

# Perinatal Quality Collaborative Vermont

## Birth Certificate Quality Improvement Initiative

Learning Series Call #3

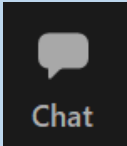
October 7, 2024

12:00-1:00PM

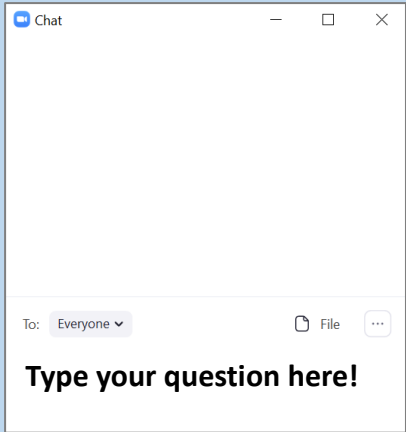


# Housekeeping

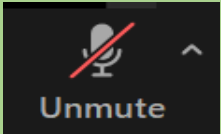
## Chat



Use the *Chat* box to ask a question.

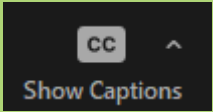


## Microphone



You will be muted when you join. If you wish to verbally ask your question during the Q&A portion of the presentation, please unmute your microphone.

## Captioning



Click *Show Captions* from your navigation bar to view automated captions.

## Evaluation

Before leaving the event, please complete the evaluation by copying and pasting the link provided in the *Chat* into a browser or scan the QR code Thank you!



# Agenda

- Welcome
- Revisit: 3 Educational Tools
- Northwestern Medical Center Birth Certificate Workflow
- Breakout Rooms by Hospital
- Using Birth Certificate for Maternal Mortality Review Panel (MMRP)

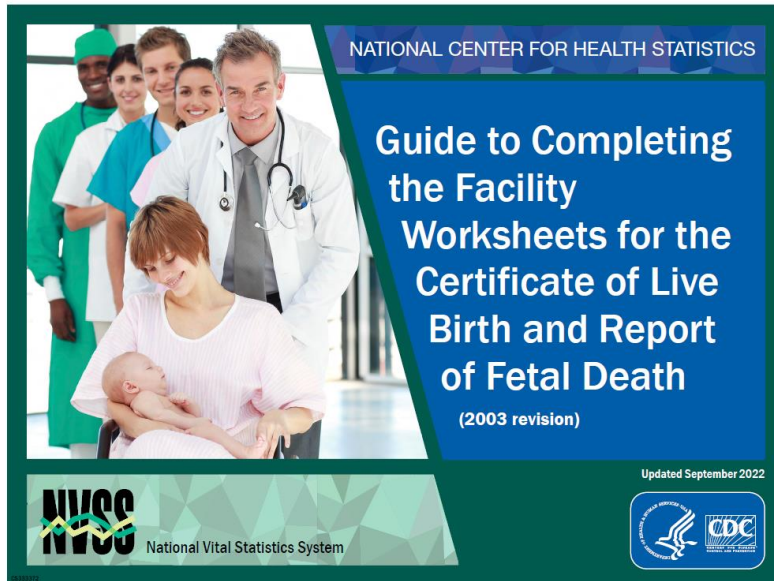
# Hospital Strategies to Improve Birth Certificate Information

- ✓ Established a multidisciplinary team to review records and identify challenges in reporting birth certificate information
- ✓ Identified the best sources of information and specific locations in the records and developed instructions for HIM specialist on reporting this information
- ✓ Modified electronic medical records to capture information consistent with birth certificate items
- ✓ Adopted use of resources, such as the guide to encourage adherence to birth certificate definitions
- ✓ Trained clinical staff to consistently document information in specific locations in the medical records
- ✓ Identified experts in state vital records department for staff to contact with questions
- ✓ Trained hospital staff on all the new procedures

# Education Resources Available for Hospital Teams

# Essential Education Resources for Hospital Teams

## #1 Guide (Updated Sept. 22)



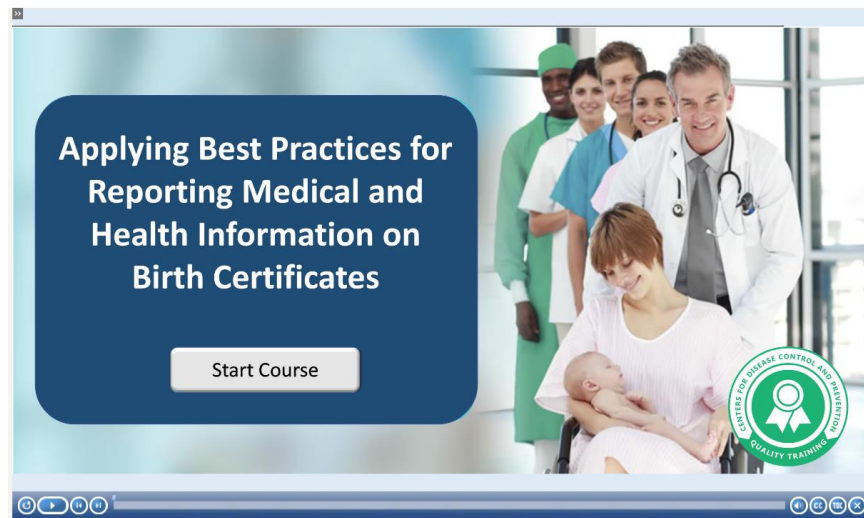
- Provides definitions, instructions, sources, and keywords and abbreviations for each of the medical and health items
- Available online in html and pdf
- FREE spiral-bound hard copies available
  - Request from [births@cdc.gov](mailto:births@cdc.gov)

