The Children and Recovering Mothers (CHARM) Collaborative in Burlington, Vermont
A Case Study

A Case Study of a successful Collaborative serving pregnant women with opioid dependence, their babies and families.
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**Overview and Purpose**

The purpose of this document is to provide an in-depth case study of a community-developed, coordinated, and comprehensive approach to care for families affected by opioid addiction. The Children and Recovering Mothers (CHARM) Collaborative in Burlington, Vermont, is a multidisciplinary group of agencies serving women with opioid addiction and their families during pregnancy and infancy. This report describes and examines two aspects of the CHARM Collaborative: 1) the multiple points of intervention for families and 2) the collaborative practice elements across systems.

There are multiple intervention opportunities across service systems and professionals, beginning before pregnancy and continuing throughout a child’s developmental milestones. The National Center on Substance Abuse and Child Welfare, funded by the Substance Abuse and Mental Health Services Administration and the Administration for Children and Families, created a five-point framework that addresses screening, assessment, referral, and engagement across all stages of development for affected children (Young et al., 2009). According to the framework, interventions can reduce the potential harm of prenatal and postnatal substance exposure at five intervention points: 1) before pregnancy, 2) during pregnancy, 3) at birth, 4) during the neonatal period, and 5) throughout childhood and adolescence.

The case study narrative in this report describes the history of CHARM and the policies and practices developed across the intervention points outlined in the five-point framework. The case study also includes a flow chart (Appendix A) that depicts the CHARM Collaborative’s decision-making process at each intervention point.

A second purpose of this document is to describe and provide examples of collaborative practices implemented by CHARM. Collaborative practice can be defined as the use of 10 system linkage elements by two or more systems, agencies, or providers to improve child and family outcomes (Children and Family Futures, 2011). The 10 elements of system linkages are: 1) underlying values and principles of collaboration, 2) screening and assessment, 3) engagement and retention in care, 4) services to children of parents with substance use disorders, 5) joint accountability and shared outcomes, 6) information and data systems, 7) budgeting and program sustainability, 8) training and staff development, 9) working with related agencies, and 10) working with the community and supporting families. This report examines CHARM Collaborative practices across the 10 elements of system linkage. State and community collaborative groups can use this information to guide their efforts to implement collaborative practices in their own communities.
A. History and Description of the CHARM Collaborative

Early Need
In 1998, a physician specializing in addiction at the Fletcher Allen Health Care Hospital in Burlington, Vermont, met a young pregnant woman who was seeking treatment for an addiction to heroin because she was concerned about her baby. The physician knew that medication-assisted treatment (MAT) was the best option for the woman and her unborn child, and he wanted to prescribe methadone. At that time, however, no methadone clinics or opioid treatment programs (OTP) existed in Vermont and the Controlled Substances Act of 1970 limited the ability of physicians to prescribe methadone directly.

Under this law, physicians were able request waivers from the State Opioid Treatment Authority to prescribe methadone to identified patients as part of their medical practice. The physician applied for and received a waiver for the first woman. Within a year, he received waivers to treat two more pregnant women with addiction to heroin. The demand for treatment grew quickly, so the physician continued to request and obtain waivers to treat several pregnant women until the first methadone clinic, opened in Vermont in 2002 at Fletcher Allen Health Care Hospital. This physician worked with an obstetrician and neonatologist from the same hospital to coordinate care for these women.

Creation of the CHARM Collaborative
These early efforts to provide care for women with addiction to opioids during pregnancy became the CHARM Collaborative. Today, the CHARM Collaborative provides comprehensive care coordination for pregnant women with opioid addiction and consultation for child welfare, medical, and addiction professionals across Vermont. In 2013, the CHARM Collaborative supported 194 women, babies, and their families.

Effectively treating and supporting pregnant women with addiction to opioids (heroin or prescription medications) and their families requires a comprehensive approach. Before the CHARM Collaborative was formally established in 2002, two groups of professionals worked together to coordinate care for their shared patients in Burlington. At Fletcher Allen Hospital, the addiction specialist joined two other physicians from the Comprehensive Obstetric and Gynecological Specialty (COGS) clinic and the Neonatal Medical Follow-up Clinic (NeoMed) at the hospital to address the needs of the families they were treating.

This group’s primary goal was to make sure that each woman with an opioid addiction and her infant received the services they needed, including substance abuse counseling, nutrition support from the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC), and home-visiting services for prenatal and early-childhood support. Members of a second group of community-based professionals from Lund, a comprehensive treatment center and family support agency; the Howard Center, a substance abuse treatment provider; and the state alcohol and drug abuse program (ADAP) were also working together to support these women and families. By 2002, the two groups had begun working together.
While the two groups of professionals continued to work informally together, the demand for access to MAT for pregnant women (among other populations) continued to grow. Several state agencies, including the Divisions of Maternal and Child Health and Alcohol and Drug Abuse Program (Women’s Treatment Programs, representatives of the Opioid Treatment Authority and, the U.S. Drug Enforcement Agency) began discussing ways to address these emerging issues. The efforts of this group agencies resulted in two important outcomes: 1) development of the first methadone clinic in Vermont and 2) the decision to provide an outside facilitator from Kid Safe Collaborative to help the two informal groups establish a more formal care coordination effort. The KidSafe Collaborative is a local agency that supports multiple cross-agency collaborations to prevent and address child abuse and neglect in Burlington.

The six initial members of the collaborative were a physician and addiction specialist, an obstetrician, a neonatologist, the ADAP women’s services coordinator, and the directors of Lund and the Howard Center. This team served many families that were receiving child welfare services from the Vermont Department of Children and Families (VDCF), and the group wanted VDCF representatives to join the collaborative. However, the addition of VDCF created conflicts among collaborative members, primarily regarding information sharing. Many collaborative members were unsure of how to share patient information while still adhering to confidentiality laws and regulations. For example, under federal mandates to protect child safety, VDCF was obligated to act on any information revealing potential child safety concerns. Substance abuse treatment providers were also reluctant to share client information that might put their clients at risk of involvement in the child welfare system. Collaborative members agreed that all stakeholders needed to be at the table to ensure child safety and promote family well-being, and they made a commitment to identify a solution to this information sharing challenge. VDCF was ultimately able to participate in the collaborative.

To begin addressing this challenge, the collaborative created a memorandum of understanding (MOU) (Appendix B) and a comprehensive, multiagency release-of-information form (Appendix C) for clients to sign that would allow members to appropriately share information for care coordination purposes. Collaborative members and their agencies’ attorneys spent 2 years negotiating the terms of the MOU and release of information. Skilled facilitation provided by KidSafe and the ongoing commitment of all members to effectively serve pregnant women with opioid addiction and families were critical factors in the eventual success of this effort.
Another part of the solution to the information-sharing challenge came from a state statute that provides for the development of child protection teams that may share client information under certain circumstances. Similar statutes exist in other states and might offer important policy opportunities to communities interested in creating a model similar to the CHARM Collaborative. The Vermont statute (Title 33, Section 4917) allows a group of empanelled professionals to share relevant, client-specific information with one another for the purpose of protecting child safety. Establishing an empanelled group requires approval for each member from the commissioner of the Vermont Department for Children and Families. Once each CHARM Collaborative member received this approval, the group became a designated child protection team. Effective information sharing allowed the group to effectively coordinate services for families with child safety concerns.

Another significant early challenge for CHARM was the limited availability of MAT in Vermont. Initially, the Vermont Opioid Treatment Authority required physicians to obtain a one-time waiver to prescribe methadone for each pregnant woman. In 2002, the State Opioid Treatment Authority established the first state-approved opioid treatment program (OTP) at Fletcher Allen Hospital in Burlington. This OTP dispensed methadone from the hospital pharmacy to women who arrived daily for their prescribed dose. Over time, the methadone program moved to a community-based clinic. In 2004, buprenorphine became a second option for MAT during pregnancy in Vermont. In Burlington, buprenorphine prescriptions and dosing became available at the Fletcher Allen Hospital’s COGS, where many CHARM women received prenatal care. State approval for the first OTP and for buprenorphine use effectively increased access to MAT for pregnant women in Vermont.1

CHARM Today
Today, the CHARM Collaborative includes 11 organizations that collectively provide comprehensive care coordination for pregnant women with opioid addiction and consultation for child welfare, medical, and addiction professionals across Vermont. Several of the members have been involved in CHARM since the group’s inception.

