

MARPHLI Case Study Abstract

The study examines the collaboration of community agencies during a lead poisoning incident in Elkhart and St. Joseph Counties. Lead poisoning is a toxic, potentially fatal condition that appears in children who have absorbed too much lead into their systems. The lead can be absorbed, ingested or inhaled in any environment with elevated lead levels. Lead is most commonly found in older homes with lead-based paint.

Staff provided education, screening, treatment, and support to a family with known elevated lead levels. Success in treatment and prevention is highly contingent on cooperation of the family and requires involvement from agencies such as the hospital, health department, child protection services, family physicians, school, landlord, and family services.

The team continues to assess the necessity and effectiveness of inter-agency partnerships.

Case Study Time Line

May, 2008

Purple County Health Nursing Lead Program

Lead Screening Results From 9/4/07 13 Venous

RN received a referral from Orange County Health Department regarding 3 year old Matthew due to a high lead screening result. OCHD requested Purple County take over the follow up since the family had moved to Purple County. Screening was done in September of 07, but follow up could not be done as the family had moved and contact was lost. RN immediately made contact with Purple County Environmental Services and with Matthew's mother to schedule a home visit in order to complete a lead risk assessment.

Lead Risk Assessment

Lead Risk Assessment was completed at Matthew's home. Assessment of current home showed no lead risk, but information indicated that the former residence tested high for lead and that Matthew was found eating paint chips on several occasions. Mother states the Matthew "puts everything in his mouth."

Community Agency involvement

Had mother sign a release of information in order to provide and receive information needed from area agencies. Matthew speech is not clear and has had an evaluation with Special Education Services of Orange County for developmental evaluation. Mother states that he was eligible for Special Education Services. Mother states she will contact Purple County Schools Special Education Services to transfer information and to get Matthew enrolled in classes.

June, 2008

Purple County Health Nursing Lead Program

Called clients physician to report lead result from 2007, also confirmed that follow-up was being attempted and that case management would stay open until Matthew's lead level results were under 10 Venous twice. RN scheduled a Home Visit to do a follow-up lead screening on Matthew. No one was at the home at the scheduled time. Called and scheduled another visit to complete the screening.

Lead Screening Results

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Lead Screening
Results
6/27/08
47 Venous

Physician's office called to say that they were aware of the high lead level and had been attempting to have mother bring Matthew in for follow up visits but have not had any response. Second home visit was attempted at the scheduled time, but no one was home for this visit. Mother was called to have her schedule another appointment. Phone call received from physician's office to find out the results of the home visit. Explained to physician's office that family was no show. Mother brought Matthew into the Health Department for a capillary lead screen. The results received from laboratory showed very high. RN placed a call to mother to let her know that Matthew needed to have a Venous lead screening immediately. Mother agreed to take Matthew to the hospital to have the screening completed. Mother informed the nurse that they have moved again to another home in Purple County because their home (which had tested lead safe) was too expensive for the family. RN called physician's office to request an order to be sent to the hospital for the Venous Lead Screening. RN called mother to confirm that the order was at the hospital. She reminded mother of the symptoms to look for in children with elevated lead levels. Mother states that Matthew is "acting normal" at this time. Venous lead screening results returned were very high. RN called Environmental Health Services to inform of elevated lead level and to discuss the need for Chelation therapy for Matthew. RN sent change of address information to Environmental Health. RN received a phone call from Physician indicating that another Venous Lead Screen will be completed to confirm this level before beginning Chelation treatment. Matthew's older brother was also tested for lead poisoning.

Community Agency involvement

A telephone call from Orange County Health Department Nursing Division indicated that they had also received results of the elevated lead level. Orange County Health Department will make sure that any information that they receive regarding Matthew is communicated to Purple County Health Department in order to maintain best possible service to Matthew and his family. Report was received from the Orange County Special Education Services.

July, 2008

Lead Risk Assessment

Lead Risk Assessment was completed at the new residence of Matthew and family. Assessment indicated that lead was present at the residence and that the family needed to move as soon as possible. Evidence was found that indicated that Matthew had been eating paint chips from a window that had paint that tested high with Niton. Results were given to landlord of current home who states he is unable to make the house lead free due to lack of funds. He will release the family from the lease and has informed other tenants of the lead assessment. Mother states that she could move in with Matthew's grandmother temporarily. Scheduled a time to do a Lead Risk Assessment at the Grandmother's home and also at Matthew's biological father's home, where he spends several hours per week.