[www.cdc.gov/nchs/nvss/facility-worksheets-guide.htm](http://www.cdc.gov/nchs/nvss/facility-worksheets-guide.htm)



# Essential Resources for Hospital Teams

## #2 Applying Best Practices for Reporting Medical and Health Information on Birth Certificates



- Free training available on NCHS website
- Continuing education units, certificate of completion available
- New EBRS Users to complete this training as part of VDH onboarding protocol
- Recommend that clinical team entering the data at hospital complete this training as part of competency education.

[NCHS Training - Applying Best Practices for Reporting Medical and Health Information on Birth Certificates \(cdc.gov\)](https://www.cdc.gov/nchs/training/best-practices-reporting-medical-and-health-information-on-birth-certificates)

# Tips to Increase Accuracy

## Provider responsibility:

- Work with your Birth Certificate abstractors to determine where in the chart the pregnancy-related and/or newborn conditions is noted.
- Best practice recommendation: document in the admission History and Physical
- Think specificity pre-existing vs gestational diabetes
- Document in the area mutually agreed upon with Birth Certificate abstractors

## Birth Certificate abstractor responsibility:

- Look in the designated area for pregnancy related and/or newborn conditions
- Ideally the History and Physical section
- Work with providers for mutual agreement re: where data are located

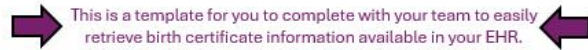


# TEAMS!

- Established a multidisciplinary team to review records and identify challenges in reporting birth certificate information
- Meet with some frequency to share experience of Health Information Managers and Clinical teams
- Acknowledge the expertise of all members of the team to improve accuracy of birth certificate data

# VT Resource: Hospital Tip Sheet

[ADD YOUR HOSPITAL NAME]



This is a template for you to complete with your team to easily retrieve birth certificate information available in your EHR.

## Hospital Specific Tip Sheet to Completing the Birth Certificate Facility Worksheet

All definitions of variables being entered into the Electronic Birth Registration System (EBRS) are important. However, this guide focuses on 11 Vermont Birth Certificate Variables for the purpose of the BCQI review.

2024



DEFINITION	EBRS TAB	TIPS FOR ENTRY
<b>Facility Transfer</b>		
<b>Vermont Facility Worksheet number 40.</b> <b>Was child transferred?:</b> Transfer status of the infant from this facility to another within 24 hours after delivery.	Stat: Child	[Instructions: Include in this column where you usually find this information in your EHR or other tips for entry]
<b>Vermont Facility Worksheet number 42.</b> <b>Is the child being breastfed at time of discharge?:</b> Information on whether the infant was receiving breastmilk or colostrum during the period between birth and discharge from the hospital. Breastfeeding refers to the establishment of breastmilk through the action of breastfeeding or pumping (expressing). Include any attempt to establish breastmilk production during the period between birth and discharge from the hospital. Include if the infant received formula in addition to being breastfed. Does not include the intent to breastfeed.	Stat: Child	
<b>Principal Source of Payment</b>		
<b>Vermont Facility Worksheet number 46.</b> Source: The primary source of payment for the delivery at the time of delivery: <ul style="list-style-type: none"><li>o <b>Private insurance:</b> (Blue Cross/Blue Shield, Aetna, etc.)</li><li>o <b>Medicaid:</b> (or a comparable state program)</li><li>o <b>Self-pay:</b> (no third party identified)</li><li>o <b>Other:</b> (Indian Health Service; CHAMPUS or TRICARE; other government [federal, state, or local]; or charity)</li></ul> The principal source of payment is important public health information and is	Stat: Mother	

DEFINITION	EBRS TAB	TIPS FOR ENTRY
<b>Vermont Facility Worksheet number 53.</b> <b>Pre-pregnancy diabetes:</b> Diagnosis before this pregnancy.	Medical / Health	
<b>Vermont Facility Worksheet number 53.</b> <b>Gestational diabetes:</b> Diagnosis during this pregnancy.	Medical / Health	
<b>Pregnancy Risk Factors: Hypertension – Elevation of blood pressure above normal for age, sex, and physiological condition.</b>		
<b>Vermont Facility Worksheet number 53.</b> <b>Pre-pregnancy hypertension (chronic):</b> Diagnosis prior to the onset of this pregnancy—does not include gestational (pregnancy-induced hypertension [PIH]).	Medical / Health	
<b>Vermont Facility Worksheet number 53.</b> <b>Gestation hypertension (PIH, preeclampsia):</b> Diagnosis in this pregnancy (Pregnancy-induced hypertension or preeclampsia).	Medical / Health	<b>Q:</b> How to document chronic hypertension with superimposed preeclampsia? <b>A:</b> Report as chronic hypertension. <b>Justification:</b> Although of course it is possible to have chronic with superimposed preeclampsia, our primary interest is whether the condition began before or during pregnancy.
<b>Onset of Labor</b>		
<b>Vermont Facility Worksheet number 54.</b> <b>Premature Rupture of Membranes (prolonged, &gt;= 12 hours):</b> Tearing of the uterine wall. Uterine rupture is a full-thickness disruption of the uterine wall that also involves the overlying visceral peritoneum (uterine serosa). Does not include uterine dehiscence (window), in which the fetus, placenta, and umbilical cord remain contained with the uterine cavity. Does not include a silent or incomplete rupture or an asymptomatic separation.	Medical / Health	<b>Q:</b> What if they opt to start Pit prior to 12 hours? <b>A:</b> Should not be checked.
<b>Medical and Health Information</b>		