Vermont Statute
Title 33: Human Services
Chapter 49: Child Welfare Services
§ 4917. Multidisciplinary Teams; Empanelling

The Commissioner or his or her designee may empanel a multidisciplinary team or a special investigative multitask force team or both wherever in the state there may be a probable case of child abuse or neglect which warrants the coordinated use of several professional services. These teams shall participate and cooperate with the local special investigation unit in compliance with 13 [Vermont Statutes Annotated] § 5415.

1 State-approved OTPs exist in all states, except for Wyoming and North Dakota. Puerto Rico and the District of Columbia have no OTPs. For more information, including a state directory of OTPs, certification requirements for OTPs, and a list of State Opioid Treatment Authorities, see http://dpt2.samhsa.gov/treatment/directory.aspx.
The following table lists the CHARM Collaborative members.

<table>
<thead>
<tr>
<th>Member Organization</th>
<th>Services Provided</th>
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| Comprehensive Obstetric and Gynecological Services (COGS), Fletcher Allen Health Care Hospital | • Prenatal care  
• MAT assessment  
• Buprenorphine  
• Care coordination |
| NeoMed Clinic, Vermont Children’s Hospital at Fletcher Allen Health Care Hospital | • Neonatal assessment and treatment  
• Parent education on Neonatal Abstinence Syndrome  
• Developmental assessment |
| Howard Center/Chittenden Clinic | • MAT assessment  
• Methadone, buprenorphine  
• Individual and Group substance abuse treatment |
| LUND | • Residential care for mother and baby  
• Substance abuse treatment  
• Parent and Family support |
| Vermont Department for Children and Families | • Child Safety Assessments  
• Child Welfare Services |
| Vermont Department of Corrections/ Correct Care Solutions | • Healthcare for women in the corrections system |
| Alcohol and Drug Abuse Programs, Vermont Department of Health | • Substance abuse treatment  
• Opioid Treatment Authority |
| Maternal and Child Health (Chittenden, Franklin and Grand Isle Counties), Vermont Department of Health | • Public Health Services  
• Special Supplemental Nutrition Program for Women, Infants, and Children (WIC)  
• Home Visiting referral |
| Vermont Department of Health Access | • Medicaid |
| Visiting Nurse Association of Chittenden and Grand Isle | • Nurse Home Visiting services |

At any given time, approximately 100 women receive coordinated care through the CHARM Collaborative. Each month, about 20 pregnant women are added to the client list and about 10 babies are born. Annually, the collaborative serves 200–250 families.

Members of the CHARM Collaborative meet once a month for 2 hours to discuss the needs of client families and how to address these needs. Decisions about solutions and follow-up tasks are made for each family before the next family is discussed. To support these discussions, the facilitator distributes a list of client families at each meeting. The lists of client families are divided into four categories: families that are new to CHARM, those with a woman expected to give birth within 30 days, those with a woman who recently gave birth, and those for whom a collaborative member has concerns. Within each category, the names are listed alphabetically, and families are discussed in that order. Typically, about 40 families are discussed at each meeting. Periodically, the first 15 minutes are used for providing cross-disciplinary training, sharing outcomes, and discussing related projects and other non-case-specific process issues.
With 40 families to discuss in less than 2 hours, the meeting process needs to be quick and effective. Key factors allowing CHARM to use its time effectively at each meeting are a skilled facilitator, many years of experience, and immediate access to current client files. Many members can obtain access to their case files remotely while participating in the meetings.

Decisions about follow-up with client families made during the meetings might include increasing case coordination, increasing intensity of services, increasing social supports, formally submitting a report to VDCF, or requesting a VDCF safety assessment.

Organizing and maintaining the CHARM Collaborative process requires the efforts of several key individuals, including the facilitator, NeoMed nurse, and COGS and NeoMed caseworkers. Each individual plays a key role in sustaining the overall effort.

The facilitator from KidSafe Collaborative guides the CHARM Collaborative. She is responsible for developing the CHARM meeting agendas, facilitating CHARM Collaborative meetings, managing conflicts among CHARM members, monitoring the empanelment process for the Child Protection Teams, managing the collaborative’s budget, developing resources, and managing communication among collaborative members. Along with other CHARM Collaborative members, she gives presentations at conferences throughout the country on the CHARM process and lessons learned. Her knowledge of child welfare issues and policies and her communication and facilitation skills allow her to objectively and effectively assist the CHARM collaborative in addressing the needs of each family while protecting client rights and respecting the mandates of each member organization. The facilitator spends about 4 hours per week on CHARM, and her time is supported financially by a combination of small grants from private foundations, United Way, and the Vermont Division of Alcohol and Drug Abuse Programs. The state funding for the facilitator is discretionary, and the amount varies from year to year.

The neonatal nurse monitors the release-of-information forms and maintains the list of CHARM families. Her efforts for CHARM require about 1 hour per week, and Fletcher Allen Health Care Hospital provides her services on an in-kind basis.

The social worker in the COGS clinic works primarily with CHARM families and takes on most of the care coordination responsibilities for these families during pregnancy. The medical assistant and the nurse in the NeoMed clinic provide most of the care coordination for families during infancy. They work with CHARM families in addition to other families receiving neonatal services. Fletcher Allen Health Care Hospital supports these three positions. If the CHARM Collaborative did not exist, COGS and the NeoMed clinics would still provide care coordination services for these families. The CHARM Collaborative improves the efficiency and decreases the time required for care coordination.

### Critical Facilitator Competencies

An effective facilitator is:

- Organized
- Objective (not partial to certain members)
- Effective at oral and written communication
- Aware of relationships among group members and political influences on the group
- Adept at conflict resolution
Benefits of CHARM

The CHARM Collaborative benefits families, organizations, the community, and the state of Vermont. This collaborative has resulted in a full range of services for the families of pregnant women with opioid dependence in the northern half of the state. Collaborative members have shared the CHARM process throughout the state, and other counties are now implementing similar models. For the organizations involved in CHARM, the time saved by coordinating services for 40 families in one 2-hour meeting a month (compared to the time required to coordinate services by telephone and email) is substantial, and members believe that the quality of care they provide to families is better as a result. The CHARM process avoids problems resulting from conflicting information about patient health, progress in recovery, and behavior. Family needs are identified sooner and addressed more quickly, and fewer families “fall through the cracks,” than if the services these families received were not coordinated among providers.

The benefits of CHARM to families include healthier pregnancies, healthier babies, and a greater chance to remain together or be reunified. Since CHARM began, access to MAT for pregnant women has increased, and women are receiving treatment earlier in their pregnancies. There is a trend toward increased birth weight, and fewer babies require pharmacological treatment for withdrawal symptoms after discharge from the hospital. Some babies requiring treatment after discharge are able to complete that treatment at home.

In 2012, a study led by one of the COGS obstetricians and published in the Journal of Addiction Medicine identified some outcomes of the CHARM Collaborative (Meyer et al., 2012). The authors investigated the impact of increased access to MAT for women and babies served by CHARM from 2000 to 2006. Of the 106 CHARM babies who underwent developmental screening at eight months, 96 (94%) were within normal limits on all developmental parameters, 6 (5.6%) had mild delays, 2 (1.8%) had more severe delays, and two (1.8%) died after discharge from the hospital. Of 134 CHARM babies born between 2003 and 2006, 116 (86%) were discharged from the hospital in the custody of the mother. This percentage increased from 83.3% in 2003 to 91.8% in 2006.

