in counties with populations over 100,000. During the 2015 legislative session, the Indiana General Assembly modified the moratorium on certification of new Opioid Treatment Programs and authorized up to five new OTP clinics.

DMHA contracts with two providers to provide residential detoxification services. In the whole state, there are only 9 general hospitals with certified addiction units providing detoxification, 14 psychiatric hospitals with certified addiction units providing detoxification and 10 certified addiction residential facilities providing detoxification services. DMHA also contracts with 6 residential providers to provide residential services to women. Additionally, the Indiana Department of Corrections provides 1,200 beds in Therapeutic Communities in nine facilities for both male and female offenders. Offenders participating in the program are segregated from the general prison population.

SAMHSA also identifies 350 physicians in Indiana (<https://www.samhsa.gov/medication-assisted-treatment/physician-program-data>) who are eligible to prescribe buprenorphine. However, only half of the counties (46) are represented, and more than half of the physicians (170) are located in Marion or the surrounding counties. Physicians are limited in the number of patients they can treat, but a report issued in 2016 by Indiana University-Purdue University, Indianapolis found that they often do not treat their full quota and some treat none at all (Duwve et al., 2016).

Indiana received a MAT-PDOA grant in 2015 to expand and enhance its outreach and engagement services and increase access to medication-assisted treatment. This program's funding and intersection with the current proposal is addressed in Section B-2.

Indiana's prescription drug monitoring program, INSPECT, provides a searchable database for healthcare providers to determine prior controlled substance dispensation for their patients. Pharmacies are required to report controlled substances that they dispense within 24 hours. As of December 31, 2015, there were over 14,000 health care providers registered to access the system. Although the use of the database is not mandated for healthcare practitioners, there were almost half a million queries of the database. Expansion of INSPECT and integration into electronic

health records for easy provider access is an important component of the proposed work with this funding, and is explained in greater detail in Sections B and C.

Indiana's prevention system is guided by the latest prevention research. The State has created the Community Prevention Framework (CPF) as a guide to Indiana communities as they undertake prevention efforts and move through the Strategic Prevention Framework (SPF) process. CPF combines elements of the latest research in prevention science, the SPF, and the Communities That Care (CTC) system. CTC is a five-step prevention planning tool that guides communities in strengthening the prevention infrastructure and decreasing substance abuse as well as its associated consequences. The system incorporates the use of milestones and benchmarks to track progress and focus the efforts of coalitions, and provides a valuable tool that can be used to guide the provision of technical assistance. The State Epidemiological Outcomes Workgroup (SEOW) is responsible for determining state priorities for preventing and reducing substance use. After analyzing available data on risk and protective factors, substance use, and consequences, the SEOW determined six priorities and set objectives to reduce use in these areas by 2020. The six substance abuse prevention priority areas for 2015 to 2020 were determined to be alcohol, tobacco, prescription drugs, marijuana, injection drug use and suicide. Despite these strengths, addressing the priority areas articulated by the SEOW for prescription drug and injection drug use (especially opioids) will require substantial investment in environmental prevention and health communications using evidence-based approaches.

Needs and Service Gaps

Indiana has few inpatient and residential treatment options and fewer that include detoxification. Indiana only has a small number of providers that have specialized programming for pregnant women and women with their children. In addition, there are areas of the state that have no addiction treatment residential or inpatient facilities. There is a pressing need for expanded resources for inpatient and residential treatment, detoxification, and integrated recovery services, both within the ER and within the broader context of OUD treatment – all of which are proposed in this document.

A recent national study of the states' treatment needs and capacities found that Indiana had the third highest rate in the country for past year opioid abuse, but the capacity for medication-assisted treatment was far below its need. The rate per 100,000 of Indiana's population 12 years of age or older who had an opioid abuse or dependence in the past year was 12.6 (based on average annual rate for 2009-2012). However, the treatment capacity for buprenorphine treatment was only 2.8 per 100,000. Indiana had the second largest gap between need and capacity of all states in the nation (Jones et al., 2015). Expansion of MAT capacity and specialty physician and healthcare provider education are critical needs for the state. Further, expansion of opioid-overdose-reversal capacity via mobile 'crisis teams' is needed to maximize the number of individuals whose overdose is non-fatal.

Recently identified barriers to patients' receipt of buprenorphine in Indiana include provider availability and willingness to prescribe, limited insurance coverage, and costs. In addition, physicians' confidence in addressing addiction, and concerns of limited access to addiction experts, lack of institutional or office support, lack of behavioral health services, and

reimbursement contribute to the limited number of physicians seeking the federal waiver and the underuse of buprenorphine among those who have obtained a waiver (Duwve et al., 2016). Further, national data indicate that only 44%-66% of the physicians with waivers actually prescribe buprenorphine (Jones et al., 2015).

Barriers to accessing methadone include long waiting lists, long distances for many residents of the state (see **Figure 10**), limited insurance coverage, and the requirement that many patients must present at the OTP daily for treatment. A recent study of the treatment and recovery systems in Indiana found that, in addition to insufficient detox and residential treatment services, there were insufficient recovery support services, including recovery housing, transportation, job training, and employment (Kooreman & Greene, 2016).

The work proposed in response to this funding opportunity is designed specifically and intentionally to address the needs and service gaps experience both in the selected, underserved counties in Indiana and also, in broader strokes, throughout the entire state.

Figure 10. Distances of Opioid-Related Deaths to the Nearest Opioid Treatment Provider, 2008-2016



Source: Indiana Management and Performance Data Hub

SECTION B: PROPOSED IMPLEMENTATION APPROACH

B-1

The purpose of the proposed project is to address the opioid crisis in Indiana by expanding existing prevention, treatment, and recovery services for OUDs, identifying and implementing new evidence-based programs across the continuum of care to address OUDs and opioid use in general, and focusing on providing focused support to areas with limited access to treatment and related services.

Section A of this proposal provides a preliminary needs assessment and strategic analysis of the state's assets and needs in this area. During the initial phase of the proposed project, project staff will complete additional needs assessment work and strategic planning and make a final determination of a statewide plan in conjunction with stakeholders. Throughout this application, we will utilize the word **goals** to refer to strategically-selected programming (i.e., in each case, our **goal** is to implement a specific **program**). Each **goal** is derived from one or more **needs** and is expected to address one or more **measurable objectives**. Additional cross-walks between other required data (e.g., FOA **required activities**) and best-practice implementation guides is

provided in Section C-1. Based on the initial needs assessment developed for this proposal, we propose the following description and partial logic model (see **Figure 11**) for this project. All goals are described in detail in Sections B-5 and B-6, and are addressed from their bases as evidence-based practices in Sections C-2 through C-5.

Goal 1: Indiana Prescription Drug Monitoring Program Expansion (INSPECT). This goal is predicated on the need for additional healthcare providers to have integrated electronic access to INSPECT and is expected directly to address two measurable objectives by reducing the numbers and rates of opioid use (Objective 5) and reducing the number and rates of opioid overdose-related deaths (Objective 6) in the state of Indiana.

Goal 2: Environmental Prevention Expansion. This goal is based on the need for a broad-based environmental prevention system to provide targeted messaging to potential opioid users in Indiana and is expected directly to address two measurable objectives by reducing numbers and rates of opioid use (Objective 5) and reducing numbers and rates of opioid overdose-related deaths (Objective 6).

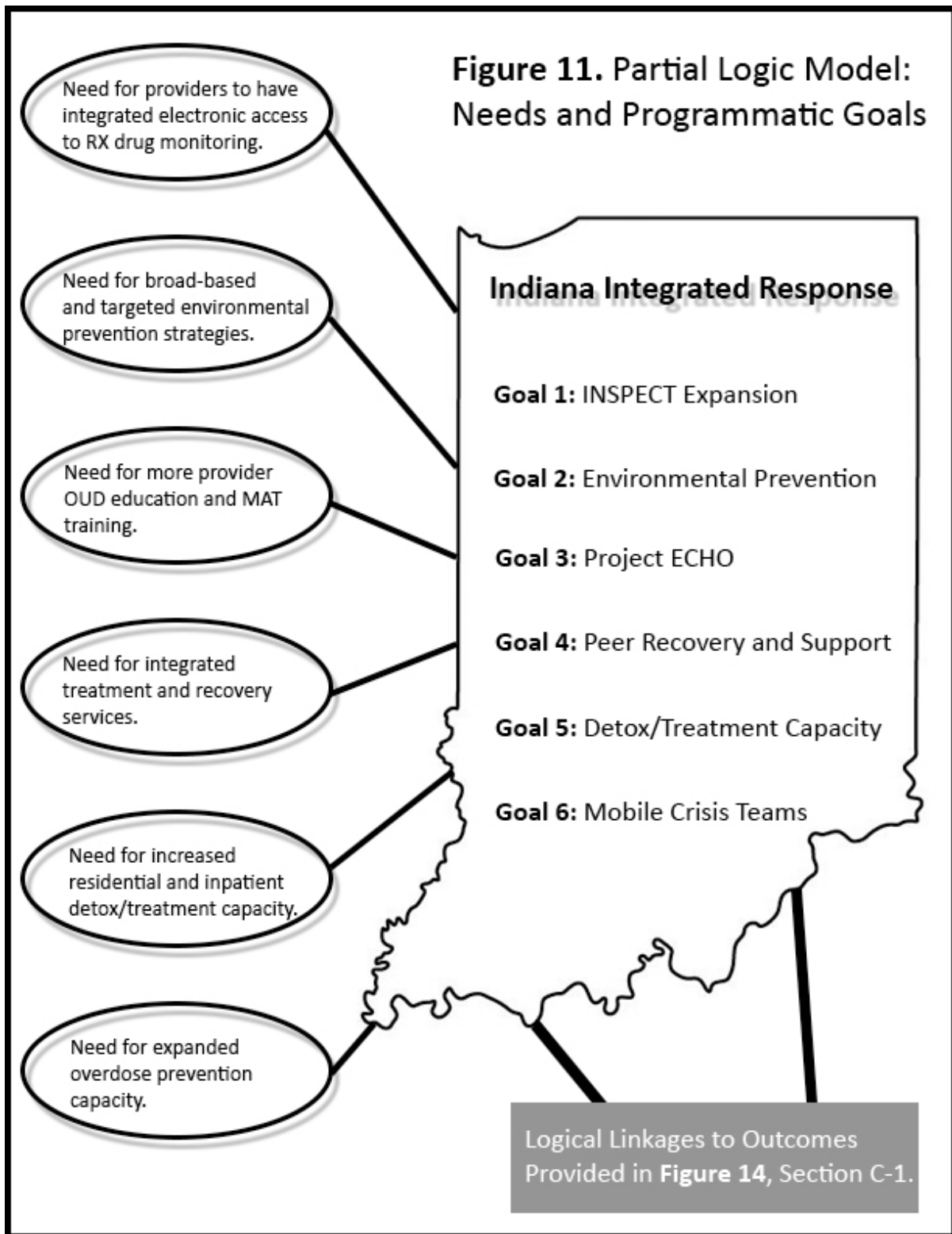
Goal 3: Extension for Community Healthcare Outcomes – Project ECHO. This goal is based on the need for expanded healthcare provider education and MAT training, especially in underserved areas and is expected measurably to increase the number of OUD prevention and treatment providers trained (Objective 4).

Goal 4: Indiana Peer Recovery and Support Initiative. This goal is based on the need for integrated treatment and recovery services, especially for patients who have overdosed on an opioid, and is expected to increase the number of people who receive OUD treatment (Objective 1), increase the number of people who receive OUD recovery services (Objective 2), and increase the number of providers implementing MAT (Objective 3).

Goal 5. Expansion of Residential/Inpatient Detoxification and Treatment. This goal is based on the need to expand resources for inpatient and residential detoxification and treatment, including staff and space, and is expected to increase the number of people who receive OUD treatment (Objective 1), increase the number of people who receive OUD recovery services (Objective 2), and increase the number of providers implementing MAT (Objective 3).