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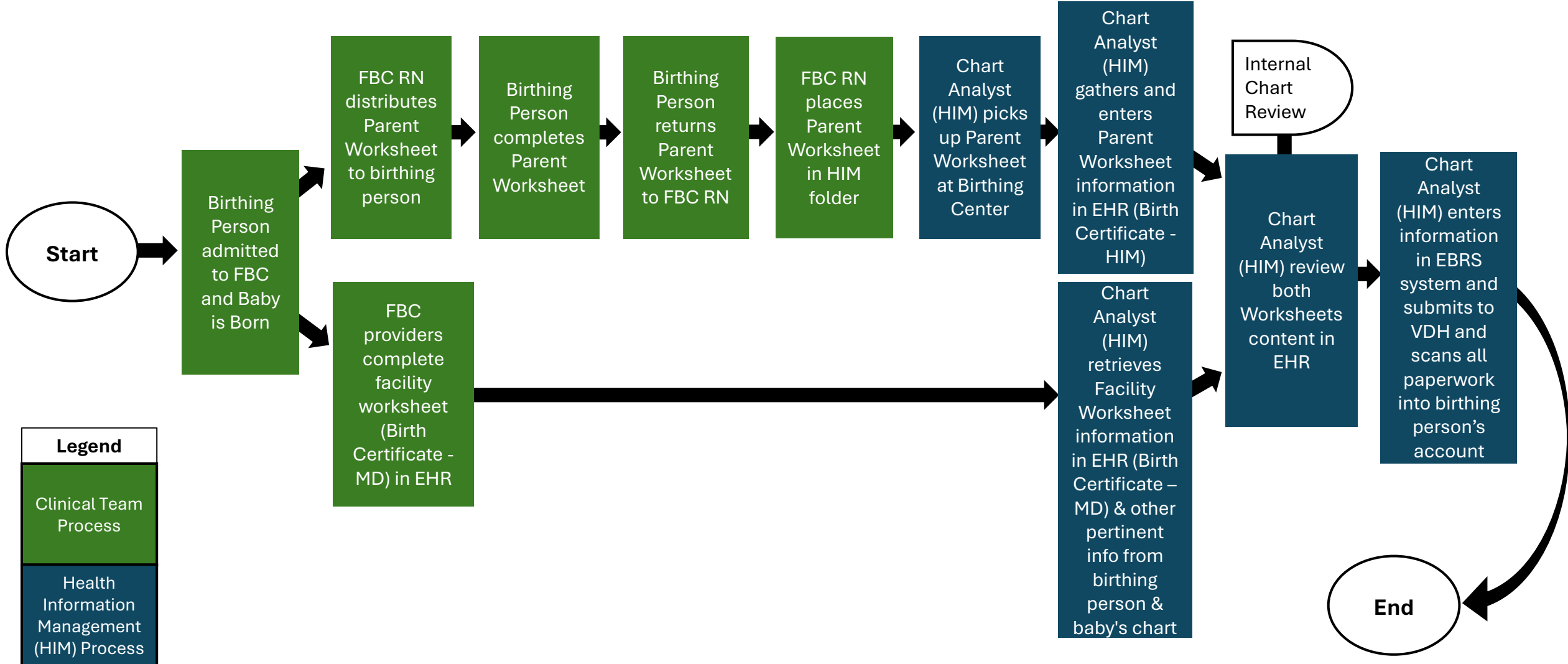
## Northwestern Medical Center Birth Certificate Data Collection Approach

Anna Gabaree and Bailee Martin

# Birth Certificate Data Entry Team







- 4 Health Information Technicians
- 22 RNs from the Family Birth Center
- 6 OBGYN Providers
- Families who have given birth

Birth Certificate Data Collection **Current** Workflow  
Northwestern Medical Center (NMC)  
March 2024



# Parent Worksheet Workflow

- Parent worksheet and parentage form are added to admission folder
- On admission AND after delivery – forms are discussed by nursing with family.
- Nursing asks and confirms completion and documents in EMR.
- Parent completes form
- Form goes into binder
- HIM picks up forms from binder

	Care Item	 		Last Done
A	Hourly Rounding (FBC)	Q1H		61m
A	Address Medications/Pain/Clock	QSHIFT		6h
A	Birth Certificate Worksheet	QSHIFT		4h
A	Intrapartum Fall Risk Assessment	QSHIFT		6h
A	IV Insertion/Assessment	QSHIFT	 	6h

Interventions	
Birth Certificate Worksheet QSHIFT	
✓	
[-] Assessments	
[-] Birth Certificate Worksheet	
✓	
[-] Birth Certificate Worksheet	
Status	<input type="checkbox"/> Given to Parent <input type="checkbox"/> Completed / On Chart
Comment	Do not complete off the worklist until the patient's purple form is completed.