Purple County Health Nursing Lead Program

Mother reports that she is 2 months pregnant. Mother has been pulling carpets and painting in the home. She was advised to go for a lead screening for herself

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as soon as possible. She states that she will go to the doctor for a lead screening when her Medicaid becomes active.

Lead Risk Assessment

Lead Risk Assessment was completed at the grandmother's residence which was also found to be lead positive. Some of the windows were new, but some had paint that tested positive with Niton. There were paint chips in the drip lines from exterior window trim that was also positive with Niton.

Purple County Health Nursing Lead Program

Lead Screening Results 6/30/08 49 Venous

Physician's office called to state that Matthew's lead level results from 6/30/08 returned very high. They would like to do Chelation therapy in Matthew's home if possible. They were advised that the home tested lead positive. It was decided to have Matthew admitted to the hospital for Chelation therapy and he was admitted immediately. RN, received telephone calls from the hospital care management department and the physician's office looking for information regarding after care for Matt. They were informed that Matthew should not be released to go to current home or to grandmother's home. Physician reported that Matthew was receiving oral Chelation Therapy and that he can be released as soon as safe housing is found. RN made telephone call to local homeless shelter to see if temporary housing would be available for Matthew and family. Call to homeless shelter revealed that the only room available was in an older home that could potentially be lead positive. It was determined that this shelter is not an option for Matthew and his family at this time. Health Department will arrange for emergency housing at a local hotel for the family at discharge. Calls made to the hospital and the physician's office informing them of housing plan. Received a return call from the physician's office stating that they are delaying discharge for Matthew because medication had not yet been approved by Medicaid and because mother had not been coming to the hospital and had not learned how to give the medication needed after discharge.

Lead Risk Assessment

Lead Risk Assessment was scheduled at the father's home. Risk Assessment team arrived at father's home at scheduled time, no one was home. They called father and reschedule Risk Assessment for later in the day. Father was not at home at the second scheduled time for the Lead Risk Assessment of his home. He arrived 45 minutes late and Assessment was completed. Lead hazards were found on the front porch soffit and on some paint chips in the rear drip line.

Purple County Health Nursing Lead Program

The results of lead screening for 6 year old brother came back 12 Venous. Matthew was released from the hospital and family was temporarily housed in hotel. Physician and CPS worker were notified of family's temporary residence. RN and Purple County Environmental Health discussed housing options with family. Family moved in with a cousin temporarily. Mother stated that Matthew finished his oral chelation medication and had an appointment for lead screening scheduled. Mother has an option of living in a church based home in Purple County. Lead Risk Assessment scheduled.

Lead Risk Assessment

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Lead Risk Assessment was completed and returned with lead positive results. Window jambs, baseboards and some door jambs tested positive with Niton. Home was determined unsafe for Matthew and family. Explained to owner what would need to be done to make the home lead safe. He will discuss with the church board. RN explained to mother that the home was not safe. She will plan to stay with cousin longer.

Purple County Health Nursing Lead Program

Cousin is being evicted and family must move. Clearance was given for Matthew to stay with father for the weekend as long as he stays on the main level which has been cleared of lead.

Lead Risk Assessment

Grandmother's house re-screened for lead. Most items had been addressed. There were still paint chips around the foundation that needed to be cleaned up and bare soil areas to be mulched. Matthew and family moved into grandmother's house.

Purple County Health Nursing Lead Program

Mother called and would like to move into an apartment in Purple County. She has discussed the lead problem with owner who thinks that the apartment should not have many lead hazards present and will allow mother and boyfriend to clean up any problems found. Scheduled and appointment to have Risk Assessment at new apartment.

Lead Risk Assessment

The following area's of the new apartment tested positive for lead with Niton: back porch ceiling, front porch soffit, front door and door frame into foyer. Items were noted to mother and landlord who agreed to clean up the problem areas. Staff rescheduled a Lead Risk Assessment at father's home.

Community agency involvement

Mother reports that Child Protective Services is now involved in the case to make sure that Matthew is getting the health care that he needs. She thinks that the physician reported her for the delay in having Matthew lead tested. Mother also states that she will follow through on enrolling Matthew in the Purple County Special Education program. Mother is hospitalized for dehydration and is referred to Maternal/Infant Program.

August, 2008

Lead Risk Assessment

Follow up visit to the apartment showed that some work had been completed. There are still a few areas of concern regarding lead, mostly on the back porch.

Purple County Health Nursing Lead Program

Lead screening completed on Matthew. Results were down, but still considered very high. Results for lead screen on older brother returned at 2 Venous. Re-screening for Matthew scheduled for two weeks.