Factors Resulting in Healthier Infants
- Access to early prenatal care
- Consistent attendance at prenatal visits
- Receipt of MAT and counseling
- Completion of at least one prenatal neonatal visit

Factors Resulting in Less Healthy Infants
- Missed prenatal and neonatal appointments
- Continued use of illicit opiates
- Lack of stable housing
- Discontinuation of counseling (even if the women continues to receive MAT)

Over the last several years, CHARM members have identified factors that seem to predict infant health. Healthy outcomes are more likely when women obtain prenatal care early during pregnancy, consistently complete their prenatal visits, receive MAT, participate in counseling, and/or attend at least one prenatal appointment with a neonatologist. Conversely, poor health outcomes for the baby are more likely when women miss prenatal and neonatal appointments, continue their illicit use of opioids, lack

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2 Neither of the infants who died required treatment for neonatal abstinence syndrome. The mothers of both infants were actively receiving substance abuse treatment with no indication of relapse. The causes of death were suffocation from co-sleeping and sudden infant death syndrome.
stable housing, and/or do not continue to obtain substance abuse counseling (even if they continue to undergo MAT).

The following section describes the CHARM collaborative decision-making process and services across three points in time: pregnancy, birth, and after birth. See Appendix A for a flow chart illustrating the decision-making process at each point of intervention.

B. Engaging Mothers during Pregnancy
Members of the CHARM Collaborative have identified four goals for each family during pregnancy: 1) engage each woman in prenatal care as early in the pregnancy as possible, 2) reduce opioid cravings and withdrawal symptoms using MAT, 3) engage the woman (and her partner if possible) in substance abuse counseling, and 4) provide social support and meet basic needs for the family.

Prenatal Care
Most pregnant women enrolled in CHARM are referred to COGS for prenatal care by another CHARM Collaborative member. They can also be referred by a hospital emergency department, community obstetrician, primary care provider, or substance abuse counselor. Women can also refer themselves to COGS for prenatal care. If a woman is referred by an emergency department, COGS schedules an appointment for her for the next business day. COGS staff regard this situation as urgent but not as an emergency requiring immediate action.

For a CHARM woman’s first visit to COGS for prenatal care, the goals are to confirm the pregnancy; assess the woman’s opioid dependence and whether she needs MAT; assess her nutrition status and refer her to WIC for nutrition support, if needed; and begin assessing her social support needs. Most CHARM women receive referrals for home-based well-baby services. If the pregnancy and/or opioid dependence is not confirmed, the woman is referred to other services based on her needs and the family is not added to the CHARM client list.

CHARM women can also receive prenatal care from community-based obstetricians or primary care providers. The number of CHARM women receiving prenatal services from non-COGS providers is growing as the number of providers receiving training on and improving competencies in MAT during pregnancy increases. In some cases, women receive early prenatal care from community providers and transfer to COGS later in the pregnancy for closer monitoring and coordinated care.

Prenatal Care at COGS

The COGS Team
Four staff members provide services to CHARM women at COGS: a physician, a registered nurse, a medical assistant, and a social worker. All four staff members work to engage and retain these women in prenatal care and substance abuse treatment, including MAT. Two of the four COGS staff members attend CHARM meetings every month.

The physician has in-depth knowledge of addiction through years of experience, a close association with a physician who specialized in addiction medicine, and attendance at relevant conferences and continuing education events. In the early days of the CHARM Collaborative, all CHARM women received a consultation with the addiction medicine specialist. Currently, the obstetrician requests consultations only for complicated or unusual situations. The nurse communicates regularly with the CHARM facilitator and coordinates information dissemination and services for CHARM families with the physician, medical assistant, and social worker. The medical assistant generates lists of new...
patients for the facilitator each month and identifies families to be discussed by the COGS team at monthly CHARM meetings. The social worker coordinates medical care, substance abuse treatment, social supports, and nutrition services for CHARM families. She also educates parents about CHARM and requests a signed release of information for families that enroll in the program. She relies on the CHARM meetings to coordinate services for CHARM clients efficiently with other providers.

CHARM Services Provided at COGS
CHARM women receive prenatal care services at COGS, and the frequency of these visits depends on gestational age and whether women have complications that need monitoring. In addition to standard prenatal care, each visit includes a urine drug test; monitoring of attendance at prior prenatal visits; substance abuse counseling; scheduling of NeoMed appointments and home-visiting appointments; and ongoing assessment of social support needs, including housing, transportation, and mental health services. All CHARM women are tested for HIV, gonorrhea, chlamydia, and hepatitis B and C at their first visit to COGS. COGS offers CHARM women hepatitis B immunizations after the first trimester. The women are tested again for gonorrhea and chlamydia at 28 weeks gestation and for hepatitis C during the third trimester. The women have a group B streptococcus test at 35 weeks.

COGS team members encourage CHARM mothers’ partners to seek substance abuse treatment when needed and can assist in coordinating referrals and assessments for partners. The COGS team refers CHARM women to services and supports as needed or documents these needs to discuss at the next CHARM meeting.

At each prenatal visit, the physician, nurse practitioner, medical assistant, and social worker monitor the woman’s behavior for indications of a relapse or the need to adjust the MAT dosage. The COGS team can adjust MAT doses immediately, when needed, for women receiving MAT at COGS. For women receiving MAT from another provider, COGS staff contact that provider right away without waiting for the next CHARM meeting.

Women receive an ultrasound during an early prenatal care visit. Seeing the baby during the ultrasound is often a significant motivator for women to protect their health and stay engaged in substance abuse treatment. The ultrasounds also allow the physician to identify any anomalies in the fetus. Additional ultrasounds are done each trimester.

MAT
CHARM women have several options for receiving MAT during pregnancy. If a pregnant woman is already stable on MAT, she is likely to stay with the same MAT provider throughout her pregnancy. However, most pregnant women are not stable on MAT when they come to the attention of the CHARM Collaborative.

A MAT assessment is typically completed at COGS or the methadone clinic in accordance with the Vermont guidelines for MAT for pregnant women.

For providers who are determining whether to prescribe buprenorphine or methadone, the guideline authors recommend basing the decision on the answers to several questions:

- Is the woman able to take medication consistently on her own?

Vermont Guidelines for MAT for Pregnant Women
A consolidated set of recommendations for the management of opioid dependence during pregnancy is available on the Web site of the Vermont Child Health Improvement Program, which created this document: http://www.uvm.edu/medicine/vchip/documents/VC_HIP_4MAT_GUIDELINES.pdf.
Following the 2013, Burlington and the surrounding areas have one primary methadone provider. This methadone clinic was the first to open in Vermont, and its medical director is the addiction-certified physician who advocated for MAT for pregnant women prior to the existence of CHARM.

Induction on methadone can be provided to CHARM women on an outpatient basis at this clinic or, if needed for medical reasons, at the hospital over a 2- or 3-day admission. The dosage is adjusted frequently until women are stable and they are relatively symptom free. After the induction period, the provider adjusts the dosage as needed based on patient reports and observed behavior. Patients must visit the clinic daily for dosing at first. As of January 2013, in accordance with federal regulations, women can begin receiving their doses on a weekly basis once their condition is stable.

**Methadone**

Most CHARM women who are prescribed buprenorphine receive it from the COGS clinic on a weekly basis. Due to a statewide initiative implemented in 2013, known as the Hub and Spoke initiative (see Appendix D), CHARM women can also receive buprenorphine from the state’s methadone clinic or other community-based providers. Buprenorphine induction by COGs takes place during a 24-hour hospital admission.

**Buprenorphine**

**Hub and Spoke Initiative**


**CHARM Release-of-Information Form**

Following induction and initial stabilization with MAT, each woman who is eligible for CHARM is informed by a CHARM Collaborative member of the CHARM Collaborative and, if she agrees to participate, her signature on a comprehensive release-of-information form is requested. By signing this form, the woman becomes a CHARM client. The vast majority of eligible women sign the information release form.

The small number of women who do not choose to participate in CHARM receive the same care from most of the same providers as CHARM participants but with standard care coordination. The service needs, health, and recovery progress of CHARM women are not discussed at CHARM meetings until 30 days before their expected due date. At that time, if any group member has concerns about the safety of a patient’s baby, that group member submits a report to VDCF and the group operates under its authority as an empanelled child protection team in compliance with all relevant information-sharing protocols. As providers develop relationships and build trust with women not
enrolled in CHARM and their families, the providers continue sharing information about the CHARM Collaborative, and many of these women ultimately agree to participate.