# Facility Worksheet Workflow

- Integrated into EHR
- “Starred” in provider favorites ★
- Completed by OBGYN provider after delivery of infant

\* Risk factors in this pregnancy (Check all that apply)

Diabetes (prepregnancy)	Diabetes (gestational)	Hypertension-prepregnancy
Hypertension-gestational	Hypertension-eclampsia	Previous preterm births
Other previous poor pregnancy outcome	Pregnancy resulted from infertility treatment	Fertility enhancing drugs, artificial or intrauterine insemination
Assisted reproductive technology (e.g. In vitro fertilization)	Mother had a previous cesarean delivery	None of the above

▼

\* Onset of labor (Check all that apply)

PROM (prolonged > 12 hrs)	Precipitous labor(<3 hrs)	Prolonged labor (>20 hrs)
None of the above		

▼

\* Pregnancy Infections (Check all that apply)

Gonorrhea	Syphilis	Chlamydia
Hepatitis B	Hepatitis C	None of the above

▼

\* Group B Strep Status

Negative	Positive	Not performed
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▼

\* GBS Prophylaxis Status

No treatment	> 4 hours before delivery	</= 4 hours before delivery
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▼

\* Characteristics of labor & delivery (Check all that apply)

Induction of labor	Augmentation of labor	Non-vertex presentation
Steroids for fetal lung maturation received by mother before delivery	Antibiotics received by mother during labor	Clinical chorioamnionitis during labor or maternal temp >=100.4F(38C)
Moderate/heavy meconium staining of the amniotic fluid	Fetal intolerance of labor such that action was taken	Epidural or spinal anesthesia during labor
None of the above		

▼ Method of Delivery

\* Was delivery with forceps attempted but unsuccessful?

Yes	No
-----	----

\* Was delivery with vacuum extraction attempted but unsuccessful?

Yes	No
-----	----

\* Final route and method of delivery

Vaginal spontaneous	Vaginal with forceps	Vaginal with vacuum	Cesarean
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# HIM Checklist/worksheet

## Information needed to complete Birth Certificate

**Baby's Information**      **Name:** \_\_\_\_\_ **DOB:** \_\_\_\_\_

MR#: \_\_\_\_\_ Acct#: \_\_\_\_\_

Sex: \_\_\_\_\_

Date of Birth: \_\_\_\_\_ Time of Birth: \_\_\_\_\_

Weight (Grams and Pounds) Grams: \_\_\_\_\_ G      Pounds: \_\_\_\_\_ lbs      oz

APGAR      -      -

Gestational Age: \_\_\_\_\_

Breast or Bottle      Baby Transferred?   Y   N

Phone #: \_\_\_\_\_

**Mom's Information**      **Name:** \_\_\_\_\_ **DOB:** \_\_\_\_\_

MR#: \_\_\_\_\_ Dr. \_\_\_\_\_

Gravida: \_\_\_\_ Para: \_\_\_\_ Last Live Birth: \_\_\_\_\_ (Other Outcome #) \_\_\_\_ Date: \_\_\_\_\_

Height: \_\_\_\_\_ '      "      Date of Other Outcome: \_\_\_\_\_

Weight:      Pounds: Pre \_\_\_\_\_ Post: \_\_\_\_\_      Kilograms: Pre: \_\_\_\_\_ Post: \_\_\_\_\_

Marital status: \_\_\_\_\_      If single is Dad involved: Y   N

Insurance type: \_\_\_\_\_

WIC- Yes or No

GBS: \_\_\_\_\_

LMP: \_\_\_\_\_

1<sup>st</sup> Visit: \_\_\_\_\_

Last Visit: \_\_\_\_\_

Total Visits: \_\_\_\_\_      Prenatal Provider: \_\_\_\_\_

Purple Sheet

Parentage

MD

HIM

DSW

Letter

Print

Scan

Submit

Excel

# Internal Audit Processes

HIM  
Chart  
Review

- Put baby and birthing person's info into the baby spreadsheet that we obtain from FBC's Birth Log binder
- Utilizing checklist – HIM technician reviews both worksheets content doing a chart review (EHR) to ensure all information needed is there.
  - EMR
  - Parent Worksheet
- Create HIM report in birthing person's account w/ the info gathered
- Check birthing person's insurance regarding social security cards. If birth person has Medicaid, they will get a DSW w/ a DSW letter. If birth person has any other insurance, they will only receive a Non DSW letter
- Then begin birth certificate through State Website (EBRS) followed by printing the draft birth certificate and submitting it into the system
- Scan parent's worksheet, draft birth certificate from State Website, dsw/non dsw letter, dsw (if needed) & parentage form into the patients EMR
- Update the baby's name in EMR if D/C for 24 hours or longer
- Update excel birth log spreadsheet

Chart  
Analyst  
(HIM) review  
both  
Worksheets  
content in  
EHR

# Birth Certificate Spread Sheet

- Use spreadsheet before paperwork is received – log MRN for birthing person and baby & babies dob and current Meditech name
- Review labor log daily to ensure all patients are on the spreadsheet and that nobody gets missed.
- Spreadsheet includes:

	Patients Name (*comments Exist)	D.O.B.	Mom	Baby	Interview	Printed	Parentage Form	Phone #	DSW	Comment	baby's wt (g)	NB Acct #	name in MT	Scan	MD	HIM	Social Security Y/N	* Additional Comments
	October																	
1																		
2																		

- Gestational Carriers get highlighted in spreadsheet and information scanned into intended parent's chart is not scanned into GC chart. No GC information gets scanned into baby's chart. Paperwork gets mailed to vital records.