Goal 6. Expansion of Mobile Crisis Teams. This goal is based on the need to expand capacity throughout the state to prevent opioid overdose fatalities prior to arrival at the ER and is expected to address the objective of reducing the numbers and rates of opioid overdose-related deaths (Objective 6).

**Figure 11. Partial Logic Model:
Needs and Programmatic Goals**



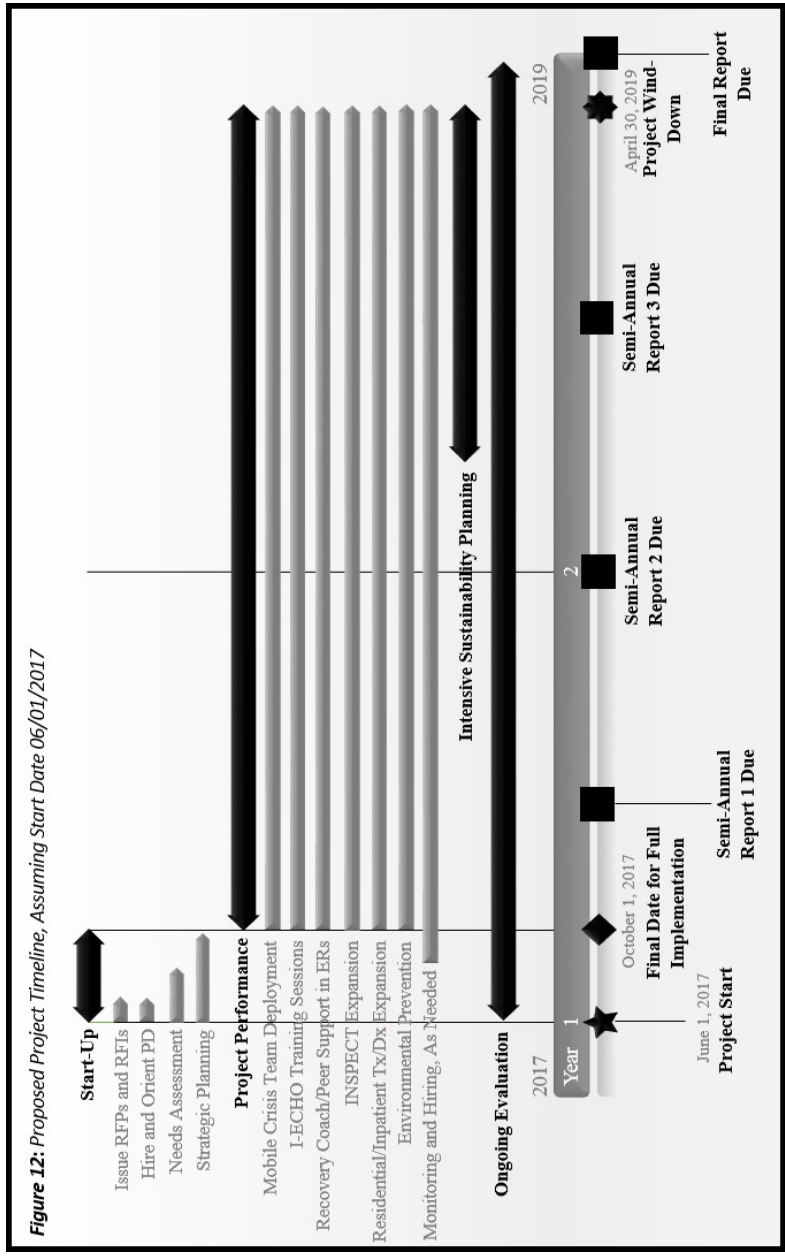
B-2

The only other resources that address the objectives for this proposed project stem from Indiana DMHA's receipt of MAT-PDOA funding (award #TI026149) via FOA TI-15-007. This program was funded to support MAT expansion, outreach, recovery support, and case management for approximately 500 individuals over three years. It selectively targets individuals in two communities in a tiered roll-out: Valparaiso and Austin, Indiana. In order to facilitate services, two OTPs are engaged for service delivery. In order to ensure that the Opioid STR funds will not duplicate existing efforts, a differentiation mechanism ('checkbox') will be added to the state's data collection system (DARMHA). Individuals in the selected communities who are recruited or who receive services through MAT-PDOA will be separated in DARMHA from those who receive services through Opioid STR projects. In cases where additional services, beyond those provided by MAT-PDOA services are provided to individuals via this funding opportunity, those additional services will be funded by Opioid STR funds.

B-3

Figure 12 provides a general anticipated timeline for the project period. The timeline includes a start-up period of up to four months, which includes issuance of RFPs and RFIs pursuant to each of the strategic goals, hiring and orientation of the project director (PD), needs assessment, and comprehensive statewide strategic planning. Because the requirements outlined in Section I-2 of the FOA are general program descriptors, we have mapped each of our specific strategic goals/activities to the expectations from the FOA to clarify which is met by each process. The Grant Program Director as part of the Addiction Treatment Team within DMHA will oversee all tasks associated with the timeline. That information is available in conceptual alignment document (**Figure 13**). For clarity, we also provide a brief summary of that alignment here.

Mobile Crisis Team Deployment supports implementation and expansion of access to clinically-appropriate EBPs for OUD treatment; I-ECHO supports all of the required activities from FOA section I-2; Recovery Coach/Peer Support Initiative supports implementation and expansion of access to clinically-appropriate EBPs for OUD treatment, assistance to patients with treatment costs, and treatment and transition coverage for reentry; INSPECT Expansion (PDMP) supports the design, implementation, and enhancement of primary prevention using an EBP, and facilitates ongoing needs assessment and strategic planning; Residential/Inpatient Treatment and Detoxification Expansion supports implementation and expansion of access to clinically-appropriate EBPs for OUD treatment, assistance to patients with treatment costs, and treatment transition and coverage for reentry; and Environmental Prevention supports the design, implementation, and enhancement of primary prevention using an EBP.



B-4

Administrative and infrastructure costs will be used exclusively to support programmatic activities, and fall into the general categories of Personnel and Fringe, Travel, Equipment and Office Supplies, Strategic Planning, and Program Evaluation.

Personnel and Fringe: These costs will occur exclusively at the SSA-level and include the required key staff person (Project Director, 1.0 FTE), who will provide oversight of day-to-day operations of the project, and a Grant Coordinator (1.0 FTE) who will support the PD and oversee contracts and vendors. The SSA Deputy Director (0.20 FTE) will be the organizational supervisor for the PD and oversee certain aspects of decision-making. Other staff, including the

Finance Analyst, Controller, SSA Assistant Director, and Data Analyst (each at 0.05 FTE) will provide oversight of specific grant functions associated with their extant organizational roles. These roles represent the applicant's best estimate of the required staff time and positions required to administer this project with optimal efficiency and efficacy.

Travel: Due to the high number of vendors and subcontractors involved with the proposed work (e.g., up to 20 contracts), we propose bi-monthly site visits at the standard state reimbursement rate. These costs will ensure connectivity and uniformity of purpose across all sponsored grant activities.

Equipment and Office Supplies: Each new hire proposed for this project (Project Director and Grant Coordinator) will be provided with a laptop and cell phone, both of which are necessary to work optimally while traveling extensively to coordinate the proposed work. Office supplies reflect items of general use that will be utilized primarily by this project.

Strategic Planning: Strategic planning – which includes additional linkage of planned activities to measurable objectives and demonstrable needs – will include focus groups, surveys, collaboration, data collection, and analysis, and is a required programmatic activity per the FOA. DMHA will contract with an agency or individual to oversee all aspects of the strategic plan and to support its development and completion in conjunction with SSA staff.

Program Evaluation: Program evaluation, at the level of administration and infrastructure, refers to assessment of the total program (versus continuous quality improvement and embedded evaluative activities within each of the project associated with individual strategic goals). Data-driven linkages between each program component are important to understanding the holistic impact of the proposed work on state-level outcomes. DMHA will contract with an agency or individual to oversee the global project evaluation, including collaboration with those doing similar work on sub-projects, review and analysis, and sustainability planning for successful initiatives.

Each of the administrative/infrastructure costs described herein is intended directly to facilitate successful implementation and/or completion of one or more proposed programmatic functions described in this proposal.

B-5

Per FOA requirements, this section will identify the specific prevention services that will be implemented with a focus on strategic implementation processes, while the response to section C-2 will focus on the linkages to expected outcomes.

Goal 1: Indiana Prescription Monitoring Program Expansion (INSPECT). *This project addresses section 2.2 ('Proactively use PDMP data for enforcement and education purposes') of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activity C and supports activities A and B (see Figure 13 in Section C-1).*

Prescription drug monitoring programs (PDMPs) are widely accepted mechanisms to prevent harm from substance use and abuse by collating pharmacists' records regarding prescription distribution. As of 2015, 49 states had adopted some form of PDMP, though the specific mechanisms vary widely; none are administered at the federal level by the Drug Enforcement Agency (Gabay, 2015). Although physicians and patients may express concerns about being improperly categorized as addicts or fraudulent prescribers, evidence suggests that PDMPs may reduce doctor shopping and fraudulent prescribing, reduce inappropriate prescription drug use, and even improve quality of medical care (Islam & McRae, 2014; Haegerich et al., 2014). However, research also suggests that PDMPs will not reach desired levels of efficacy in reducing opioid prescriptions without improvements in usability and accessibility (Brady et al., 2014; Rutkow et al., 2015). In 2013, SAMHSA reported that Indiana was one of 34 states that could benefit from expansion of PDMP participation to providers throughout the state (<http://healthyamericans.org/reports/drugabuse2013/>). In 2014, the Indiana State Medical Association passed a rule requiring use of Indiana's PDMP on at least an initial and annual basis with all patients being prescribed opioids (<https://www.ismanet.org/pdf/legal/IndianaPainManagementPrescribingFinalRuleSummary.pdf>).

Indiana's PDMP is called the **INSPECT** program. It was created in 1994 and intended for use by law enforcement. In 2007, access expanded to include healthcare practitioners. Currently, any healthcare practitioner with a valid CSR license and individual DEA number is eligible to participate in the INSPECT program; these individuals may also assign an 'agent' at their organization to utilize the program, though responsibility for misuse remains with the original practitioner (<http://www.in.gov/pla/inspect/2381.htm>). Coverage of substances in PDMPs varies by state; INSPECT requires pharmacists to report all substances from schedule II through schedule V, which comprehensively covers all opioid and opioid derivative substances (<http://www.in.gov/pla/inspect/2371.htm#question1>). Recently, the INSPECT Oversight Committee and the Indiana Board of Pharmacy approved electronic health record integration for INSPECT. This process greatly reduces the time utilized for an individual search (from approximately 5 minutes to a few seconds). Especially in environments like the ER, this is extremely important; an internal report by Michael Brady, Director of INSPECT, reported that transition for INSPECT access to the EHR in an ER could save as much as 1 hour and 32 minutes of time per provider per day. The resultant time savings represents both additional patients served and additional service time per patient. An integration pilot study of INSPECT's EHR integration in an ER has produced positive results, and Mr. Brady's report indicates that expansion to providers throughout the state would serve to improve health outcomes related to OUDs.

A major barrier to INSPECT integration into EHRs, especially at smaller healthcare sites or those in underserved, resource-poor areas (both rural and urban), is the startup cost. Estimated at \$7,500, many facilities cannot afford this one-time payment to integrate INSPECT into their electronic record system. For this reason, given the evidence of preventive efficacy for PDMPs and the increased provider efficiency stemming from INSPECT's EHR integration, we plan to issue a short request for proposals (RFP) for all healthcare sites within the state of Indiana who have at least one prescriber on staff. Sites will be asked to demonstrate their need for fiscal support, and all awarded sites will participate in this expansion program free of startup costs, which will be covered using funds allocated for prevention in this federal funding opportunity.