**Substance Abuse Counseling**

All CHARM women who receive MAT must also receive substance abuse counseling and non-pharmacological substance abuse treatment. Both group and individual treatment are provided to CHARM women through programs at the Chittenden Clinic, Fletcher Allen Health Care Hospital, Lund’s residential care program, and other community-based treatment providers. CHARM Collaborative members treat lack of engagement in substance abuse counseling as a risk factor for poor birth outcomes for CHARM women even if these women continue receiving MAT. Collaborative members stress the importance of substance abuse counseling with families and make every effort to keep women engaged and actively participating in this aspect of their treatment.

**Neonatal Consultation**

An important component of the CHARM process is a prenatal visit to the NeoMed clinic, where providers focus on educating women about the health and safety of their babies and on building a relationship and establishing trust between the NeoMed clinic staff, the woman, and her family. The COGS clinic staff refer CHARM women for one or two prenatal consultations per family with the NeoMed providers. COGS clinic staff strongly encourage women to complete these visits and they sometimes accompany CHARM women to the NeoMed clinic to schedule the appointment.

The NeoMed provider meets with each expectant CHARM woman to discuss the importance of prenatal care, what to expect from a newborn, optimal care of the newborn, the potential of neonatal abstinence syndrome (NAS), and what NAS assessment and treatment for the woman’s infant might require. When discussing caring for the infant, the provider and expectant mother talk about the importance of skin-to-skin contact, breastfeeding, and a low-stimulus environment with low lighting and noise levels and few visitors. The provider and client also discuss the woman’s fears, concerns, strengths, and goals. Each family receives an “Our Care Notebook” with resources, information, personal stories, and encouragement.

A quality improvement project at the University of Vermont, Improving Care for Opioid-exposed Newborns (ICON), created the “Our Care Notebook” with the help of several women who had been served by the CHARM Collaborative. The ICON team also includes previous COGS staff and NeoMed staff.

Collaborative members consider participation in one or more prenatal NeoMed consultations to be a protective factor for infant well-being. Women receiving prenatal care from the COGS clinic are more likely to attend at least one prenatal visit than those who receive prenatal care elsewhere.

**Our Care Notebook**

This notebook for mothers of opiate-exposed newborns provides information, lists of resources, stories, and encouragement and is available for other communities to customize at [http://www.uvm.edu/medicine/vchip/?Page=ICONcarenotebook.html](http://www.uvm.edu/medicine/vchip/?Page=ICONcarenotebook.html).
Involvement of Child Welfare System during Pregnancy

If CHARM women are stable, their pregnancy has no complications, and no concerns exist for the safety of the baby, the family is discussed at only two CHARM Collaborative meetings—when the family first enters the program and again within 30 days of the woman’s due date. A woman is considered stable when she is taking the prescribed MAT with no problems and is attending substance abuse counseling and prenatal visits. Once a woman’s due date is within 30 days, her family is briefly discussed to confirm no existing safety concerns, the labor and delivery team is alerted and no further actions are taken. VDCF is aware of all the families being served by CHARM but if no concerns have arisen regarding a CHARM woman’s infant, VDCF does not conduct a safety risk assessment of that woman and her family.

If a CHARM woman is not stable on MAT, continues to use illegal substances during her pregnancy, is not attending substance abuse counseling or prenatal visits, and/or does not have a safe and stable living situation, the safety of her baby becomes a concern. Depending on the level of concern, CHARM Collaborative members might decide to refer the case to VDCF prior to the baby’s birth and/or refer the woman and her child(ren) to a residential care facility for more intensive treatment and greater structure and safety.

In Vermont, unlike most other states, the child welfare system can initiate a safety and risk assessment 30 days prior to a woman’s due date. If VDCF receives a report of prenatal substance exposure or a pregnant woman admits to using illegal drugs or non-prescribed medications during the third trimester, the agency places the report on a “high risk” calendar until 30 days prior to the expected due date. At that time, VDCF initiates a risk and safety assessment, and, if indicated, a case worker can begin providing supportive services to the family.

Women served by the CHARM Collaborative receive frequent drug tests. If a woman has had multiple positive test results, a collaborative member typically submits a report to VDCF earlier than the third trimester.

Collaborative members consider implementation of the state policy allowing early safety and risk assessments to be one of the most significant and beneficial system-level changes that have resulted from CHARM. VDCF workers can create safety plans, provide services, and, when necessary, arrange alternative placements well in advance of hospital discharge for new mothers. This minimizes the need for emergency custody orders and improves service planning with families and providers.

The child safety assessments of families affected by prenatal substance exposure are completed using the same protocol as those used for all families reported to VDCF for any reason. Similarly, the individualized child safety interventions provided to CHARM families of infants with prenatal substance exposure or parental prescriptions for MAT are the same as those provided to other families. CHARM Collaborative members may share the results of safety assessments and intervention plans with other collaborative members, and all members who are working with a family share their observations regarding the family’s progress, success, concerns, and needs.
C. During Birth and the Hospital Stay

Services Provided at Birth
CHARM women may give birth in any hospital but most deliver at Fletcher Allen Health Care Hospital in Burlington. The CHARM facilitator alerts all collaborative members of expected deliveries within the next 30 days. The hospital social worker contacts VDCF if any child safety concerns arise at the time of birth. In most cases, the need for alternative placements for the baby or additional supports for families to adequately care for the baby are known and planned for prior to labor and delivery.

Labor and delivery protocols are the same for all women delivering at this hospital, except that the focus on pain control increases because women taking buprenorphine or methadone often experience higher levels of pain during childbirth. Medical providers report no evidence of drug-seeking behavior during labor and delivery for CHARM women.

Hospital staff do not screen all CHARM mothers or babies at birth for illegal substance use or exposure. CHARM women undergo regular drug tests, so screening at birth would not provide any new information. Toxicology screening for women and babies who are not part of the CHARM Collaborative is ordered by the attending pediatrician or neonatologist based on observed behavior in the mother and/or withdrawal symptoms in the baby.

If hospital staff suspect substance use in a mother and exposure in a baby who are not part of CHARM, they speak with the mother about their concerns. Depending on the mother’s response, staff might order a toxicology screen of the mother. If her results are positive for an illegal or non-prescribed substance, hospital staff submit a report to VDCF and a child safety assessment is completed. If the mother denies use of illicit or non-prescribed substances during pregnancy and concerns about the baby remain, a toxicology screen may be ordered for the baby. Parental permission is not required in this situation. If the results are positive, a report is submitted to VDCF, and the hospital social worker meets with the mother to discuss the toxicology results and the implications of the report to VDCF. The social worker describes the CHARM Collaborative and asks the woman to sign the comprehensive release-of-information form and enroll in the collaborative.

Infant Care, NAS Assessments, and Treatments
All CHARM babies stay in their mother’s room after birth. CHARM mothers are encouraged to use non-pharmacological treatments for withdrawal symptoms in their infants, including skin-to-skin contact, breastfeeding, and a low-stimulus environment for the baby. A low-stimulus environment includes low levels of lights, low levels of noise, and few visitors.

CHARM infants typically stay in the hospital for 4–6 days and are cared for by hospital pediatricians or the mother’s own pediatrician if that individual has hospital privileges. The nurse or medical assistant from the NeoMed clinic visits each CHARM mother in the hospital to hand-deliver a NeoMed appointment slip for 1 or 2 weeks after discharge. These staff also mail an appointment reminder to the woman’s home. The NeoMed provider does not meet the baby until the woman’s first visit to the clinic unless the baby has complications.
Hospital nurses assess all CHARM babies for NAS using a scoring tool based on the Finnegan Neonatal Abstinence Scoring System (Finnegan, 1975). Assessments begin at 2 hours after birth and continuing every 3 to 4 hours for the first 96 hours until discharge or, if the infant receives a NAS diagnosis, until treatment begins and the infant’s condition is stable on medication. Through a quality-improvement project led by ICON, nurses teach parents to observe and monitor symptoms of withdrawal in their infants and encourage them to participate in the NAS assessments during the hospital stay.