# Compliance with 5-day reporting

- Timeliness of Birth Reporting **98.3%**
  - Staff turnover
  - New team members

# Pros and Cons of this Approach

## Pros

- Roles are well defined
- Seamless for providers
- Technicians process is clearly laid out
- Spreadsheet ensures technicians are prepared for every baby born before receiving parents birth worksheet.
- Checklist makes a big difference

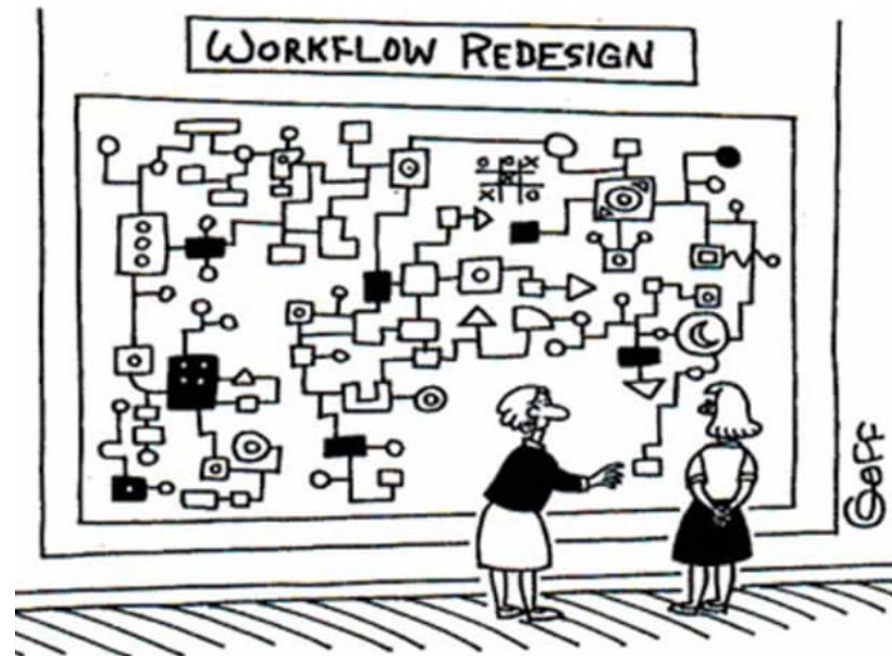
## Cons

- If nursing forgets to collect paper form or patients leaves AMA – can cause delay
- Occasionally parents take Parent Worksheet home



# Breakout Session

- In your groups:
  - Introduce yourselves
  - What questions do you have ?
  - What challenges are you facing?
  - What more do you and your team need to know or further explore?



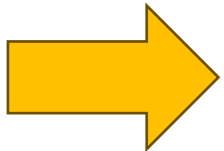
*"And this is where our ED workflow redesign team went insane."*

# Large group debrief of the Break-out Group



# Opportunity for feedback on:

- Birth Certificate Worksheets
- Complications and/or concerns about Voluntary Acknowledgement of Parentage (VAP) form process
- Vermont Department of Health Quarterly Report
- Specific questions for Vermont Department of Health vital stats



<https://redcap.med.uvm.edu/surveys/?s=JEK7RW3CEDFXH3RL>

# Using Birth Certificate for Maternal Mortality and Morbidity Surveillance

Audrey Ling, MPH , Public Health Analyst, Division of Health Statistics & Informatics  
Vermont Department of Health