Goal 2: Environmental Prevention Expansion. *This project addresses section 7.2 ('...help communities undertake comprehensive approaches that address the supply of, and demand for, prescription opioids in their locales...') of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activities A and C (see **Figure 13** in Section C-1).*

A separate Pew report (<http://www.pewinternet.org/2016/11/11/social-media-update-2016/>) examines specifics related to social media use, finding Facebook to be the most frequently-used social media platform by a wide margin (at 79% of online adults), followed by Instagram, Pinterest, LinkedIn, and Twitter (ranging from 32% to 24% of online adults). Use of Facebook, in particular, has burgeoned among older adults, with 72% of online adults ages 50 to 64, and 62% of online adults ages 65+ using the platform. Facebook use is also equally well-represented among urban and rural locations. Other social media platforms tend to skew toward younger audiences (e.g., Instagram, with 59% of online adults ages 18 to 29, but only 8% of online adults ages 65+). This report also found that use of message deletion apps (e.g., Snapchat) is increasing, with a 7% increase between 2015 and 2016 alone, and with use again skewing toward online adults ages 18 to 29.

The CDC toolkit supports and provides best-practice recommendations for a variety of tools that can be used on social media, including active social networking, online video production, mobile technology, podcasts, and others. Importantly, though, the CDC emphasizes the importance of “going where the people are.” A prominent textbook, “Marketing Health Behavior,” also notes that “it is clear that no product, service, or health promotion campaign can be successful if it attempts to be all things to all people” (Frederiksen et al., 2013). Social marketing recommendations from the UK-based NSMC group provide even more direction, emphasizing that audience segmentation should focus on groups that are homogenous, accessible, measurable, viable/sustainable, and ethical. Segmentation is recommended along the dimensions of age/life-stage, environments, and known attitudes and beliefs (<http://www.thensmc.com/content/choose-who-target-0>). Combining the principles from these different evidence bases indicates that an effective social media prevention campaign will utilize health education and social marketing in a way that delivers important and **tailored messages** about opioids to **different populations**, often using **different platforms**.

Public education and social marketing are core categories of environmental substance abuse prevention endorsed by SAMHSA (<https://www.samhsa.gov/capt/practicing-effective-prevention/prevention-approaches#communication-education>). Both types of strategies are intended to change behaviors or social norms across a segment of population. Social marketing focuses on the use of advertising or marketing principles in conjunction with the theoretical underpinnings of behavior-change theory in order to obtain a desired social outcome (Brennan et al., 2014), whereas public education tends to use public health principles to design a learning experience (Sharma, 2016). Despite frequent conflation of the terms, both social marketing and public education can be accomplished via social media or traditional media – the two sets of terms refer to the strategic approach and the medium of dissemination, respectively. This proposed environmental prevention expansion will be based on one of the most comprehensive social media strategies used by federal agencies in the United States: the Centers for Disease

Control and Prevention's (CDC) Vital Signs campaign (<https://www.cdc.gov/socialmedia/tools/buttons/vitalsigns/index.html>). As will be discussed, however, the underserved nature of our population of focus will necessitate minor modifications to incorporate other EBPs.

The CDC developed a product called "The Health Communicator's Social Media Toolkit" that functions as a best-practice guide to using social media as a component of a broad health system (Brodalski et al., 2011, available: https://www.cdc.gov/socialmedia/tools/guidelines/pdf/socialmediatoolkit_bm.pdf).

The toolkit acknowledges that social media should be one platform among several (as this proposal will address subsequently), but also emphasizes that use of social media for health has increased dramatically in recent years, and so harnessing it is important.

Trend analysis from Pew Research Center surveys indicates that use of social networking among all adults (age 18+) has increased from 7% in 2005 to 65% in 2015

(<http://www.pewinternet.org/2015/10/08/social-networking-usage-2005-2015/>). This increase has been segmented, with 90% of 18 to 29-year-olds using social media, and 77% of 30 to 49-year-olds, 51% of 50 to 64-year-olds, and 35% of those ages 65+ using social media in 2015. Beginning in 2010, there also "has been a surge in usership among those 65 and older." While use of social media does not vary significantly by gender or race/ethnicity, it is used more frequently among those with more education, those with higher income, and those in urban areas (versus rural areas). Still, 58% of individuals living in rural areas engaged with social media in 2015.

Strategic Implementation

Prior to development of these marking tools, formative research will need to be conducted. Environmental strategies, based on that research, will be developed. The overall process will use the recommended pathway to social media development that is part of the CDC's toolkit (pp. 47-49). Selected elements may use traditional media when social media would not reach an audience segment. Specifically, DMHA or a contractor will:

- 1) Identify initial audience segments by age, environment (especially rural/urban), and other characteristics (e.g., race/ethnicity). This identification will be based on sociodemographic data from Section A as well as additional needs assessment and secondary epidemiological data obtained at the outset of the project.
- 2) Identify objectives for each audience segment using the CDC's 'SMART' structure (Specific, Measurable, Attainable, Relevant, Time-Bound). May include use of surveys, focus groups, and key informant interviews. Objectives may range widely to include knowledge-based attainment (e.g., information about Good Samaritan laws), behavior change (e.g., encouraging family members to seek treatment), or other outcomes. This step will include assurance that each objective matches one or more goals for the overall project.
- 3) Identify communication needs for each audience segment based on the results of qualitative and quantitative research, including focus groups and key informant interviews. Data from the Pew Research Center (as noted previously) suggest that social media is most likely to be useful for youth and young adults, individuals living in urban

areas, and individuals in higher income brackets. Other forms of media may be more appropriate communication tools (e.g., billboards, television ads) for individuals who are older, who live in rural areas, or who are in lower income brackets. One potential exception to this rule may be the ubiquitous uptake of Facebook.

- 4) Design the appropriate messaging for each objective and audience segment based on prior research specific to each objective/segment pair and the results of the formative research.
- 5) Identify the appropriate tools for each message; even if an audience segment is heavily invested in Facebook, it may be the case, for example, that research identifies the efficacy of using Twitter hashtags to accomplish specific things for a specific audience segment.
- 6) Design an evaluation plan to determine the levels of success for each objective/audience segment pairing, and conduct evaluation consistently throughout each program, utilizing both traditional evaluation techniques and social marketing evaluation techniques. The first evaluation type will focus on processes, outputs, and outcomes from the perspective of OUDs and health. This second evaluation structure will ask different questions, such as “Was the audience exposed to the message and with what dosage?” and “How did the audience react to and receive the messages (e.g., were they perceived as credible, likeable)?” (Evans, 2016, p. 141).

B-6

Per FOA requirements, this section will identify the specific treatment/recovery services that will be implemented with a focus on strategic implementation processes, while the response to section C-2 will focus on the linkages to expected outcomes.

Goal 3: Project ECHO – ‘Extension for Community Healthcare Outcomes.’ *This project addresses sections 1.3 (‘Provide physician training in pain management and opioid prescribing...’) and 6.6 (‘Educate prescribers and pharmacists about how to prevent, identify, and treat opioid addiction’) of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activities C, D, E, F, and G (see Figure 13 in Section C-1).*

Project ECHO is a support service that emerged in New Mexico in 2003 as a means of addressing disparities in access to quality specialist care to traditionally underserved areas, including, but not limited to, rural regions (Komaromy et al., 2016). Dr. Komaromy, who is the Associate Director at the ECHO Institute, summarizes the model as “a distance education model in which specialists located at a ‘hub’ (which is located in an academic medical center or more rarely in a public health department or FQHC) connect via simultaneous video link with numerous community based PCPs...for the purpose of facilitating case-based learning” (Komaromy et al., 2016, p. 24). Evidence for the efficacy of Project ECHO both in terms of disseminating skill sets and credentialing and in terms of broadening the overall provider knowledge-base within the targeted regions is both compelling and plentiful. The model has been used for a variety of health conditions and approaches, including hepatitis C, rheumatology, substance use and addictions, and opioids and, in the 12-year span from 2003 to 2015, has facilitated 69,745 CME units (e.g., Thornton et al., 2016; Arora et al., 2016). Evidence from a

prospective trial of Project ECHO for hepatitis C found that health outcomes were equivalent in patients treated in a university HCV clinic and those treated by providers trained through the ECHO model (Arora et al., 2011). More recently, the model has expanded to focus on other healthcare providers, such as community health workers (Zurawski et al., 2016). Components of Project ECHO have received funding from numerous federal agencies, including HRSA, CDC, AHRQ, SAMHSA, CMS, IHS, and NIH, demonstrating broad acceptance of the evidence basis (<http://echo.unm.edu/about-echo/funders/>).

Beginning in January, 2017, the ECHO Institute began offering a specialized Opioid Addiction Treatment ECHO at 5 different hubs. The model proposed for Indiana will be based on this specific model, which is the newest opioid-related effort from the ECHO Institute.

The proposed ***Indiana Opioid Addiction Treatment ECHO (I-ECHO)*** will utilize both didactic and case-learning approaches. Each I-ECHO clinic will feature a talk (approximately 30 minutes in length) followed by a case discussion appropriate to the attending professionals. The I-ECHO clinic will feature three curriculum tracks, each of which can be attended by any interested individual but with focus on the specific learning needs and cases that might be encountered by different types of health professionals. These tracks and associated healthcare professions and curricular content will be drawn directly from the core Opioid ECHO design (<http://echo.unm.edu/nm-teleecho-clinics/opioid/curriculum/>).

Curriculum Track One: Provider and Primary Care Teams. These clinics will focus on topics including overviews of opioid use disorder, overdose prevention, use of evidence-based treatment guidelines for opioid use disorder, medication-assisted treatment of opioid use disorders, evidence-based screening and brief intervention techniques, pain management in patients with opioid use disorder, and Motivational Interviewing, among other topics.

Curriculum Track Two: Community Health Workers and Medical Assistants. These clinics will focus on topics such as addiction as a disease, the Stages of Change model and health coaching, harm reduction and overdose prevention, crisis intervention, working with patient families, addressing social barriers and referring to services, Motivational Interviewing, and roles of the paraprofessional in opioid use disorders (e.g., screening and intervention protocols), among other topics.

Curriculum Track Three: Counselors, Psychologists, and Social Workers. These clinics will focus on topics such as relapse-prevention techniques, collaboration with medical providers who are prescribing medication treatment, conducting treatment and support groups for opioid and other substance use disorders, harm reduction approaches (including overdose prevention and syringe exchange), and Motivational Interviewing, among other topics.

Start-up processes for I-ECHO will involve two simultaneous phases. In the first, the applicant agency (DMHA) will identify subject matter experts for each of the three curriculum tracks. While the total number of experts has not yet been identified, the ECHO Institute launched its Opioid ECHO with a total of 25 experts, with approximately 8 individuals per curriculum track (<http://echo.unm.edu/nm-teleecho-clinics/opioid/faculty/>). These experts will receive compensation for their time in preparing and delivering content. In the second, DMHA will issue

a RFP for a coordinating agency to manage the logistics and execution of I-ECHO. Once selected, this agency will be responsible for following the Project ECHO Replication Steps (except those reserved for DMHA purview, such as selection of subject matter experts) (<http://echo.unm.edu/wp-content/uploads/2016/01/Steps-to-Implementation-branded-final.docx>). These steps include attending ECHO Orientation in Albuquerque, New Mexico (offered monthly), attending further ECHO immersion experiences in New Mexico to learn about curriculum development, managing IT resources and architecture, and designing evaluation protocols, in addition to other content. Per recommendations from the ECHO Institute, this agency will also work with DMHA to recruit participants, develop branding and participation incentives for community members, advertise the opportunity, develop standardized processes, set up an IT infrastructure and hold test clinics, develop an evaluation strategy (not for the overall grant project, but specific to Project ECHO as part of continuous quality improvement), and execute continuous quality improvement activities.