Babies who are diagnosed with NAS are treated with methadone and remain in the hospital until their withdrawal symptoms are safely managed. The average length of stay is the same as for babies with no need for methadone treatment (4–6 days). Some babies complete methadone treatment and are weaned from it by the time they leave the hospital. For infants needing treatment after discharge for whom no child safety concerns have arisen, most parents continue administering treatment at home. Parents receive training in administering methadone to their infants and must demonstrate the ability to measure the correct dosage before leaving the hospital and at each NeoMed appointment. Parents continue to monitor their baby for withdrawal symptoms, and the NeoMed provider gives the family a weaning schedule to follow at home.

Parents may call the NeoMed clinic staff with questions or concerns anytime. CHARM Collaborative members believe that this high level of support is a critical component of the collaborative’s success. NeoMed clinic staff do not recommend that other hospitals give parents the responsibility for administering methadone to a newborn at home unless a similar mechanism is in place to provide immediate support by telephone at all times.

### Involvement of VDCF and Courts at Birth

The VDCF Family Services Policy Manual (2013) directs case workers to provide assessment services based on allegations of any of the following circumstances occurring prenatally, at or, shortly after birth:

- **An infant has been born with a positive toxicology screen for illegal substances or prescription medication not prescribed to the patient or administered by a physician;**
- **A physician certifies or the mother admits to use of illegal substances or non-prescribed prescription medication during the last trimester of their pregnancy, or**
- **The infant has been deemed to have Neonatal Abstinence Syndrome by a medical professional through NAS scoring as the result of maternal use of illegal substances or non-prescribed prescription medication.**

Reports to VDCF under these circumstances lead to safety assessments, and the results are used to determine whether a case is opened for ongoing child welfare services. The Federal Child Abuse Prevention and Treatment Act requires states to implement policies and procedures to notify child protective services agencies of substance-exposed newborns. In accordance with the CAPTA, VDCF also developed a plan to provide safe care for these babies. In Burlington, medical staff and social workers at the hospital and VDCF collaboratively developed this plan.
VDCF may open a case for ongoing services based on the results of the safety and risk assessment without involvement from the courts. VDCF begins providing services to the family as soon as the case is open. Services might include linkages to home-visiting services, substance abuse treatment if the mother is not already receiving treatment, residential placement for the mother and baby, or alternative placement for the baby if needed. The VDCF worker also informs the family about the CHARM Collaborative and encourages the mother to sign the comprehensive release-of-information form to obtain access to coordinated care. If VDCF seeks custody of the child or a protective order, the courts become involved and standard child welfare and legal practice is followed. In this situation, the VDCF worker may convey relevant updates, progress, and concerns from CHARM Collaborative members to the judge.

E. Infant, Postpartum, and Ongoing Services

Services for Children after Hospital Discharge

All CHARM women are expected to bring their babies for regular visits to the NeoMed clinic until the child is 12–18 months old. The first appointment takes place 1 or 2 weeks after the baby’s discharge from the hospital. Babies receiving methadone treatment are scheduled for visits every 2 weeks, whereas visits are less frequent for those not undergoing methadone treatment. During these appointments, a health care provider measures the baby’s weight and size; conducts a physical examination; monitors the infant’s growth and development; and reviews the mother’s MAT dose, receipt of substance abuse counseling, and needs for other family supports. In addition, the provider delivers parenting education. The parents of babies receiving methadone treatment at home must bring the methadone to each appointment so that health-care providers can measure the remaining amount. Parents must also demonstrate the ability to measure the correct dosage for their baby.

A community-based pediatrician or primary care provider is responsible for well-baby visits and illnesses not related to prenatal exposure. If safety concerns for the baby arise at any time, the NeoMed clinic staff and/or the pediatrician report the concerns to VDCF. The NeoMed staff also share their concerns at CHARM meetings.

Services for Women and Families

The COGS clinic continues to provide services to CHARM women for 8 weeks after delivery for follow-up care. After that time, the women receive ongoing care from a community-based obstetrics and gynecology clinic or a primary care provider. Women who received buprenorphine from the COGS clinic also need to transfer to a new MAT provider. The COGS clinic helps these women find, and make appointments with, new providers.

A current challenge for the CHARM Collaborative is finding a new provider who will accept these women as new clients. Vermont’s MAT capacity is limited, and the state requires MAT providers to give priority to pregnant women needing MAT. However, once a woman has given birth, she loses priority access. CHARM women who received MAT from clinics other than COGS can usually continue doing so without changing their provider after the neonatal period.

Involvement of Child Welfare System and Courts

VDCF does not contact CHARM families that are stable and are providing safe care for their infant. If safety concerns are reported to VDCF about a CHARM family, the department conducts safety assessments, opens child welfare
cases for these families when appropriate, and creates treatment plans using the same protocols it uses for families not enrolled in CHARM.

CHARM families have more contact with more providers than typical VDCF families. As a result, providers serving CHARM families and the CHARM Collaborative team give VDCF more information about CHARM families than is typically available for non-CHARM families on which to base case planning and permanency decisions. Court proceedings for CHARM families, when needed, also follow standard practices, and judges benefit from having more complete information on women involved with CHARM than they typically receive on women not involved with CHARM.

F. Elements of System Linkages

An intensive collaborative effort like CHARM is necessary to address the complex needs of women with opioid addiction during pregnancy and their families. Developing a successful and sustainable collaborative requires commitment from multiple agencies and a coordinated multiyear effort. The CHARM Collaborative is an example of a highly successful collaborative that has developed and implemented multiple elements of system linkages. The practice elements of screening and assessment, engagement and retention in care, services to infants, and collaboration with related agencies are described throughout this report and shown in the flow chart in Appendix A.

The CHARM Collaborative also implemented some of the other 10 elements of system linkages (Children and Family Futures, 2011), including the underlying values and principles of collaboration, joint accountability and shared outcomes, information sharing and data systems, budgeting and program sustainability and, training and staff development. This section discusses the importance of each of these elements and how the CHARM Collaborative has addressed them. More information on establishing successful collaborative efforts and technical assistance are available through Screening and Assessment for Family Engagement, Retention and Recovery from the National Center on Substance Abuse and Child Welfare, which offers instructions for establishing effective collaborations.
Underlying Values and Principles of Collaboration

CHARM Collaborative members have gained an understanding of the missions and mandates of each partner agency. The values and principles that guide their collaborative efforts are reflected in their MOU (see Appendix B) and articulated in presentations and training programs provided by members. These values include the common goal of a healthy family, recognition that the formal charge of the collaborative is to ensure child safety, and a commitment to comprehensively support families and ensure the safety of their children.

An important principle of the CHARM Collaborative is acceptance of disagreement without disrupting the process or relationships among members. The group usually agrees on recommendations regarding whether a child will remain at, or be removed from, the home. However, when one or more members disagree with a group decision about removal of a child, they use an agreed-on process for expressing their dissenting views. According to this process, the disagreement is made known to the group, and the members can write their opinion in a letter to the judge. The letter becomes part of the family’s case file. When CHARM Collaborative members disagree about the need to open a VDCF case, the process is different. The group recognizes that VDCF operates independently from the CHARM Collaborative and is ultimately responsible for child safety. When VDCF representatives decide to open a case based on information shared at a CHARM Collaborative meeting, they inform collaborative members. In the past, VDCF representatives did not always share their decisions with the CHARM Collaborative, a practice that damaged trust among CHARM Collaborative members. Agreement about how to communicate differing views on significant decisions has enhanced the trust and effectiveness of the CHARM Collaborative.

Joint Accountability and Shared Outcomes

Each CHARM provider monitors and reports the results of outcome measures within his or her agency or institution, but most do not analyze or report data on the subset of the women enrolled in CHARM. Members share information on outcomes that are relevant to other members of the Collaborative. An example of a report on relevant outcome measures is the study led by a COGs obstetrician (Meyer, 2012). This study found that increased access to MAT for pregnant women improved infant health outcomes and allowed more infants to remain with their mothers.