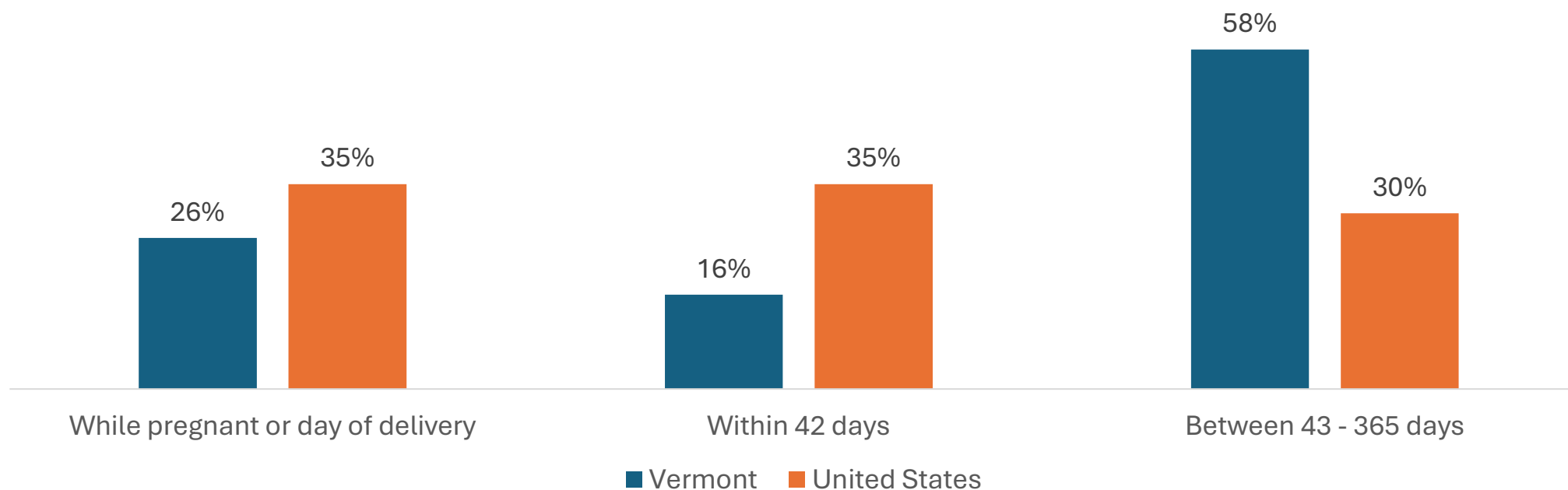
# The Maternal Mortality Review Panel

The Maternal Mortality Review Panel (MMRP) was established in 2011 to conduct comprehensive, multidisciplinary reviews of perinatal deaths for the purpose of identifying factors associated with these deaths and creating recommendations for system changes for improving the health care and social services for individuals living in Vermont



# Timing of Maternal Deaths

Timing of Maternal Deaths at the State and National\* Levels



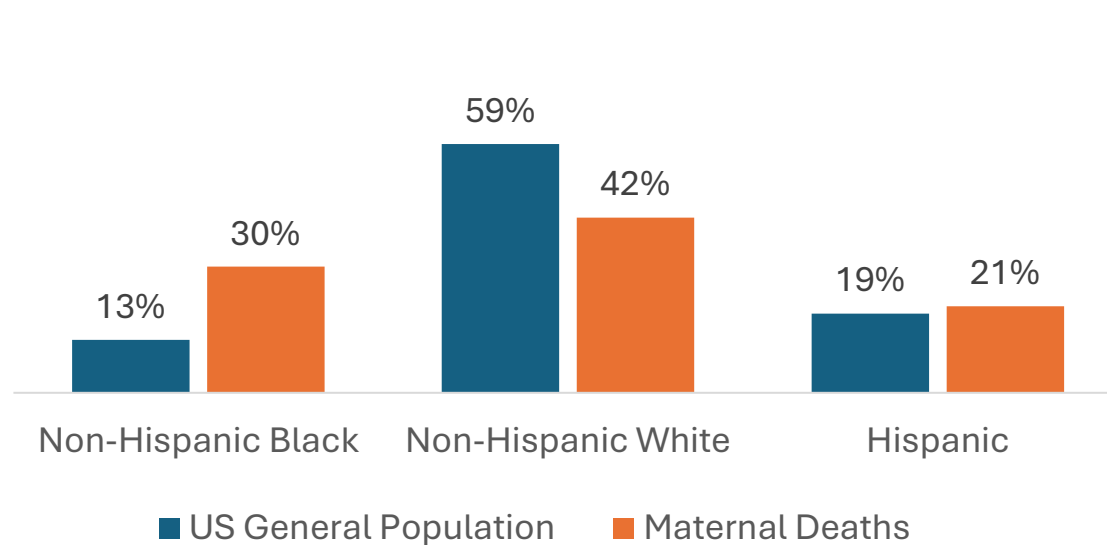
\*At the time of data collection, 36 states were reporting maternal deaths.

Sources: U.S. Centers for Disease Control and Prevention (2017 – 2019), Vermont Vital Statistics (2012 – 2023)



# Race and Ethnicity in Maternal Deaths

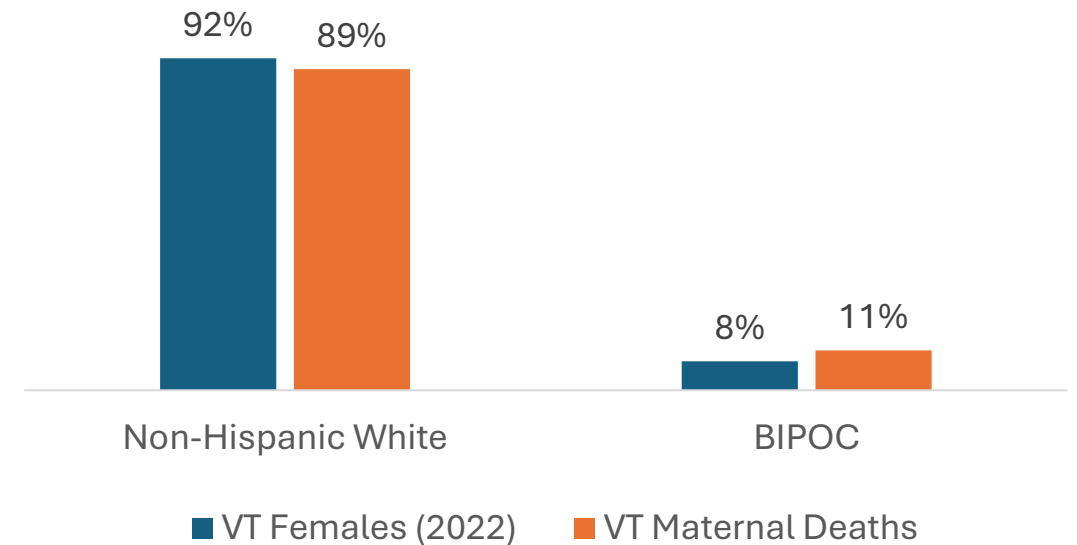
Race/Ethnicity by Percent for United States General Population and Maternal Deaths, 2021



Source: National Center for Health Statistics (2021), National Vital Statistics System, Natality and Mortality (2021), U.S. Census Bureau via USA Facts (2021)

Vermont Department of Health

Race/Ethnicity by Percent for Vermont Females and Maternal Deaths, 2012-2023



Source: Vermont Vital Statistics (2012 – 2023), Vermont Population Estimates (2022)

# Vermont's MMRP Data

Maternal Mortality in Vermont bears out this distressing trend...