Goal 4: Indiana Recovery and Peer Support Initiative (IRPSI). *This goal addresses sections 1.2 ('Provide oversight of pain treatment...') and 3.4 ('Improve management and oversight of individuals who use controlled substances') of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activities D, E, and G (see Figure 13 in Section C-1).*

Systematic reviews of peer-delivered recovery support across the spectrum of substance addictions in the United States – the gold standard of evidence-gathering – have produced generally positive findings for such services (e.g., Bassuk et al., 2016), including substance-specific outcomes, such as reductions in use, and distal outcomes, such as increased housing stability. A core goal for Indiana's overall response to the OUD crisis is the formation of an initiative – the Indiana Recovery and Peer Support Initiative, or IRPSI, that utilizes recovery coaching and peer support linked to emergency rooms (ERs) in the state. The use of multiple non-physician roles within the ER, sometimes called Social Emergency Medicine, increasingly is recommended as a best practice, including in a recent commentary in the *Annals of Emergency Medicine*, the journal of the American College of Emergency Physicians (Anderson et al., 2016).

While formal design of recovery and support initiatives within the ER setting is an ongoing topic of research, the SAMHSA-sponsored program AnchorED in Rhode Island issued general replication guidance in a SAMHSA webinar (Joyce & Bailey, 2014), and the Department of Emergency Medicine at Yale University recently published favorable results from a randomized trial of a similar program (D'Onofrio et al., 2015). The IRPSI's strategic design is based on the preliminary work completed by these entities and recommendations from Project POINT, a partial replication of D'Onofrio's work in Marion County, Indiana within the Eskenazi Health system (Personal Correspondence, Dr. Krista Brucker, Project POINT Administrator, 2017).

The IRPSI will focus specifically on individuals who arrive in an ER setting after having overdosed on any opioid (including prescription drugs, regardless of the source, heroin, fentanyl, and others). Special emphasis will be placed on those revived using Naloxone subsequent to an overdose. Any interested ER within the state of Indiana will be eligible to participate. To do so, that entity will sign a memorandum of understanding with a community mental health center or DMHA-certified addictions entity and register with IRPSI. This MOU will link the ER with

appropriate non-physician health professionals, including those with LMHC, LCSW, and LMFT certifications who have addiction certification (e.g., CAPRCII, Indiana’s internationally-recognized Certified Addiction Peer Recovery Coach credential; <https://www.icaada.org/credentials-navigation>), and those with an LCAC certification, LAC certification, or any other Indiana recognized certification. Bachelors-prepared individuals and those with a GED or high school diploma who also have CAPRCII certification will be allowed to offer services, though with additional supervision (see below). These individuals, for the purposes of this project universally labeled Recovery Coaches (RCs) will be on-call 24 hours a day, 7 days a week, and be able to arrive at the ER within 30 minutes of receiving a call – protocols recommended by AnchorED (Joyce & Bailey, 2014). ERs additionally will be required to implement twice-monthly supervisory meetings between physician and nursing staff and IRPSI recovery partner staff (Joyce & Bailey, 2014). ERs utilizing bachelors-prepared or GED/high school diploma-level staff also will be required to offer additional individual supervision, and all participating agencies will be encouraged to monitor interaction fidelity (Personal Correspondence, Dr. Krista Brucker, Project POINT Administrator, 2017).

Both Project POINT and the Yale randomized trial that serve as models for IRPSI utilize basic principles in structuring the recovery and support process. Thus, RCs and patients will complete the following sequential steps:

Screening and Assessment: Patients will work with the RC to complete an assessment of substance use, especially (but not exclusively) prescription opioids or heroin, within the past 30 days, including administration of a diagnostic tool to ascertain whether the patient is dependent on opioids, such as the Mini-International Neuropsychiatric Interview, or MINI (D’Onofrio et al., 2015). RCs would be free to collect additional pertinent information as needed to facilitate the process, such as family substance use history and preferred route of use. Patients who are critically ill or unable to communicate due to psychosis or schizophrenia, as well as those who need immediate mitigation of suicidal ideology, will not enter this process (D’Onofrio et al., 2015).

Immediate Counseling and Intervention: D’Onofrio and colleagues modified a traditional alcohol brief intervention (D’Onofrio et al., 2005) to specifically meet the needs of patients who have overdosed on opiates. This modified protocol also includes a 27-item fidelity checklist (D’Onofrio et al., 2015). RCs will complete an intervention with patients in approximately 10 to 15 minutes, prior to the referral process.

Referral to Treatment and/or Buprenorphine Administration: RCs will “discuss a variety of treatment options...based on patient insurance, residence, and preferences. The RC directly will link the patient with the referral. This will include reviewing the patient’s eligibility for services, insurance clearance, and arranging transportation... Patients exhibiting moderate to severe opioid withdrawal will be provided with sufficient doses of buprenorphine until a scheduled appointment in the hospital’s primary care center [or referral target]. [If treatment is available in the hospital], office-based buprenorphine treatment will be provided for 10 weeks by physicians and nurses using established procedures. After 10 weeks, patients will be transferred for ongoing opioid agonist maintenance treatment to

either a community program or a clinician, or will be offered detoxification over a 2-week period, based on stability, insurance, and preference” (D’Onofrio et al., 2015, p. 1639). In cases where a participating ER does not have any physicians or care providers with a buprenorphine waiver, at least one physician will be expected to complete training and receive a waiver within 4 months of receiving support for participation in IRPSI.

Post-Treatment Care Coordination: IRPSI includes modalities that support up to 12 weeks of continued care and treatment with physician and nursing staff. However, little rigorous research has examined individualized concomitant psychosocial care with peer support, case managers, or other behavioral health providers (e.g., those defined by Medicaid regulations). There is little extant research about models of OUD extended care involving provision of psychosocial support. The closest research analogue is for patients with alcohol use disorders, as research on alcohol tends to precede similar work on other substances. Even so, a meta-analysis of 15,235 trials related to alcohol use disorders found only six rigorous studies focusing on individualized continued care more than seven days after detoxification (Lenaerts et al., 2014). Effects of these types of approaches, including home visits and telephonic support, were generally positive where measured. The IRPSI model will utilize evidence-based approaches as part of a continued care model. These include community support/life skills training, contingency management training, and therapeutic educational support, along with other appropriate assistance (as supported by reviews such as Marsch & Dallery, 2012). The utilization of evidence-based approaches as well as the inductive generalization of long-term alcohol use disorder paradigms to OUDs suggests that this addendum to work like Project POINT is supported by the literature, though continuous evaluation, facilitated through data collection in the state’s data-system (DARMHA), will be especially important for this project.

Goal 5: Expansion of Residential/Inpatient Detoxification and Treatment. *This goal addresses sections 6.2 (‘Expand access to buprenorphine treatment...’) and 6.4 (‘Provide treatment funding for communities with high rates of OUD and limited access to treatment’) of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activities D, E, and F (see **Figure 13** in Section C-1).*

Expansion of Residential/Inpatient Detoxification

Federal guidelines revised in 2015 carefully separate traditional ‘detoxification,’ which is fairly rapid movement to an opioid-free state, and ‘medically-supervised withdrawal,’ which is a more gradual tapering at the patient’s pace (<http://store.samhsa.gov/shin/content/PEP15-FEDGUIDEOTP/PEP15-FEDGUIDEOTP.pdf>). Accordingly, there are a variety of levels of care and settings associated with detoxification. For the purposes of this strategic goal, we propose expansion of statewide capacity for both inpatient detoxification, which includes 24-hour observation and supervision and an interdisciplinary staff, and residential detoxification, which still provides 24-hour supervision and observation, but which also puts greater emphasis on peer support and may not have a ‘complete’ medical team on-site at all times (<http://store.samhsa.gov/shin/content/SMA09-4331/SMA09-4331.pdf>).

As noted, the traditional goal of detoxification is to remove the opioid's influence in a controlled and humane fashion; maximizing treatment retention and detoxification success rates while minimizing degree of discomfort (Amato et al., 2005). It is specifically **not** recommended by SAMHSA for healthcare professionals to attempt to manage opiate withdrawal without any form of detoxification, whether traditional or medically-supervised withdrawal (<http://store.samhsa.gov/shin/content/SMA06-4225/SMA06-4225.pdf>). Ambulatory detoxification (with and without monitoring), intensive outpatient detoxification, and freestanding urgent care or ER detoxification all may be utilized in cases of mild or moderate withdrawal, but for moderate to severe withdrawal, acute care inpatient detoxification tends to be a first step, followed by migration to a separate residential or inpatient process (<http://store.samhsa.gov/shin/content/SMA09-4331/SMA09-4331.pdf>).

At the same time, medical providers do not view detoxification alone an effective treatment for opiate dependence (Gossop, 2006), as it often fails to produce satisfactory retention rates and to promote long-term abstinence (O'Connor, 2005; World Health Organization, 2009). This is especially true for 'ultrarapid' opiate detoxification (UROD) with naltrexone; a recent study found that 100% of patients who underwent UROD and were offered counseling had relapsed to regular opiate use within 6 months (Forozeshfard et al., 2014). Individuals who report opiates as their primary drug of choice are at greater risk of detoxification dropout than other patients admitted to an inpatient facility for other types of drug use (Broers et al., 2000), and parents often experience additional complications leading to reduced retention (Connors et al., 2001). It is nonetheless extremely important to provide access to resources for detoxification in cases where it is the appropriate first-line response as determined by the medical provider's professional opinion and/or the presence of withdrawal symptoms. Given the dearth of service capacity identified in Section A, especially as pertains to underserved populations within the state, it will be important to expand facilities' capacity to provide 'beds' (an inclusive term referring not only to patient space but to infrastructure and staff capacity) to individuals who require opiate detoxification.

Treatment Overview

As noted, detoxification is a necessary but not sufficient process as it infrequently results in long-term cessation of use without migration to treatment. Involvement with treatment is a fundamentally important second-line response to OUD. Recent research indicates that following detoxification, about 30% of patients prefer residential or inpatient treatment, 30% of patients prefer counseling without medication assistance, and about 40% prefer medication-assisted outpatient treatment (Stein et al., 2015). Preferences vary across a number of factors including whether the patient is homeless, has prior experience with opioid detoxification, is a hazardous alcohol user, or perceives a risk of relapse (Stein et al., 2015). Other comorbid factors such as pain and depression may also complicate treatment formulae for clients (Veilleux et al., 2010) as research is unclear about the influence of comorbid psychopathology on OUD treatment programs (Strain, 2002).

Expansion of Medication-Assisted Therapy (MAT)

The Betty Ford Institute Consensus Panel (2007) reported that methadone, naltrexone, and buprenorphine have produced superior outcomes when compared to non-medication based therapies in the areas of increased treatment retention, reduced mortality, improved social functioning, decreased drug use, and improved quality of life. Volkow and colleagues (2014) produced an excellent summative table of medications that can be utilized for MAT: *Characteristics of Medications for Opioid-Addiction Treatment*.

- 1) Methadone – “An agonist-class medication, meaning it fully activates opioid receptors. It is taken orally and reduces both opioid cravings and withdrawal symptoms. It is generally available through outpatient treatment programs, but not as a take-home prescription.”
- 2) Naltrexone – “An antagonist-class medication, meaning it blocks the opioid receptors and interferes with the rewarding and analgesic effects of opioids. It can be taken orally or by injection. It is not considered to be addicting or sedating. However, it historically has suffered from poor patient compliance, as initiation requires attaining prolonged abstinence.”
- 3) Buprenorphine – “A partial-agonist-class medication that activates opioid receptors but produces a diminished response. It can be taken orally or sublingually on a daily basis to relieve opioid cravings and withdrawal symptoms. It can be prescribed by certified physicians for use outside of a treatment clinic. Some formulations have abuse liability, which can be mitigated by including naloxone into the formulation (e.g., Suboxone).”

Care must be taken when working with special populations and MAT. Specifically, neither naloxone nor naltrexone is recommended for use by pregnant women (Jones et al., 2010). Both buprenorphine and methadone have been used with good success among incarcerated populations (Kinloch et al., 2009), but oral naltrexone requires close supervision for adherence in this population (Coviello et al., 2010). Multiple studies have indicated a preference for use of combined buprenorphine/naloxone (Suboxone) in MAT (e.g., Shuman-Oliver et al., 2014). However, Suboxone may be less effective with emerging adults than with older adults (Dreifuss et al., 2013; Schuman-Oliver et al., 2014) in terms of relapse risk and treatment retention.