At present, the CHARM Collaborative has no mechanism for consistently monitoring shared outcome measures. If this group is able to identify and monitor shared outcomes in the future, they might be better positions to quantify their effectiveness, identify areas that need improvement, and communicate with stakeholders about how the collaborative has achieved efficiencies, saved money, or prevented costs. Shared outcome measures for a group like the CHARM Collaborative could include indicators of child well-being and safety, infant health and development, and parental engagement in treatment and maintenance of recovery.
Information Sharing and Data Systems

Shared information is a prerequisite for joint accountability. Joint information systems form the basis for communicating across systems and are necessary to track progress toward shared goals. Effective communication and information sharing provide the guideposts to gauge the effectiveness of the CHARM Collaborative’s programs.

The ubiquity of electronic medical records provides communities developing new collaboratives with more opportunities to create secure information sharing systems than the CHARM Collaborative founders had a decade ago. Groups can determine early in their development which information each partner needs and when. Establishing a secure and efficient mechanism to share, monitor, and protect client information then becomes possible. A formal MOU and/or information-sharing agreement signed by all members is necessary for effective and appropriate exchange of client information.

The CHARM Collaborative members share information on clients who have signed a comprehensive release-of-information form or, in for clients who have not signed the form, as an empanelled child protection team in compliance with state statute. The release-of-information authorization allows members to discuss the needs of each family during their monthly meetings and to exchange health and safety information in between meetings. Collaborative members do not share any data electronically because not all members can do so securely. The facilitator records the information shared and decisions that collaborative members make during their monthly meetings and members receive paper copies of these notes at the next meeting. The facilitator also shares paper copies of the list of families to be discussed each month at the beginning of each meeting. Each CHARM Collaborative member follows his or her agency’s protocols to manage and protect the hard-copy information shared during meetings.

The MOU and the comprehensive release-of-information form that the CHARM Collaborative created effectively address the requirements and restrictions of federal information-sharing regulations. Federal regulations governing the protection of patient records concerning alcohol and drug abuse (Title 42 of the Code of Federal Regulations, Part 2, and the Health Insurance Portability and Accountability Act of 1996) are often seen as barriers to effective information sharing by community collaboratives. By working across systems and using the services of legal professionals, the CHARM Collaborative was successful in creating protocols and documents that allow members to share information in ways that are effective, legally permissible, and respectful of individual and family privacy and confidentiality. See Appendix B for the CHARM MOU and Appendix C for the CHARM release-of-information form.

Budgeting and Program Sustainability

Cost of the Collaborative

Although no cost studies on the impact of the CHARM Collaborative have been conducted, the staff providing the case management believe that the model allows them to provide higher-quality services in less time than without the collaborative. For example, the program avoids costs by coordinating services for 20 or more families in each two-hour monthly CHARM Collaborative meeting. Without these monthly meetings, coordinating services for each family would take from 15 minutes to several hours each month, so the total time for all of these families would be much higher than two hours. Based on a rough estimate of 1 hour of coordination time per family per month, the

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4 More information on substance abuse confidentiality regulations is available on the SAMHSA Web site at http://www.samhsa.gov/healthprivacy.
CHARM Collaborative saves 18 staff-hours per month. A cost analysis is needed to determine the actual costs of the CHARM Collaborative and how much money it avoids or saves.

About 15 professionals attend each monthly CHARM Collaborative meeting, for a total of 30 staff hours. With the exception of the facilitator, the time of each member to attend the meetings is contributed in kind by his or her agency. Some agencies bill the time to third-party payers as case management or case coordination. Others categorize the time as an administrative cost. All participating agencies believe that attendance at these meetings is a cost-effective use of staff time.

**Funding for Services**

Most CHARM women are eligible for Medicaid during pregnancy. Medicaid covers prenatal care through labor and delivery and for 60 days postpartum. Medicaid eligibility rules vary by state. Most states provide Medicaid benefits to pregnant women earning up to 185% of the federal poverty level. Most CHARM women continue to be eligible for Medicaid as long as the baby remains in their home. If a child is removed from its mother’s care, Medicaid continues to cover the medical costs of the baby but not necessarily those of the mother. Loss of Medicaid coverage results in barriers to continued medical care and family planning. In Burlington, women without Medicaid or other health insurance can receive medical care from federally qualified health centers.

Funding for MAT and substance abuse treatment services in Vermont has recently changed. In January 2014, the state of Vermont implemented the Hub and Spoke initiative, a new system for integrated treatment of substance use disorders. The “hubs” are five regional specialty treatment centers, and the “spokes” are more than 150 physician offices around the state, including primary care providers, obstetricians and gynecologists, outpatient substance abuse treatment providers, and federally qualified health centers. Hubs provide comprehensive assessments and treatment protocols, methadone treatment and supports, initiation of buprenorphine, care coordination and referrals to ongoing care, consultation to physician offices (spokes), and ongoing care for clinically complex patients. The hubs are funded by the state’s Division of Alcohol and Drug Abuse Programs and they provide buprenorphine prescriptions, administration, and monitoring; substance abuse treatment services, including counseling, contingency management, and access to recovery support; and care coordination. The spokes receive funding from the Vermont Department of Health Access on a fee-for-service basis.

Two CHARM partners are directly involved in the Hub and Spoke initiative. The Howard Center, where many CHARM women receive MAT and substance abuse treatment, is a designated hub, The COGS clinic, where many CHARM women receive prenatal care and MAT (buprenorphine only), is a designated spoke. Additional details on the Hub and Spoke initiative are provided in Appendix D.

**Sustainability**

Staff from member organizations participate in the Collaborative on an in-kind basis. The only exception is the facilitator from KidSafe. A combination of funding from the state and small local grants supports her role on the Collaborative. The amount and source of these funds vary year to year.

**Training and Staff Development**

Cross-training for the staff of CHARM Collaborative members at all levels—administrative, management, and line-level—is essential to ensuring cooperation between key players in the systems. Training needs to be ongoing, and a combination of formal and informal training opportunities works well.
When the CHARM Collaborative began, members provided cross-system training for each other formally and informally as they discussed each family. Founding members of CHARM also attended conferences to broaden their knowledge of practices within their respective fields and across disciplines. CHARM Collaborative members continue to participate in cross-training, typically in the form of 30- to 60-minute sessions before the regular monthly meetings. Training topics are driven by the needs of the group. For example, after an infant death, the state medical examiner gave a presentation to the CHARM Collaborative on the process of investigating a child’s death, and the Department for Children and Families provided training for CHARM about the requirements for reporting prenatal substance exposure. In addition, ICON annual conferences on care for infants with prenatal opioid exposure are open to all CHARM members. These conferences typically address prevention and best practices for treatment of NAS as well as new research findings on the long-term impact of prenatal exposure to opioids.

G. Summary
Over a 16-year period, the extraordinary commitment of the CHARM Collaborative to a cross-system approach in working with opioid-dependent pregnant women and their infants has resulted in improvements in practice and at the individual client level. The initiative has made possible the provision of a full range of services for families in half of the state of Vermont. The full service array will become available to more families as additional communities replicate the model. The quality of care of these services has improved through collaborative practice, with pregnant women gaining access to MAT and additional services earlier in their pregnancies. At the client level, outcomes include healthier pregnancies, healthier babies, and a greater chance for families to remain together or be safely reunified. The lessons learned in overcoming barriers to collaborative practice can guide other communities seeking to help pregnant women dependent on opioids.
References


Appendices
B. MOU

MEMORANDUM OF UNDERSTANDING REGARDING THE CHILDREN AND RECOVERING MOTHERS (CHARM) PROGRAM

This Memorandum of Understanding is effective immediately following obtainment of the final signature of the parties listed on Attachment A [hereinafter referred to collectively as the “Parties,” or for any one of the Parties, as a “Party”] but no later than the first day of December 2012 excluding any unsigned Parties.

Whereas, the Children and Recovering Mothers Program [hereinafter “CHARM” or the “Program”] is a coalition of service providers serving women with chemical dependency and their children. It is not a separate legal entity.

Whereas, the purposes of CHARM are to coordinate services to meet the needs of pregnant and parenting women with chemical dependency and their children, improve the delivery of services to these women and their children, and identify gaps in services that need to be addressed.