- From 2020 to 2023, the last year of full reviews, all deaths have been in the post partum period.
- Since 2012, **43%** of perinatal deaths in Vermont were the result of accidental overdose. Substance misuse contributed to a significant majority of overall deaths.
- Of the 8 maternal deaths reviewed by the panel since 2021, all were related to opioid misuse – 7 were directly caused by overdose and one by endocarditis due to IV drug use.

# Vermont's MMRP Data

- More than 90% of perinatal deaths in Vermont occurred among people with a diagnosis of a mental health disorder. Since 2012, 11% were identified as being caused by suicide.
- In many of the cases reviewed in 2023 and 2024, we also saw comorbidities such as:
  - Housing instability or homelessness
  - Poverty
  - Intimate partner violence
  - Involvement with the child welfare system

# Vitals Statistics Data

- CDC funded
- Data lag
  - Updated daily
  - Final data available 1 year following completion of calendar year
- Data included
  - All births and deaths which occur in Vermont
  - Births and deaths of Vermont residents which occur out of state



# Death Identification Process

- Pregnancy check box on death certificate
  - Not always accurate
- Searching cause of death fields for pregnancy relation
  - ICD-10 codes
  - Text fields
- Linking the death certificate of a birth parent to the birth certificate of their child
  - SSN
  - Name
  - DOB

```
/*UPDATE SSN TO NUMERIC, AND CREATE CDATEB*/

DATA D1;
  SET DEATHS;

  SSN1 = INPUT(SSN, 9.);
  FORMAT SSN1 Z9.;
  CDATEB = MDY(MOB, DOB, YOB);
  FORMAT CDATEB DATE9.;
  FORMAT CID 13.;

RUN;

/*CHECK UPDATES*/
PROC CONTENTS DATA= D1;
RUN;

PROC PRINT DATA = D1 (OBS = 10);
  VAR SSN SSN1 CID CDATEB CDATED;
RUN;

/*CREATE LINKPLUS DEATH FILE - ALREADY LIMITED TO FEMALE '
DATA LINK;
  SET D1;
  WHERE 10 LE AGE_YR LE 60;
RUN;
```

# Linkage of Birth and Death Certificates

- All potential cases must be linked
- Verification of case
- Clarification of date of death in relation to date of delivery
- Provides additional information
  - Conflicts
- Limitations
  - Entry errors
  - Name changes
  - Manual review

The screenshot shows a software interface for linking two datasets. At the top, 'Data Type' is set to 'Delimited' for both 'File 1' and 'File 2'. File 1 is 'J:\MCH\Maternal Mortality\MK\data\2024\_01\births.csv' and File 2 is 'J:\MCH\Maternal Mortality\MK\data\2024\_01\deaths.csv'. Below this are three main sections: 'Select Blocking Variables', 'Select Matching Variables and Methods', and 'Select ID Variables'. The 'Select Blocking Variables' section has a table with columns 'Data Item (File 1)', 'Data Item (File 2)', and 'Phonetic System'. The 'Select Matching Variables and Methods' section has a similar table with a 'Matching Method' column. The 'Select ID Variables' section has two lists for File 1 and File 2. At the bottom, there are checkboxes for 'Direct Method' and 'Best Match', a 'Cutoff Value' of 7, a text box for 'Linkage results will be saved to' with a file path, and a 'Generate Non-match Report' checkbox. On the right side, there are buttons for 'Advanced...', 'Save', 'Cancel', and 'Run'. A footer note says 'Please configure your linkage, and then click the Run button.'

Data Item (File 1)	Data Item (File 2)	Phonetic System
MOMLN	LN	Soundex
MOMDOB	CDATEB	
MOMSSN	SSN	

Data Item (File 1)	Data Item (File 2)	Matching Method
MOMLN	LN	Last Name
MOMFN	FN	First Name
MOMMN	MN	Middle Name
MOMSSN	SSN	SSN
MOMDOB	CDATEB	Date

Select ID Variables (File 1)
CID
ChildID
CDATEB

Select ID Variables (File 2)
CID
cdated

Missing Value (File 1) Missing Value (File 2)