Indiana currently has 14 Opioid Treatment Providers (OTPs) in 10 counties within the state, 13 of which are overseen by DMHA and one of which is a VA hospital overseen by SAMHSA. A second goal of this proposed detoxification and treatment expansion will be an effort to expand OTP capacity throughout the state, including training nurse practitioners and physician assistants to provide MAT in office-based settings, allowable via Public Law 114-198 through Oct. 1, 2021 (<https://www.gpo.gov/fdsys/pkg/PLAW-114publ198/pdf/PLAW-114publ198.pdf>). This goal will be supplemented by work completed through proposed Goal 2, I-ECHO. Further, additional focus will be placed on ensuring the needs of pregnant women, emerging adults, and incarcerated populations are met by including their unique needs within the capacity-building efforts that are supported.

Training for Psychosocial Interventions

Though a moderately-sized segment of the OUD treatment-seeking population prefers to engage only in psychosocial interventions, these techniques are important components of best-practice MAT efforts and are required by federal law to be offered to all MAT patients (<https://www.samhsa.gov/medication-assisted-treatment/treatment#counseling-behavioral-therapies>). Thus, every patient who engages with the MAT process in Indiana will participate in at least one type of psychosocial intervention. Further, as noted below, there is a paucity of evidence that psychosocial treatment alone is sufficient to address OUDs, and so patients should be encouraged to engage in a form of MAT whenever feasible, even when their preference is to engage only in psychosocial treatment.

Relatively standardized cognitive therapies for OUD include both individual- and group-level processes such as motivational interviewing, contingency management, and relapse prevention. A meta-analysis of 34 randomized controlled trials using one or more of these techniques found an aggregated moderate effect (McHugh et al., 2010) on SUD outcomes in general. In some cases, outcomes have been strengthened by tailoring language and content in standard therapies, such as an MI-infused brief intervention for opiate-dependent patients (Darker et al., 2016). Fewer individuals nationally have been trained in so-called ‘third wave’ psychosocial treatment models that focus on contextual elements of substance use, including acceptance and commitment therapy (ACT) and dialectical behavior therapy (DBT), which also show promising results for SUDs (Stotts & Northrup, 2015). Finally, manualized fusions of multiple extant EBPs for psychosocial treatment of SUDs are available and may present unique opportunities for providers (e.g., *Integrating Dialectical Behavior Therapy with the Twelve Steps*; http://www.hazelden.org/OA_HTML/ibeCCtpItmDspRte.jsp?item=176106).

Cochrane reviews and individual studies of the benefits of psychosocial treatment for OUD have found insufficient evidence that they are efficacious by themselves, without MAT (e.g., Hser, 2001; Mayet et al., 2004). Thus, Indiana’s training programming will be designed in such a way that individuals providing MAT, recovery coaches, and other health professionals integrated into the OUD treatment system in Indiana are trained in at least one cognitive behavioral therapy such as MI, contingency management, ACT, DBT, or DBT-Twelve Step, all of which, except the latter, also appear on SAMHSA’s National Registry of Evidence-Based Programs and Practices for Substance Use Disorders (NREPP; http://www.nrepp.samhsa.gov/01_landing.aspx). The program that does not currently appear on NREPP is an amalgam of two programs that do (DBT and the Twelve Step Therapeutic Approach).

Expansion of Residential/Inpatient Treatment Capacity

As noted previously, inpatient or residential treatment is the preferred modality for approximately 30% of patients following opioid detoxification (Stein et al., 2015), but this baseline likely will be a minimum as other proposed initiatives, such as IRPSI, will match and refer additional overdose clients to appropriate treatment services. As is the case with detoxification, lack of ‘beds,’ including staffing and supportive infrastructure, limits the extent to which residential/inpatient treatment can be utilized. This barrier is especially

likely to impact high-risk OUD clients, such as injected drug users or patients with HIV/AIDS (Appel et al., 2009). Lack of capacity for residential/inpatient treatment often results in significant waiting times for entry, and research indicates that relapse, additional substance use, and other criminal activity may occur or even partly be driven by such waiting times (Redko et al., 2006). This strategic goal therefore will expand the number of available ‘beds’ for residential/inpatient opiate treatment and recovery, focusing especially on areas that currently are undersupplied or where residents would need to travel significant distances to access these resources.

Tentative Implementation Plan

As with all initiatives described in this proposal, implementation will be guided by additional information gained from the needs assessment and strategic planning process. Presently, the state of Indiana proposes to increase the number of ‘beds’ that offer 24-hour residential medium-intensity services as well as clinically managed high-intensity residential services pending certification through DMHA. These levels correspond to ASAM 3.5 and 3.7 criteria (<http://www.asam.org/quality-practice/guidelines-and-consensus-documents/the-asam-criteria/about>). The exact number of ‘beds’ created throughout the state will be contingent on the needs assessment and processes described subsequently, but is expected to represent a significant increase by percentage, relative to the baseline.

To accomplish this, the applicant agency (DMHA) will issue a request for proposals (RFP) for (a) existing qualifying residential detoxification and/or treatment centers that do not currently offer ASAM 3.5 or higher services to expand their services to meet the ASAM 3.5 or 3.7 levels of care, and (b) existing qualifying treatment centers that currently offer ASAM 3.5 or 3.7 levels of care to expand their capacity to offer those services. While no regional restrictions will be levied in terms of who may apply, in terms of resource allocation, preference will be given to organizations in traditionally underserved areas of Indiana or that serve patients who likely experience disparities in access to care in these areas, including pregnant women, women with children, and adolescents. All participating organizations will be expected to train (via this funding mechanism) physicians, recovery coaches, nurse practitioners, physician assistants, or other health professionals (determined by the responding center) in one of the evidence-based psychosocial treatment protocols supported by DMHA, or to demonstrate a sufficient threshold of individuals with those skillsets to accommodate the expanded services. Physicians, nurse practitioners, and physician assistants also will be required to be trained in and, where appropriate, to receive waivers for MAT. Additional funding will be set aside for individuals outside of the applicant organizations who work with OUD patients who also wish to receive these trainings. Finally, organizations will be encouraged to offer programs that specifically support mothers with children ages 5 and under. Successful piloting of such programming using the best-practices described in this section has been accomplished by Volunteers of American in Indiana’s ‘Fresh Start’ program, which provides an acute stabilization program involving detoxification, psychosocial treatment, and parenting and life skills for the mother, and child engagement and family bonding work with the unit. An additional long-term treatment program is also available for mothers and children.

After DMHA has selected the centers, DMHA staff or qualified subcontractors will assess the applicants' organizational readiness for change, a key indicator of implementation success (Weiner, 2009), and will work with the organizations to develop an implementation plan that includes training, certification, and other components of the expansion process. Centers will also be required to provide a detailed budget of all expenses to expand capacity, including costs to mitigate barriers experienced by low-income or underserved clients, such as transportation and childcare costs for qualifying individuals.

Given the size and scope of this component of the overall proposal, DMHA will also issue an RFP simultaneously with the others to obtain evaluation services specific to this initiative, especially those focused on formative evaluation. This will include a data-collection plan, analysis and reporting to DMHA's Project Director, and technical assistance to each of the sites working toward expansion.

Goal 6: Formation of Mobile Crisis Teams. *This goal addresses sections 5.3 ('Ensure coverage of naloxone products') and 5.4 ('Partner with community-based overdose education and naloxone distribution programs) of the Johns Hopkins Evidence-Based Plan to comprehensively address the prescription opioid epidemic. It aligns with required activity D (see Figure 13 in Section C-1).*

According to Yuan and Detlor (2005), a crisis can occur anywhere at any time, and the people whose job is to respond might be geographically dispersed, necessitating a flexible and robust communication system and effective coordination of emergency providers in risky, uncertain, and time-sensitive environments. In mental healthcare and substance abuse treatment, mobile crisis teams were strategically designed prior to the OUD epidemic. They originally were developed to coordinate responder communication and response efforts in order to minimize the threat to human life and damage to property (Yuan & Detlor, 2005). SAMHSA summarizes their general structure and purpose as such (<https://store.samhsa.gov/shin/content/SMA14-4848/SMA14-4848.pdf>) :

The American Psychiatric Association (APA) Task Force defines mobile crisis services as having the "capacity to go out into the community to begin the process of assessment and definitive treatment outside of a hospital or health care facility," along with a staff including "a psychiatrist available by phone or for in-person assessment as needed and clinically indicated" (Allen et al., 2002). Mobile crisis teams provide acute mental health crisis stabilization and psychiatric assessment services to individuals within their own homes and in other sites outside of a traditional clinical setting (Scott, 2000).

A randomized, controlled trial of mobile crisis outreach for suicide prevention was published in 2009, finding evidence of efficacy in contacting suicidal patients (Currier et al., 2009). The mobile crisis unit was not sufficient, alone, to completely mitigate patients' mental health symptoms, and so linkages to other services often are warranted.

The primary advancement in mobile crisis team evolution for OUD has been the development of easily-deployed overdose reversal medication (naloxone) units. Both Narcan (nasal spray) and

Evzio (intramuscular or subcutaneous auto-injector) are recommended as part of a series of specific steps for medically-trained and medically-untrained first responders to the scene of a suspected opioid overdose (<http://store.samhsa.gov/shin/content//SMA16-4742/SMA16-4742.pdf>). A meta-analysis of use of Narcan and Evzio by bystanders and/or trained medical personnel found that administration by both groups significantly improved the odds of overdose recovery, but that trained personnel improved the odds significantly more robustly (Giglio et al., 2015). Trained personnel need not be limited to traditional medical roles and may include police officers and fire department personnel (Koh, 2015).

The combined research evidence basis suggests strongly that mobile crisis teams that are equipped to deal with psychosocial and physical effects of opioid overdose significantly will strengthen Indiana’s treatment infrastructure.

For this strategic goal, DMHA will support the development of Indiana Mobile Crisis Response Intervention Teams for Opioid Substance Disorders (hereafter described generically as ‘mobile crisis teams’). The intended purpose of the mobile crisis teams will be to mitigate the immediate crisis and to support engagement with treatment, detoxification, and rehabilitation, as appropriate. Using data developed through this needs assessment and additional formative work at the project’s outset, DMHA will identify and prioritize counties with demonstrated need for mobile crisis teams on the basis of per capita naloxone deployment.

In Indiana, legislation authorizing formation of a ‘Crisis Intervention Team’ (CIT) Technical Assistance Center, SEA 380, was signed by former-Governor Pence in 2015. These intervention teams primarily have encompassed the criminal justice community and have focused on diverting individuals with mental illness who would otherwise face imprisonment into treatment; a summative brochure is publically available via CIT Indiana (<https://docs.google.com/viewer?a=v&pid=sites&srcid=bmFtaWluZGlhbmEub3JnfG5hbWktaW5kaWFuYXxneDo2NzQ3MmRlN2QxZTU1Mzlw>). The proposed structure of the mobile crisis teams for OUDs is different. We anticipate that these teams will constitute, at a minimum, a nurse practitioner, recovery coach, and a clinician, with additional staff members potentially participating in any given team based on need. While law enforcement will be permitted as part of the mobile crisis teams, those individuals will need to be CIT-trained. All individuals will be trained to administer naloxone using standardized training protocols (e.g., Giglio et al., 2015) and will be required to follow best-practices as outlined by SAMHSA. Depending on the medical qualifications of a given team, training will cover Narcan, Evzio, and, in some cases, equipment to support intravenous naloxone for individuals additionally trained and certified in that method of administration. While not required, strong preference will be granted to teams that are able to establish MOUs with hospitals, OTPs, CMHCs, and other potential entities that can support follow-up referrals, recovery support, detoxification, psychiatric care, and treatment. Furthermore, to track the dispensing of Naloxone, DMHA will develop a phone application where first responders will document information about their use of Naloxone deployment in the field. This will be achieved using their phones to capture specific data, e.g., gender, age, number of Naloxone units needed to revive the patient, and Location (captured by GPS) that will be uploaded to a database. This data can be subsequently utilized to determine placement and coverage of the teams to match high-use areas.