Whereas, an individual participating in CHARM [hereinafter “client participant”] may be provided direct services by any or all of the Parties, in which case that individual becomes a client of each Party that provides such a service.

Whereas, the Parties desire to set forth their understandings with respect to the way in which they will comply with the Privacy Rule of the Health Insurance Portability and Accountability Act of 1996 [hereinafter “HIPAA”], federal confidentiality provisions governing substance abuse treatment, and State confidentiality provisions.

Now Therefore, the Parties, acting by and through the undersigned duly authorized agents, hereby agree as follows:

1. With respect to all information related to client participants in the Program, each Party agrees to fully abide by the terms and conditions set out in HIPAA, 42 C.F.R. Part 2, 7 C.F.R. § 246.26, and State confidentiality provisions.

2. Each Party that is currently subject to HIPAA will continue its practice of being individually responsible for providing HIPAA Privacy Rule protections (including, without limitation, a Notice of Privacy Practices) and State privacy protections to each client participant to whom it provides direct services.

3. In order to facilitate the internal case coordination, referral and assessment needs of client participants, each such participant in the Program will be requested to sign a Client Consent for release and sharing of information among the Parties in the form attached to this Memorandum of Understanding as Attachment B [hereinafter the “Client Consent”). The Client Consent, when signed by the client participant, is intended solely for the uses described in it and is not intended to serve as a consent for release of information with respect to any other matter, including, without limitation, treatment, payment, or health care operations, or for disclosure of confidential information to any third party, except as expressly so authorized by that Client Consent.

4. Except as otherwise required by State or federal law, each Party specifically agrees to restrict access to and use of any and all information regarding client participants only to those personnel who require access to such information for the purposes set forth in the Client Consent.

5. The Parties further agree that, unless otherwise provided by law, any and all information regarding client participants shall not be used or disclosed for any purpose except those specified in the Client Consent.

6. The Parties recognize that as mandated reporters of suspected child abuse and neglect under the provisions of 33 V.S.A. § 4913, they are required to report any and all incidences where there is
reasonable cause to believe that a child has been abused or neglected or is at significant risk of harm to the Family Services Division of the Vermont Department for Children and Families.

(7) This Memorandum of Understanding inures to the benefit of and is binding on the Parties and is intended for the sole and exclusive benefit of the Parties. Nothing in this Memorandum of Understanding shall give rise to or be deemed to give rise to any third party beneficiary rights to any third party, and in particular, but without limitation, this Memorandum of Understanding does not give rise to any third party rights to any client participant. So entered into By,

Fletcher Allen Health Care  Howard Center for Human Services, Inc.
By______________________________  By______________________________
  Duly Authorized Agent  Duly Authorized Agent
  Date____________________________  Date____________________________

KidSafe Collaborative, Inc.  Lund Family Center
By______________________________  By______________________________
  Duly Authorized Agent  Duly Authorized Agent
  Date____________________________  Date____________________________

Vermont Department for Children and Families  Vermont Department of Corrections
By______________________________  By______________________________
  Duly Authorized Agent  Duly Authorized Agent
  Date____________________________  Date____________________________

Vermont Department of Health  Visiting Nurse Association, Inc.
By______________________________  By______________________________
  Duly Authorized Agent  Duly Authorized Agent
  Date____________________________  Date____________________________

Franklin County Home Health Agency, Inc.  Northwestern Medical Center, Inc.
By______________________________  By______________________________

DRAFT 8/6/14
C. Release of Information

CHILDREN AND RECOVERING MOTHERS (CHARM) PROGRAM
CONSENT TO USE AND DISCLOSURE OF HEALTH INFORMATION
FOR TREATMENT AND SOCIAL SERVICES

I, ____________________________, date of birth _______________________, authorize the use and disclosure of my health and treatment information by and among each of the team members of the Children and Recovering Mothers (CHARM) Team, including any individual(s) involved in the direct service or service coordination within each organization. The Children and Recovering Mothers (CHARM) Team members participate from the following organizations:

- Fletcher Allen Health Care
- Northwestern MedicalCenter
- Visiting Nurse Association, Inc.
- Franklin County Home Health Agency, Inc
- LundFamilyCenter
- Northwest Counseling and Support Services, Inc
- HowardCenter (including the Chittenden Clinic and Rocking Horse Program)
- KidSafe Collaborative
- Vermont Agency of Human Services: Department of Health, Department for Children and Families (including Children’s Integrated Services), Department of Corrections, Department of Vermont Health Access, and Agency of Human Services Field Services Division

The means of this use of disclosure may be written, verbal or electronic.

I understand that the purposes of the CHARM Team are to evaluate the need for and facilitate the coordination of medical services, substance abuse treatment services, and social support services in order to best provide for the safety of my child and to support my successful treatment during pregnancy and post-partum.

I authorize the use and disclosure of my health and treatment information and that of my child by and among the participating organizations of the Children and Recovering Mothers (CHARM) Team solely for these stated purposes.

The health and treatment information that will be shared may include the following:
- Name, date of birth
- Address, phone number(s)
- Antenatal and post-partum medical care and treatment provided to me and my child(ren)
- Pregnancy and delivery
- Psycho-social history
- Current living situation
- History and attendance at alcohol/drug treatment, including methadone maintenance, and mental health services
- Lab test results, including drug testing
- Mental health and/or drug and alcohol assessment, diagnosis, treatment, progress and discharge summary (if applicable)
- Children’s health and safety assessments
- WIC program participation history
- Department for Children and Families history of involvement
- Criminal history and/or current involvement with Department of Corrections
- Other (specify) _________________________

ADDITIONAL PROVISIONS CONCERNING YOUR CONSENT:

I understand that my alcohol and/or drug treatment records are protected under federal statutes and regulations governing the Confidentiality of Alcohol and Drug Abuse Patient Records, including 42 C.F.R. Part 2, and my personal health information is protected by the Health Insurance Portability and Accountability Act of 1996 [“HIPAA”], 45 C.F.R. Pts. 160 & 164, and in some cases by 7 C.F.R. § 246.26, and such information cannot be disclosed without my written consent unless otherwise provided for in these provisions.

I also understand that my decision to use the services of the Children and Recovering Mothers (CHARM) Team is voluntary. My signature indicates that I understand the important information provided in this Consent. I may end CHARM Team services at any time.

I understand that if I want members of the CHARM Team to disclose information about me or my child to someone other than the members of the CHARM Team, I will need to sign a separate Consent or Authorization to release such health and treatment information for each party to whom such information is disclosed, except as specifically described below.

I further understand that if any of the members of the CHARM Team or the participating organizations want to use or disclose any information regarding me or my child for a purpose other than that described in this Consent form, except information required by law pertaining to the mandatory reporting of suspected child abuse or neglect, that member or participating organization must obtain my written permission, stating the purpose of the consent, prior to using or disclosing that information.

I also understand that I may request restrictions on the use or disclosure of treatment records. I understand that the CHARM Team will consider my request but is not bound to agree to it in which case I may decline to participate with the CHARM Team. However, my refusal to be involved with the CHARM Team will not affect my ability to receive services from the individual participating organizations.

I further understand that generally the participating organizations may not condition my treatment with them on whether I sign a consent form, but that in certain limited circumstances, I may be denied treatment with them if I do not sign such a form.
I may revoke this Consent at any time by notifying any member of the Children and Recovering Mothers (CHARM) Team, but revoking this Consent will not affect any actions that were taken by the CHARM Team or its participating organizations before I revoked it.

This Consent will remain in effect for the period while I receive services and for thirty (30) days after the termination of services by the last participating organization on the CHARM Team providing services to me unless I choose to terminate it on the following date, or as a result of the following event or condition:

_________________________________________.

I understand that the Vermont Department for Children and Families [DCF] may currently have opened, or in the future may open, a child-protection case that involves me or my child. If so, I specifically authorize the DCF representative on the CHARM Team to disclose and/or redisclose health and treatment information about me: (1) to other employees of DCF who have a need to know such information; and (2) to the Vermont Family Court and any party to a juvenile proceeding which involves me or my child brought under Chapters 51-53 of Title 33 of the Vermont Statutes.