☒ Direct Method ☒ Best Match

Cutoff Value: 7

Linkage results will be saved to: J:\MCH\Maternal Mortality\MK\data

☐ Generate Non-match Report

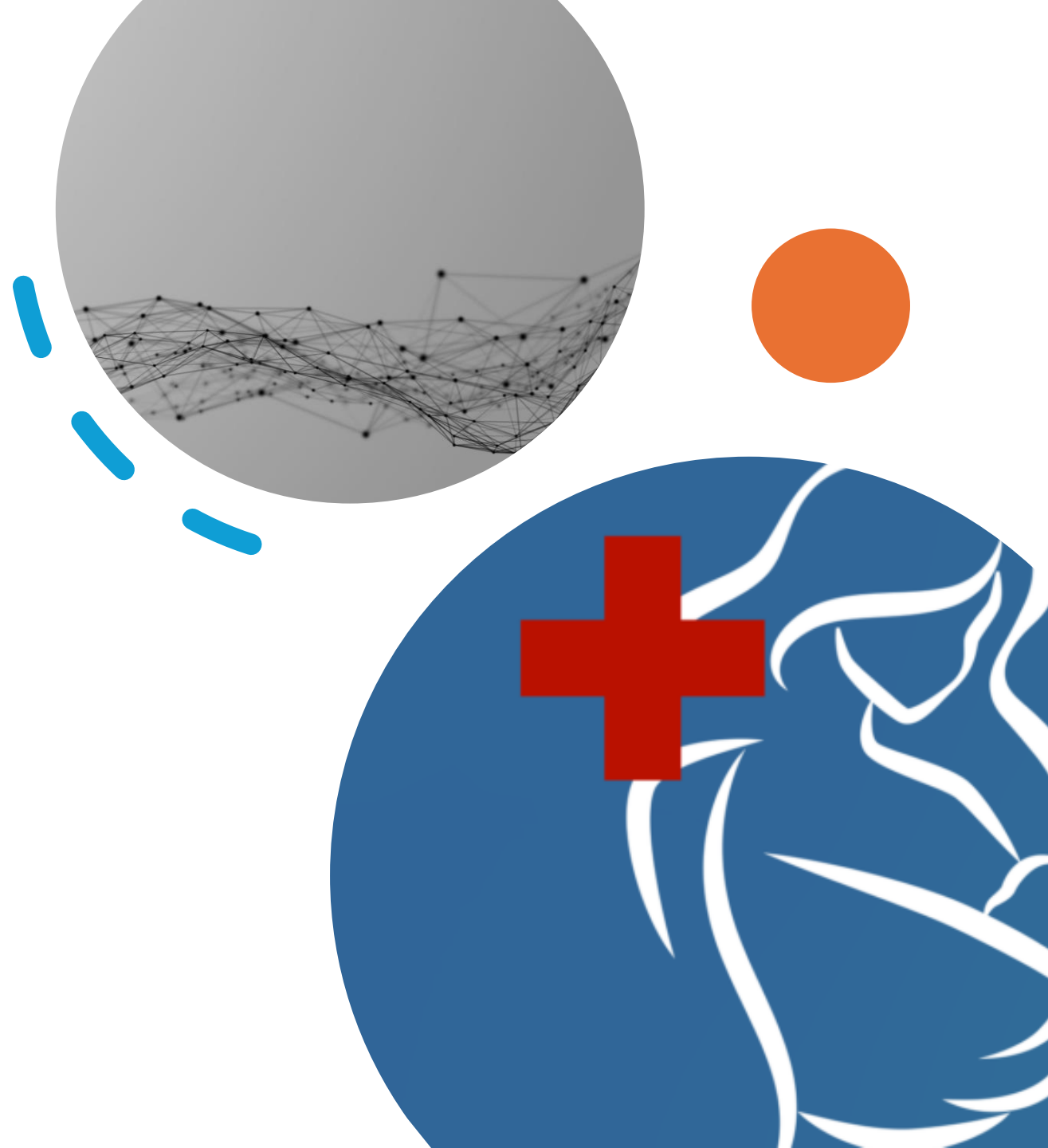
Add Remove Add Remove

Please configure your linkage, and then click the Run button.



# Putting it all together

- Birth Chart Data:
  - Offers a vivid picture of less visible life conditions and factors for the birthing parent—the social determinants that aren't explicitly documented elsewhere.
  - Allows us to better understand the infant at the time of birth





United States: c. 1940 An operator entering data

Photo Credit: Underwood Archives, Inc / Alamy Stock Photo

## Birth Certificate Quality Improvement Initiative Learning Series



### Next Call

Identify and spread best  
practices for data collection:  
Verification and Training

November 4, 2024

12:00 – 1:00 p.m.

**Register Today**

<https://go.uvm.edu/j2fou>

OR

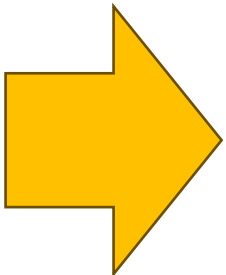


Scan the  
QR Code

### Learning Series Virtual Call Schedule

June 10, 2024 12:00-1:00 p.m.	Why is the birth certificate important to birthing people, newborns, and your hospital?
September 9, 2024 12:00-1:00 p.m.	Partnering across departments to improve accuracy of 11 key variables
October 7, 2024 12:00-1:00 p.m.	Tools to improve reporting accuracy of 11 key variables
<b>November 4, 2024 12:00-1:00 p.m.</b>	<b>Identify and spread best practices for data collection: Verification and Training</b>

This education opportunity is intended for Vermont Hospital teams involved in birth certificate data collection.



# Thank you!

## Comments? Compliments? Questions?

Please take a few moments to complete the evaluation.

Thank you!



Scan QR code