Each team will be structured in such a way that it can respond with law enforcement during crisis calls, answer calls for crisis response involving opioid overdose without law enforcement involvement, and respond to individuals presenting in ERs with symptomology consistent with opioid overdose when the staff do not have capacity to administer the appropriate treatment.

Based on best-practice evidence, mobile crisis teams will not only offer overdose reversal but also on-site patient evaluation, consultation, referral (and, if possible, ‘warm handoff’), and, in some cases, psychiatric assistance. Mobile crisis teams also will be trained to provide short-term services to any youth or adult experiencing a behavioral health crisis for the purposes of identifying, assessing, treating, and stabilizing the situation and reducing the immediate risk of danger. In times of crisis, these teams will be permitted to cross catchment area boundaries.

An additional subset of mobile crisis teams will be designated to serve Indiana as a whole through flexible mitigation of needs experienced by juveniles re-entering their communities. In addition to mobile crisis response, in 2016, Indiana Department of Corrections, Division of Youth Services processed community re-entry for 330 juveniles with a substance abuse or substance dependence disorder (65%). These youth returned to few recovery services, minimal support, and no linkages to care (Written Correspondence, Christina Blessinger, Executive Director, Indiana Department of Corrections, 2017). In these cases, the mobile crisis teams will function as intended by providing psychosocial or psychiatric mitigation of immediate issues, medical care in the event of recent substance use, and referral and guided integration into treatment programs, including residential treatment, where appropriate. Funding will be set aside to support juveniles who are at need of mental health or substance abuse treatment and whose families cannot afford enrollment or who experience structural barriers (e.g., transportation).

Contracts with mobile crisis teams will be structured in such a way that costs associated with training of team members, rendering services, purchasing naloxone products, salary and benefits, other equipment, and maintenance of all equipment, are reimbursable.

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The primary, but not only, means of identification/recruitment for populations with OUDs is through their interaction with systems with the capacity to identify an OUD, including primary care, emergency care, mental healthcare, and corrections-related systems. Many of the strategies articulated above contain components that are designed to facilitate recruitment and retention of these populations. For example, Goals 1 and 2 are designed not only to serve as upstream prevention, but also to facilitate professional-, peer-, and self-identification of potential issues with opioid use. Identification, in turn, serves as an excellent way to facilitate participation in the continuum of care prior to matriculation from opioid use to an OUD. The expansion of INSPECT will attend directly to the socioeconomic issues that may prevent physicians and other care providers from recognizing a troubling pattern of medication access in a patient, while the targeted environmental prevention and social marketing work explicitly will focus on language, beliefs, norms, and values of vulnerable population segments in order to create efficacious prevention messaging and to facilitate entry, where needed, into the state’s treatment system.

Other components of the overall project will focus on strengthening the ability of the treatment and recovery systems to support patients and clients with OUDs. The I-ECHO program is designed as a way to provide training in specialized areas, including MAT, motivational interviewing, and other EBPs, in areas where environment or socioeconomic status may make it difficult for providers to access this training or information. We expect that providing these skillsets to individuals in underserved areas directly will facilitate culturally-competent identification and recruitment of individuals with OUDs or at risk for OUDs into appropriate programming. We know, for example that good relationships with care providers facilitate significantly stronger treatment retention (Simpson et al., 1997), making it important to have trained professionals in multiple areas rather than needing to migrate all patients to centralized locations. The expansion of residential and inpatient detoxification and treatment will focus specifically on the need to retain individuals in treatment for OUDs once they have begun; given the underserved nature of the population of focus, it is especially important to note research indicating that treatment retention is inversely proportional to distance needed to travel for treatment (Kelly et al., 2011), so expansion of capacity throughout the state specifically facilitates this population's likelihood of treatment retention.

Finally, several of the proposed strategic goals relate to individuals who have overdosed on an opioid substance. The mobile crisis teams are designed in such a way that they can rapidly respond to a crisis call and utilize both medication (naloxone) and appropriate psychosocial care to mitigate initial harm. They will be trained to facilitate movement directly into a detoxification and/or treatment system following overdose reversal. Selected mobile crisis teams also will be trained to meet with discharged young adults prior to re-entry into the community from the corrections system in order to mitigate potential harms using techniques that attend to local language, beliefs, norms, and values. At the ER following an overdose, the IRPSI will utilize trained peer support and recovery coaches to provide culturally-competent services focused on recruitment and integration with the healthcare system and recovery.

We fully expect that both the direct service recipients and the population of underserved persons with OUDs or at risk for OUDs will be identified, recruited, and retained appropriately using processes and techniques that are culturally-sensitive and relevant.

B-8

Last year in preparing an application for a SUD 1115 waiver, Medicaid developed a bundled cost per day per ASAM level of care. For 3.5 Clinically Managed High-Intensity Residential the cost per day is \$392.57 for adults and \$550.75 for youth. The cost for 3.7 Medically Monitored Intensive Inpatient is \$800.00 for both adults and youth. In addition, they assumed 70% of the individuals that have the 24 hour care treatment plan will be prescribed inpatient detoxification first and that this care on average will be three days. Then the individuals will step down to high-intensity residential services for an average of 28 days. Taking all of this information into consideration, DMHA estimates the funding could provide inpatient and residential services to over 500 individuals.

We are unsure how many individuals will be provided recovery support services. We are planning to fund six emergency room sites. On average, the annual admissions to ERs regarding

a non-fatal ingestion of opioids requiring naloxone ranges from 50-85 per county with the highest admissions being 385 (outlier Marion County). DMHA estimates the funding could provide recovery support services to over 300 individuals.

SECTION C: PROPOSED EVIDENCE-BASED SERVICE/PRACTICE

C-1

The implementation model for this project involves the interaction of a large number of moving pieces. These include: (a) **Required Activities** – outlined in the FOA and required to be addressed as part of the proposed work; (b) **Strategic Goals** – the specific programs or processes that will be implemented; (c) **Measurable Objectives** – outlined in the FOA and should be the outcomes of each strategy, and; (d) **Conceptual Support** – recommendations from other best-practice documentation.

In preparing the structure of Section C-1, we relied on three external documents, hereafter referred to by the noted abbreviations: (1) *Prevention and Reduction of Opioid Misuse in Massachusetts Guidance Document*, or MASSTAPP (<http://masstapp.edc.org/sites/masstapp.edc.org/files/MOAPC%20Guidance%20Document%209.12.16.pdf>); (2) *SAMHSA Opioid Overdose Prevention Toolkit*, or SAMHSA Toolkit (<http://store.samhsa.gov/shin/content/SMA16-4742/SMA16-4742.pdf>); and (3) *Johns Hopkins Bloomberg School of Public Health – The Prescription Opioid Epidemic: An Evidence-Based Approach*, or JHU Guidance (<http://www.jhsph.edu/research/centers-and-institutes/center-for-drug-safety-and-effectiveness/opioid-epidemic-town-hall-2015/2015-prescription-opioid-epidemic-report.pdf>).

C-2

EBP 1: Indiana Prescription Monitoring Program Expansion (INSPECT) – Primary Outcomes Addressed: ‘Reduce numbers and rates of opioid use’ and ‘Reduce numbers and rates of opioid-related deaths.’

PDMPs are established in 49 of 50 states and are supported by multiple federal agencies, including SAMHSA and CDC. Requiring providers to access information from a PDMP is one of 10 state-level strategies outlined by SAMHSA to address the harm resulting from OUDs (<http://healthyamericans.org/reports/drugabuse2013/>). As noted in Section B-5, however, access to the INSPECT system in Indiana is relatively slow (approximately 5 minutes per patient), which can pose a significant barrier to providers. INSPECT’s leadership team, in conjunction with other advisory boards at the state level, determined that integrating INSPECT into a site’s EHR can mitigate this barrier by reducing the search time to a few seconds.

The cost of integration, however, posed an additional barrier that disproportionately impacts providers working in underserved or underfunded areas, both urban and rural. The start-up cost for INSPECT-EHR integration is approximately \$7,500 per site. Thus, the INSPECT Expansion

proposed in this document serves to mitigate this fiscal barrier to allow equitable access to this EBP across the state.

Given the evidence basis for PDMPs, and the importance of reducing barriers to use, we expect the proposed INSPECT Expansion to reduce numbers and rates of opioid use, as well as numbers and rates of opioid overdose-related deaths, by providing rapid access to up-to-date prescription information to providers in underserved areas.

EBP 2: Environmental Prevention Expansion – *Primary Outcomes Addressed: ‘Reduce Numbers and Rates of Opioid Use’ and ‘Reduce Numbers and Rates of Opioid Overdose-Related Deaths.’ We also expect secondary impact on most other project outcomes as a result.*

Use of environmental prevention via techniques such as social marketing has been supported for numerous public health initiatives, such as the Vital Signs campaign produced by the CDC and referenced in Section B-5. Social marketing guidance is provided by SAMHSA (<https://www.samhsa.gov/capt/tools-learning-resources/developing-social-marketing-campaign>) in a manner similar to that established by the CDC. The National Cancer Institute published an extensive guide supporting and articulating NIH-recommended health communication principles, both on-line and off-line (<https://www.cancer.gov/publications/health-communication/pink-book.pdf>). Initial research focusing on environmental prevention using these types of techniques specifically for the current OUD crisis has found that they can reduce opiate use (e.g., Kolodny et al., 2015; Cook et al., 2015) and reduce social stigma and reframe OUDs as treatable (e.g., Kennedy-Hendricks et al., 2017), among other goals.

Given the underserved nature of the population of focus in Indiana, and the diverse audience segments represented by these individuals, the evidence suggests that a comprehensive and strategic environmental prevention expansion will augment the state’s work in providing services across the continuum of care in order to reduce opioid use and overdose-related death.

EBP 3: Project ECHO (implemented as I-ECHO) – *Primary Outcome Addressed: ‘Increase Number of OUD Prevention and Treatment Providers Trained.’ We also expect secondary impact on all additional project outcomes as a result.*

Prior implementation of the Project ECHO model has produced meaningful evidence that the creation and utilization of I-ECHO with fidelity will succeed in increasing the number of OUD prevention, treatment, and recovery service providers trained at all levels of practice.

Evaluation of a regional ECHO designed for general substance use education for PCPs found that from 2010 to 2015, 654 providers had attended one or more sessions, with the mean number of sessions attended per provider at 12.4, excluding one-time visitors (Komaromy et al., 2016). Further, this clinic series was highly responsive to emerging substance use epidemiology, and New Mexico observed a 10-fold increase in the number of providers who had completed DATA-2000 buprenorphine waiver trainings between 2006 and 2015, from 36 to 375 physicians (Komaromy et al., 2016). The ECHO model has been demonstrated to increase the sense of connectedness to the medical community by providers in remote areas, increase participants

beliefs that they are qualified to support local peers, and overall knowledge of the topic of the ECHO (Wood et al., 2016).

Evaluation of the ECHO replication tool (utilized as the replication model for I-ECHO as described in Section B-6), supported by the Project ECHO Pain Team and the U.S. Army Medical Command, found that not only that the replication tool was effective, but also that the model successfully provided best-practice care to traditionally underserved patient populations (Katzman et al., 2016). Further, a study jointly conducted by the New Mexico Pain Center, ECHO Pain, and the Indian Health Service Telebehavioral Center of Excellence found that the ECHO model is appropriate to educate clinicians who treat American Indian and Alaska Native populations (Katzman et al., 2016). Finally, integration of a hepatitis C ECHO clinic with a state corrections office also produced favorable results, suggesting portability to that population in order to address opioid use (Arora et al., 2007).