I have read all of the above information, and I understand its contents and consent to the disclosure and/or redisclosure of the confidential information identified above to the participating organizations and staff members of the CHARM Team for the purposes specified.

________________________________________  ___________________________
Name of Patient (Please Print)      Date
________________________________________  ___________________________
Signature of Patient (18 and over or Emancipated Minor)   Date
or Signature of Parent/Guardian or Legal Representative

________________________________________  ___________________________
Witness: Name and Title       Date

This Consent to Release Information will be kept on file by the KidSafe Collaborative (Community Network for Children, Youth and Families, Inc.) or by another authorized organization on behalf of the CHARM team, unless revoked by the client or terminated as specified in this agreement.
**D. Hub and Spoke Initiative**

**Current State of Prescription Drug Abuse and Treatment in Vermont**

Prescription drug abuse is the nation’s fastest-growing drug problem. While Vermont is consistently ranked the “healthiest state” by many measures, it ranked 34th worst of all the states in the non-medical use of pain relievers. Other opiates overtook heroin in 2008 as the primary source of opiate addiction. In addition, drug diversion continues to be a problem for many reasons, including illegal sale and distribution, “doctor shopping,” forged prescriptions, employee theft, pharmacy theft, and obtaining prescriptions over the internet.

The Agency of Human Services (AHS) is collaborating with community providers to create a coordinated, systemic response to the complex issues of opiate and other addictions in Vermont. Medication assisted treatment (MAT) is the use of medications, in combination with counseling and behavioral therapies, to provide a whole-patient approach to the treatment of substance use disorders. Research shows that when treating substance-use disorders, a combination of medication and behavioral therapies is most successful.

Although this initiative initially focuses on medication assisted treatment for individuals with opiate addictions, it creates a framework for integrating treatment services for other substance abuse issues and co-occurring mental health disorders into the medical home through a managed approach to care. In addition, this treatment approach will help reduce recidivism in corrections and enhance outcomes for families where addiction is an identified problem for child welfare.

Each year, more Vermonters seek treatment for opiate addiction. (Figure 1) The majority of MAT patients receive buprenorphine as prescribed by a physician in a medical office setting. Methadone, unlike buprenorphine, is a highly regulated treatment provided in specialty clinics.

Waiting lists for methadone indicate insufficient treatment capacity and fewer providers are willing to prescribe buprenorphine for new patients.

Overall health care costs are approximately three times higher among MAT patients than within the general Medicaid population. In addition to the costs directly associated with medication assisted therapy, these individuals have higher rates of co-occurring mental health and other health issues and are high users of emergency rooms, pharmacy benefits, and other health care services.

<table>
<thead>
<tr>
<th>Medicaid Population</th>
<th>Buprenorphine Clients</th>
<th>Methadone Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total People Served</td>
<td>146,030</td>
<td>2601</td>
</tr>
<tr>
<td>Annual Per Capita Cost</td>
<td>$4,555</td>
<td>$12,985</td>
</tr>
<tr>
<td>Total Expenditures</td>
<td>$561,221,169</td>
<td>$36,372,106</td>
</tr>
</tbody>
</table>

*less top 5% high cost, maternity and neonate
Opiate Addiction Treatment

Medication assisted therapy (MAT), such as methadone and buprenorphine in combination with counseling, has long been recognized as the most effective treatment for opiate addiction. These medications suppress the craving for opiates, thereby reducing relapse. Effective MAT programs also provide services such as mental and physical healthcare, case management, life skills training, employment, and self-help. The length of the course of treatment is individually determined according to patient need and criteria. MAT services are cost effective over time because they help stabilize the health of patients, increase their rate of employment and decrease involvement in the criminal justice system.

Figure 2 illustrates how opiate addiction treatment is integrated into the current health and substance abuse treatment continuum of care.

Solution: Implement a “Hub and Spoke” System to Provide Appropriate Care

“HUB”

A Hub is a specialty treatment center responsible for coordinating the care of individuals with complex addictions and co-occurring substance abuse and mental health conditions across the health and substance abuse treatment systems of care. A Hub is designed to do the following:

- Provide comprehensive assessments and treatment protocols.
- Provide methadone treatment and supports.
- For clinically complex clients, initiate buprenorphine treatment and provide care for initial stabilization period.
- Coordinate referral to ongoing care.
- Provide specialty addictions consultation and support to ongoing care.
- Provide ongoing coordination of care for clinically complex clients.

“SPOKE”

A Spoke is the ongoing care system comprised of a prescribing physician and collaborating health and addictions professionals who monitor adherence to treatment, coordinate access to recovery supports, and provide counseling, contingency management, and case management services. Spokes can be:

- Blueprint Advanced Practice Medical Homes
- Outpatient substance abuse treatment providers
- Primary care providers
- Federally Qualified Health Centers
- Independent psychiatrists

Figure 3 outlines the components of the system.
Caseload and Cost Model, Phase 1: Opiate Dependence - SFY 2013 & 2014

Projected Caseloads: To help determine the growing demand for treatment, caseload projections for SFY 2013 and SFY 2014 were based on actual buprenorphine growth trends from 2003-2010. Using risk stratification, 65% of cases are apportioned to the “spokes” and 35% to the “hubs.” Estimated caseloads are:
- SFY 2013: 4,753
- SFY 2014: 5,323

This represents significant growth over the SFY 2011 case load of 3,415 Vermonters receiving medication-assisted treatment.

Cost Modeling:
1. Statewide system investments:
   - Expand methadone treatment capacity statewide.
   - Support five geographically distributed specialty addiction treatment centers.
   - Support buprenorphine prescribers by augmenting Community Health teams with nurses and substance abuse/mental health counselors.

2. Staffing and operating expenses determined with provider and other stakeholder involvement:
   - HUB: 21.7 FTE (clinical, lab, support staff, facility, security, etc.) per 400 patients served.
   - SPOKE: Two FTE licensed clinicians (1 RN and 1 licensed mental health/substance abuse clinician) per 100 patients.

3. Initial system offsets and sustainability:
   - New system costs are offset by ADAP’s existing appropriation and DVHA’s current spending on the MAT population.
   - DVHA will reinvest savings from improved care coordination and an enhanced federal match to sustain the new system.
     - ACA 2703 enhanced federal match; 90/10 for eight quarters where new initiative is implemented.
   - Estimated reductions in health care savings in select high cost / high use categories such as pharmacy, inpatient, emergency room, lab, and residential treatment.
   - Additional societal impacts and savings anticipated in areas such as corrections, employment, and children in custody (will be identified as part of evaluation design).

Total Costs: New system is cost neutral for first two years (SFY 2013-2014).

* Assumes approved State Plan Amendment under ACA Section 2703 for Health Homes and SFY 2013 ADAP appropriation request.

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
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<tbody>
<tr>
<td><strong>HUB &amp; SPOKE TOTAL:</strong></td>
<td>$11,411,052</td>
<td>$18,364,691</td>
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<tr>
<td>ADAP net of appropriation:</td>
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<tr>
<td>DVHA Investment net of new costs:</td>
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<td><strong>TOTAL NEW SYSTEM COSTS:</strong></td>
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Caseload and Cost Model, Phase 1: Opiate Dependence - SFY 2013 & 2014

Blueprint Health Care Reform Integration: New system approach aligns with Blueprint Advanced Primary Care Practices and Community Health Teams (Figure 4).

VERMONT Agency of Human Services
Proposed Integrated Health System for Addictions Treatment

Evaluation
✦ Design evaluation before implementation begins.
✦ Flag participants of "Hub and Spoke" services in VHCURES all payer database.
✦ Create an addictions measure set in DocSite for care and evaluation.
✦ Include AHS partners and subject matter experts in building evaluation model.
✦ Include required ACA 2703 evaluation components (utilization, savings, outcomes, ROI, etc.).

VERMONT Agency of Human Services
Proposed Integrated Health System for Addictions Treatment
Information & Evaluation

Figure 4

Figure 5