In sum, Project ECHO is uniquely poised as an OUD workforce development tool with highly-successful replications both nationally and internationally that specifically facilitates education and training by providers in underserved areas and those involved with veterans, American Indians/Alaska Natives, and individuals in correctional facilities. We expect I-ECHO, as a replication with fidelity, to mirror these positive outcomes.

EBP 4: Indiana Recovery and Peer Support Initiative (IRPSI) – Primary Outcomes
Addressed: ‘Number of people who receive OUD recovery services,’ ‘Number of people who receive OUD treatment,’ and ‘Number of Providers Implementing MAT.’ We also expect secondary impact on all additional project outcomes.

The concept of opioid harm reduction in the ER is an emerging issue in medical research, but recent surveys have suggested that few physicians currently integrate any such model into their practice, although they are willing, in theory, to do so (Samuels et al., 2016). The IRPSI model proposes full integration of an OUD treatment and recovery support system into the ER, including recovery coaches, screening and intervention, referral to treatment, and buprenorphine administration. Though outcome and feasibility research on this type of program is limited (e.g., Samuels, 2014; Joyce & Bailey, 2014; D’Onofrio et al., 2015), the evidence from such work is strong and, especially in D’Onofrio’s case, produced via extremely rigorous methods. The absence of a large body of research literature is likely a function of the OUD crisis’s newness relative to academic publishing speed and funding acquisition. Initial findings from single-ER replications of this pilot work in Indiana have been promising (Personal Correspondence, Dr. Krista Brucker, Project POINT Administrator, 2017).

To the extent that ERs agree to participate in this program – which they strongly will be encouraged and incentivized to do – we expect significant treatment and recovery service delivery to underserved populations in Indiana, as the protocols set in place will address all individuals who have overdosed and arrived within the ER. We further expect meaningful patient outcomes to be derived from the IRPSI model, as it is designed based on the strongest extant research available for this type of program.

EBP 5: Expansion of Residential/Inpatient Detoxification and Treatment – *Primary Outcomes Addressed: ‘Number of people who receive OUD treatment,’ ‘Number of people who receive OUD recovery services,’ and ‘Number of providers implementing MAT.’ We also expect secondary impact on all additional project outcomes.*

The expansion of residential/inpatient detoxification is entirely in-line with current evidence, which indicates that it is a necessary component of managing any level of opiate withdrawal prior to treatment (<http://store.samhsa.gov/shin/content/SMA06-4225/SMA06-4225.pdf>). Although detoxification works for all populations, there are specific medication-based limitations for certain populations (articulated in Section B-6) to which this program will adhere.

This component of the program also proposes direct training in MAT, which is a required program outcome. MAT training and waivers utilize a standardized national curriculum; these processes have been supported by a variety of agencies and individuals, including the directors of multiple federal agencies such as the CDC and NIH (Volkow et al., 2014). We expect that this program component also will be supplemented by work with I-ECHO. Training in psychosocial treatment also will be provided, and each ‘sub-EBP’ identified for potential selection either is represented on SAMHSA’s NREPP or is a combination of programs listed on NREPP. Each of the programs is documented to be appropriate for universal SUD treatment for all populations. As noted previously, provision of psychosocial treatment must accompany MAT by law (<https://www.samhsa.gov/medication-assisted-treatment/treatment#counseling-behavioral-therapies>).

Finally, the expansion of ASAM 3.5 and 3.7 ‘beds’ throughout the state will increase the number of people who receive OUD treatment and recovery services. A significant barrier to treatment access is a lack of space, which contributes to the formation of wait lists and extended wait times for patients, which often lead to relapse or other harmful behavior. Not only will this portion of the proposal address required outcomes by increasing raw frequencies of treatment service delivery, it likely will also prevent unexpected negative externalities stemming from lack of access to treatment in underserved areas.

EBP 6: Formation of Mobile Crisis Teams – *Primary Outcome Addressed: ‘Reduce numbers and rates of opioid overdose-related deaths.’*

Opioid overdose reversal via easily-administered naloxone-based products is a research-based response to the opioid epidemic that demonstrably has prevented instances of opioid overdose, even when implemented by untrained bystanders (Giglio et al., 2015). Likewise, the use of mobile crisis teams for psychiatric care and mental illness has been supported by the research literature (see summative content from SAMHSA in Section B-6) and is also established by law in the state of Indiana. The linkage of these two processes – mobile crisis response and opioid overdose reversal via opioid antagonist administration – is one of the specifically-suggested activities in SAMHSA’s toolkit to respond to the present crisis (<http://store.samhsa.gov/shin/content/SMA16-4742/SMA16-4742.pdf>). We expect that this program effectively will mitigate mental health and OUD crises among multiple subsets of underserved individuals, including juveniles re-entering their communities following incarceration.

C-3

EBP 1: Indiana Prescription Monitoring Program Expansion (INSPECT)

The INSPECT program expansion will involve an RFP process where the primary metric for determining where funds are awarded will be demonstrated need. As noted previously, addressing the barrier of inefficient provider access to INSPECT data requires integration with EHR systems, a cost which is not easily borne by providers and organizations in underserved areas of the state. The INSPECT expansion is a deliberate and specific mechanism designed to address disparities in providers' access to this important healthcare tool.

EBP 2: Environmental Prevention Expansion

By developing a formative research plan and identifying messaging that is pertinent to especially-at-risk segments of the prevention audience in Indiana, our proposed environmental prevention expansion plan explicitly addresses disparities in health outcomes. The targeted marketing principles common to social marketing and health communication best-practices are a way to ensure that underserved populations and those experiencing health disparities do not receive 'one-size-fits-all' messaging, but rather are engaged on a level that is uniquely meaningful.

EBP 3: Project ECHO (implemented as I-ECHO)

The I-ECHO initiative is specifically designed to address disparities in access and use of services, as well as patient outcomes for all underserved individuals within the state of Indiana. I-ECHO is an innovative way to address the lack of access to specialty care in all underserved areas, including rural communities with few systemic resources and urban communities with some resources but where patient capacity to utilize those resources may be limited. I-ECHO will facilitate rapid dissemination of OUD treatment and prevention capacity to providers who otherwise would not have access to such developmental resources. These capacities will extend to important practice modifications, such as buprenorphine waivers (Komaromy et al., 2016). It follows that use of OUD treatment and prevention services at points of care including physicians, nurses, social workers, and other professional health staff will increase; the professionals who already interact with patients will have obtained the capacity. Evidence from ECHO implementations in other states, as described in Section B-6, also suggests that health outcomes related to the curricular topics addressed by ECHO also will improve – in this case, those related to OUDs. As noted previously, one study found that health outcomes in underserved areas improved at a rate equivalent to those in a high-capacity venue (Arora et al., 2011).

EBP 4: Indiana Recovery and Peer Support Initiative (IRPSI)

The IRPSI is a universal-access program, meaning that services will be offered to all patients who arrive in participating ERs after having overdosed on opiates. Thus, the primary mechanism through which this EBP will address disparities experienced by patients in underserved areas will be through information dissemination and activities undertaken to encourage ERs to participate in the program. To some degree, we expect that this will also be facilitated by the I-ECHO initiative, which will disseminate not only provider knowledge and education, but also credentialing, such as buprenorphine waivers.

EBP 5: Expansion of Residential/Inpatient Detoxification and Treatment

Although an official count does not currently exist, the applicant organization estimates no more than 300 beds exist throughout the entire state for detoxification and residential treatment that would meet the ASAM 3.5 or 3.7 level of care. DMHA certifies Psychiatric Inpatient Programs (PIP- Hospitals), although most are for treatment of mental disorders and few are for SUDs. In 2015, there were a reported 13,046 treatment episodes in Indiana, of which 3,360 were opioid-related. As noted in Section A, the distribution of available residential treatment does not mirror the distribution of counties at high levels of need based on aggregated opiate data and SES. Not only will this component of the process expand capacity within extant centers, most of which receive incoming treatment episodes from multiple counties, it also will facilitate additional training and awareness in healthcare professionals throughout the state. The expected result will be increased service access and utilization of residential and inpatient treatment services among all patients, but especially those who previously would have waited for treatment, potentially putting them at risk.

EBP 6: Formation of Mobile Crisis Teams

The preliminary OUD needs assessment conducted for and reported in Section A found overrepresentation by rural locations in the areas of highest risk for OUD throughout the state. Importantly, these areas tend to have longer travel times to emergency medical resources (see, for example, **Figure 10**). By implementing a cross-walk between demonstrated need via current distribution and utilization of naloxone products and systemic inequality in service access, the proposed mobile crisis teams can be distributed in such a way that they meaningfully reduce disparities in opioid overdose-related deaths. This EBP also will include an utilization of these services to connect with juveniles who are re-entering the community after interfacing with the Department of Corrections and who have substance abuse, substance dependence, and/or comorbid mental health issues that can be mitigated via triage and linkage to services.

C-4

EBP 1: Indiana Prescription Monitoring Program Expansion (INSPECT)

INSPECT is a PDMP, which is an evidence-based protocol common to 49 states. We do not propose modifications to the premises of the PDMP, but rather an expansion of service availability.

EBP 2: Environmental Prevention Expansion

We do not expect any major modifications to the best-practice recommendations from the CDC, SAMHSA, NIH, and other federal agencies. However, some version of EBP guidance focus only on social media engagement, whereas our proposed expansion will utilize other forms of media in cases where formative assessment determines that large audience segments would not be reachable via social media.

EBP 3: Project ECHO (implemented as I-ECHO)

We do not expect any modifications to the replication protocol sponsored by the ECHO Institute at this time.

EBP 4: Indiana Recovery and Peer Support Initiative (IRPSI)

We do not expect any modifications to extant recommended protocols as found in prior studies of this type of program. We do plan to expand the types of opportunities provided to patients to include a wider variety of recovery support services, as described in Section B-6. These additional services will be closely monitored as part of ongoing CQI and process evaluation to ensure that they produce appropriate and positive patient outcomes.

EBP 5: Expansion of Residential/Inpatient Detoxification and Treatment

This portion of the proposal is multifaceted, but each component will adhere to the evidence-basis, including detoxification processes, MAT training and utilization, and other treatment. We do propose to make available an amalgamated psychosocial treatment training (DBT-12-Step) that merges two EBPs, but this is a minor modification and has already been manualized.

EBP 6: Formation of Mobile Crisis Teams

We do not expect any modifications to the best-practices established by the research literature, SAMHSA, and Indiana's CIT-TAC.

C-5

Each of the programmatic elements in this proposal will have a program-specific evaluation structure that focuses on process evaluation; each of these micro-evaluations will feed into an overall project evaluation structure. The goal in creating this structure is to ensure that adherence to EBP guidelines is systematic, and that deviations are identified and remediated quickly. This continual process evaluation also has been called continuous quality improvement (CQI).

Multiple means of CQI have been utilized in healthcare settings to ensure adherence of care with established guidelines. A common mechanism is use of the Six Sigma principles; in this case, use of those principles for EBP CQI would require that the key characteristics and other facets of the EBP be **Defined**, that they consistently are **Measured and Analyzed**, that the results are used to inform **Improvement**, and that monitoring occurs at a variety of levels of **Control** (www.healthit.gov/sites/default/files/tools/nlc_continuousqualityimprovementprimer.pdf).

In the event that an EBP's implementation is not matching appropriate guidelines, process adjustments can be made by agreement of stakeholders at DMHA and the PD, and requested by entities involved in any of the work. By necessity, the decision to make adjustments is a top-down process, as those who have the authority to modify programs must utilize it, but ensuring buy-in from 'front-line' individuals who are implementing the programs is also necessary for successful adjustment.

The possibility also must be considered that an EBP may unexpectedly need to be modified due to the characteristics of the population of focus. In those cases, these CQI-driven evaluation processes will identify the discrepancy, and project staff will work toward documenting potential solutions and vetting them to the extent of available scientific rigor.

SECTION D: STAFF AND ORGANIZATIONAL EXPERIENCE

D-1

The Division of Mental Health and Addiction (DMHA) is the single-state agency (SSA) in Indiana eligible to respond to this FOA. DMHA sets standards of care for the provision of mental health and addiction services to all Indiana residents, and operates under the auspices of the mission statement, “To ensure that Indiana citizens have access to quality mental health and addiction services that promote individual, family and community resiliency and recovery.” DMHA certifies all community mental health centers (CMHCs) and addiction treatment services providers in the state; it also operates six psychiatric hospitals across the state, partners with families and consumers, represents tax payers through wise stewardship of tax dollars, and provides addiction and mental health services to uninsured and underinsured Indiana residents. DMHA’s Bureau of Mental Health Promotion and Addiction Prevention provides oversight and administration of the Substance Abuse Prevention and Treatment (SAPT) Block Grant to ensure that funding addresses statewide prevention and mental health promotion priorities. SAMHSA’s funding specifically support’s DMHA’s work provide addiction services such as prevention and treatment to pregnant women and IV drug users.

DMHA contracts with local CMHCs throughout the state to provide a full continuum of care for individuals who are in need of behavioral health services. All 92 counties are covered either by 25 CMHCs or a satellite office within a 60 minute drive. Most of CMHCs provide services for mental health as well as substance abuse and co-occurring disorders. Besides contracting with local CMHCs, DMHA also provides oversight for 13 of the 14 OTPs in the state. As noted previously, the federal government has oversight of the OTP that is located at Richard L Roudebush VA Medical Center in Indianapolis. Out of the 13 OTPs regulated by DMHA, 10 are for-profit and the remaining 3 are not-for-profit and located within CMHCs. Oversight includes a yearly audit of patient clinical records, administration, programs and plans, medical and physical environments, and OTP staff qualifications and responsibilities. The OTPs are also required to submit a Diversion Control Plan to DMHA for approval once a year. This oversight is completed by a team from DMHA that at times includes the State Opioid Treatment Authority, managers of OTPs, and the quality assurance coordinator.

DMHA served as a key member of the integrated local, state, and federal team responding to the HIV outbreak due to use of injectable opioids in Scott County, Indiana (described in Section A-1). In doing so, DMHA provided support to increase access to treatment services for those with substance use issues. Working with the Indiana State Department of Health and the CDC, DMHA was also able to provide additional resources for addressing substance abuse issues in the community. Indiana also received Partnership for Success funding from SAMHSA’s Center for Substance Abuse Treatment. This award was designed to address the misuse of prescription drugs by youth ages 12-25 years of age and to increase the use of the Indiana’s PDMP, INSPECT (the subsequent logical step from this work is presented in this application as a strategic goal; see Section B-5).

DMHA also manages Recovery Works, a voucher-based treatment program established by the Indiana General Assembly to fund vouchers to providers that offer specialized services to those struggling with mental illness and/or substance abuse and addiction. This voucher program works with entities that are DMHA certified/licensed and demonstrate competency in the treatment of populations with criminogenic risk factors. The program works to support persons

in the community who may otherwise face incarceration. Treatment and/or recovery services are intended to supplement community supervision strategies to decrease recidivism. The program's overall strategic focus is on pre-incarceration diversion services and post-incarceration re-entry services.

DMHA manages and oversees multiple committees related to prevention and treatment of substance abuse. For clarity, one such committee is described here. The Mental Health and Addiction Advisory Council is made up of collaborators and interested partners of DMHA's substance abuse and mental health treatment and prevention programs. The membership represents advocacy organizations, prevention and treatment providers, state agencies, and concerned citizens. The Council's priority is to promote mental health and prevent addiction, with the goal of assuring that communities in Indiana have sufficient support for provision of services for addiction prevention and mental health promotion. This council provides feedback and advice to DMHA in the following areas:

- Women During Pregnancy and/or with Dependent Children Priority Services;
- Outreach and Priority Admission for Intravenous Drug Use (IVDU);
- Tuberculosis Screening, Assessment, Education and Treatment Services;
- Recovery Supports;
- Substance Abuse Prevention and Mental Health Promotion;
- Integration of Primary and Behavioral Health; and
- Safe and Affordable Home in the Community for All Consumers.

DMHA is uniquely positioned within the state of Indiana to support the implementation of the proposed work in this application, having both the management capability and demonstrated experience with numerous similar projects, both in terms of process and in terms of substance.

D-2

Many of the organizations that will partner with DMHA to implement the proposed work will be identified through requests for proposals (RFPs) or requests for information (RFIs). As such, these organizations have not been identified at this time. DMHA has a longstanding history of partnering with and identifying highly qualified and competent organizations throughout the state of Indiana to provide training, technical assistance, evaluation, and other essential programmatic services. This ability to create synergistic partnerships greatly has strengthened the substance abuse prevention and treatment infrastructure in the state. Many of the proposed strategic goals will also involve contracts with hospitals, urgent care centers, OTPs, CMHCs, treatment facilities, educational programs, and other, similar entities. These contracts will be awarded based on a measured balance of applicants' abilities to facilitate work for underserved individuals and their overall capacity, readiness, and expertise.

DMHA also anticipates building on its history of collaboration with other state agencies, such as the Indiana Department of Corrections (IDOC), Indiana State Department of Health (ISDH), the Indiana Criminal Justice Institute (ICJI), and the Indiana Department of Child Services (IDCS) to enhance and expand access to opioid prevention, treatment, and recovery services. For example, DMHA will work closely IDOC to identify individuals residing in or about to leave prison facilities who may benefit from programmatic involvement with one or more of the proposed

services. Additionally, individuals who are assigned to opioid treatment as a pretrial diversion activity will have expanded options.

Several of the proposed grant activities will benefit from involvement from the ISDH's Prenatal Substance Abuse Prevention Program, which supports pregnant mothers and teens who are using or at risk of using opioids during their pregnancies. This program currently identifies and works with high-risk, chemically-dependent women and provides them with abstinence support, education, and referral to addiction treatment. The program also trains professionals on how to identify and assist women who are chemically addicted. In working to bolster the state's resources for detoxification, treatment, and recovery, as well as facilitating expanded education – especially in underserved areas – ISDH will be a key partner, especially as pertains to pregnant mothers and teens dealing with OUDs.

The proposed project also will benefit from guidance from the Indiana Perinatal Network, which provides services and support through its Neonatal Substance Abuse Syndrome Programs. This is a collection of programs that collectively address the problems that may occur with a baby at birth that was exposed to prescription and illicit drugs prior to birth. They provide training on EBPs to manage infants' with the medical needs and to provide resources for care givers to identify and intervene with pregnant mothers to minimize prenatal exposure.

The Indiana Judicial Center through IDOC trains and certifies Court Alcohol and Drug Programs for Indiana. These programs are the responsible body for assigning person to court ordered alcohol and drug treatments and oversee compliance. Persons who are assigned opioid treatment as opposed to incarceration will go through these courts for program access.

IDCS is charged with protecting Indiana's children from neglect and abuse. The agency works to improve family situations and to keep parents and children together. If situations warrant, IDCS works to place children in foster care and to support adoption. IDCS oversees child support and emergency child protective services in Indiana and partners with Volunteers of America (VOA) to keep mothers in substance abuse treatment with their children under the age of 5, including newborns. Currently there are 15 beds at VOA, and expansion of capacity in this venue is likely as part of the proposed work (Goal 5).

In summary, DMHA anticipates numerous partnerships in the execution of the proposed project, and will ensure that all partnering organizations have experience in the appropriate areas in order to optimize service delivery to Indiana residents.

D-3

According to the FOA, the sole individual considered **key staff** for this project is the Project Director (PD). However, a Program Coordinator will also be hired to assist with management of daily responsibilities.

The PD will be responsible for high-level oversight of the project, and will report directly to Terry Cook, Assistant Director of DMHA and Indiana's State Opioid Treatment Authority. Among other responsibilities, the PD will:

- Manage and coordinate implementation of all six strategic goals for the project;

- Ensure collection of all required documentation pursuant to this project;
- Chair and otherwise structure pertinent committees, councils, and ad-hoc advisory groups relevant to the proposed work;
- Work directly with all organizations and individuals who successfully respond to RFPs and RFIs in order to ensure execution of all project components; and
- Perform other supportive work necessary for the coordination of the overall project.

The PD (to be hired) will be budgeted at 1.0 FTE, dedicating 40 hours per week to this project. It is expected that this level of effort will be entirely sufficient for the PD to successfully oversee implementation of the proposed work.

D-4

The PD is ‘to be hired.’ *At a minimum*, the applicant will be required to have a bachelor’s degree in social work, nursing, public health administration, or a related field, and at least three years of experience administering projects of similar scope to the proposed work in this application. Preference will be given to applicants who have a master’s degree or other advanced degree in a health profession or related field, who have experience working with populations in Indiana, especially rural or underserved populations, who have greater than three years of administrative experience as described above, and who can demonstrate goodness of fit within the organizational culture of DMHA.

D-5

The PD hired by DMHA will ensure that both formative and continuous input are gathered from Indiana communities, clients and families regarding the assessment, planning and implementation of the prevention and treatment EBPs. It is expected that the PD will either hire trained and experienced project evaluators or provide for those services by an RFP or RFI at the time of funding receipt. Input from all stipulated parties can be gathered via quantitative (e.g., survey) and qualitative (e.g., focus group) methods and will be utilized as part of the formative needs assessment and as part of individual program evaluation and the overall project’s continuous quality improvement mechanism.

Project managers or contractors for each specific strategic goal will, upon consultation with the PD, collect additional needs assessment data as determined by the program evaluators. These individuals and entities will work with the PD and all members of the evaluation team to ensure that program implementation is serving communities’, families’, and consumers’ needs. In the event that feedback suggests that a program should be altered to better fit the needs of the community of focus, the PD will work with all necessary parties to facilitate that change. At a minimum, process-driven feedback measures will be reported to the PD every six months.

The PD will also oversee the hiring of trained and experienced treatment evaluators for the duration of the funding period. These individuals specifically will oversee the implementation and fidelity of each treatment enhancement project to ensure that community needs are being met. They will use existing or develop new methods of assessing, implementing, and reporting feedback on the implementation success or barriers encountered.

SECTION E: DATA COLLECTION AND PERFORMANCE MANAGEMENT

E-1

DMHA used the required performance measures as the objectives of the state's goals. The collection and reporting strategies are listed in the next section.

E-2

The data for Objective 1 (Increase the number of people who receive OUD treatment) and Objective 2 (Increase the number of people who receive OUD recovery services) will be collected in DMHA's main data collection system, DARMHA (Data Assessment Registry Mental Health and Addiction). This is a web-based system that allows providers to submit data by entering into the website, importing files or directly connecting to the database thru Web Services. DMHA plans to create reports that will show the data by service, by provider and by region of the state so that they can monitor utilization, provider performance and services provided by region.

The data for objective 3 (Increase the number of providers implementing MAT) will be collected from several sources. First, providers that offer residential treatment, inpatient treatment and recovery supports will provide data about MAT in their required data set for DARMHA. Second, providers that receive funding to connect their EHR to INSPECT will be required to offer MAT.

Third, DMHA will request data from Medicaid regarding MAT counts at the beginning and at the end of the grant.

Data for objective 4 (increase the number of OUD prevention and treatment providers trained) will be collected at each I-ECHO webinar.

Data for objective 5 (reducing numbers and rates of opioid use) will be collected by survey data, specifically the Indiana school survey and the National Survey on Drug Use and Health (NSDUH).

Data for objective 6 (reducing the numbers and rates of opioid overdose-related deaths) is collected by the Indiana State Department of Health. This data will be looked at regionally in conjunction with treatment service and prevention efforts.

Wendy Harrold, Deputy Director, Provider Quality and Performance, will facilitate the collection and reporting of this data. However, the addiction staff will be responsible for the monitoring this data.

E-3

The data collected for each objective will be looked at by region of the state, if possible, so that DMHA can make adjustments in efforts. For example, if there is an increase of overdoses in an area, DMHA can increase prevention efforts, marketing of treatment options or target local doctors for the I-ECHO project. Data will be compiled and looked at monthly by the addiction staff.