Lead Screening Results 8/6/08 32 Venous
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Lead Risk Assessment

Reassessment of lead risk was completed at current home. Areas of concern include the back porch area which continues to be used for food storage. Outside the home were many areas without grass and paint chips were located in the dirt and around the foundation of the home. Matthews's hands were dirty and he was stopped by assessment team from putting paint chips in his mouth.

Other areas of concern that were noted by those present: The children had a lighter, a knife and an empty alcohol bottle in their possession, which were taken away by the staff. Razors were lying around in reach of the children. All the rooms were very dirty, especially the kitchen floor.

Purple County Health Nursing Lead Program

Lead Screening Results 8/18/08 28 Venous

Lead screening completed. Results are going down, but still very high. Re-screening scheduled for two weeks. Mother is babysitting for 1 year old cousin. RN gave mother a cleaning kit and was asked to be sure that the floors were cleaned. Children were eating potato chips during the visit.

Community agency involvement

Matthew is schedule to begin preschool with special education services the following month. He will receive speech/language therapy.

Purple County Health Nursing Lead Program

Schedule Home Visit - Matthews's hands are dirty. RN reviewed the importance of hand washing to prevent lead poisoning. Home is less cluttered but floor needed mopped. No alcohol bottles visible. Mom states that Matthew has been talking more. Mother will try to find a job to help with costs.

Drop-In Home visit - Discussed the upcoming lead screen with mother. RN observed that the kitchen floor had been mopped and Matthew's hands were clean.

September, 2008

Purple County Health Nursing Lead Program

Lead Screening Results 9/3/08 30 Venous
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Lead screening completed. Results are up slightly. RN scheduled a re-screening in two weeks.

Community agency involvement

RN received a call from the special education services. Matthew is doing well in school. They raised concern that no one was at home when the bus took him home. Bus driver brought Matthew back to the school and mother came to pick him up one hour later. There were several more occasions with no one being home when the bus brings Matthew home. RN made contact with Purple County Safe Families Program to discuss how to make a referral to their program. They will be able to assist a family as long as Child Protective Services does not have an open case. Call to CPS determines that they have closed the case for now. Drop in visit with mother, who requested that the nurse not enter the home because they had company and the house was full of people. Mother signed a

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consent form for contact with Safe Families Program. Mother stated that she will begin working at McDonalds. Referral was made to Safe Families Program.

Purple County Health Nursing Lead Program

Lead Screening
Results
9/18/08
26 Venous

Matthew missed an appointment for Lead Screening. Appointment was rescheduled. Lead screening completed. Results were lower but still high. Home visit to report lead screen results. Mother reports progress being made with Safe Families Program in helping her with needed services including a referral to a local mental health facility.

October, 2008

Purple County Health Nursing Lead Program

Lead Screening
Results
10/20/08
23 Venous

Home visit – Mother states that she missed physician appointment for Matthew. RN assisted mother in rescheduling physician appointment and scheduled next lead screening at the same time. The result of screening is down, but still high. The Doctor's office was unable to contact mother with results. The next lead screening will need to be scheduled in one month.

Drop in Home Visit – Assisted mother in scheduling appointment at mental health facility. Mother reports that she still does not have Medicaid and she had not started prenatal care. Baby is due in January.

Community agency involvement

Telephone call from Safe Families Program states that mother will quit her job because of loss of food stamps due to income. They continue to work with mother with many of the family issues. A report was made to Purple County Health Nursing Lead Program RN from a family member that they suspect meth use at Matthew's home. This information was reported to the Safe Families Program.

Lead Risk Assessment

The back porch lead problems (peeling paint on the ceiling) have not yet been taken care of. The house appeared to be clean with the exception of the back porch. Family now has a vacuum. Food is still being stored in the back porch area.

Community agency involvement

Mother reports that the family is working with Safe Families to find another apartment with section 8 housing. Telephone call from the Special Education Program states that there are still problems when the bus takes Matthew home and that the bus driver thinks that he smelled alcohol on mom's breath.

November, 2008

Purple County Health Nursing Lead Program & Maternal Infant Program

Home Visit - Mother reports that her Medicaid is active and that she has had her prenatal visit and that she is scheduled for a c-section in January. She is smoking fewer cigarettes and denies use of alcohol or drugs. RN verified next lead screening appointment for Matthew. Mother also confirmed her upcoming appointment with the local mental health facility. Case conference will be scheduled in December with: Purple County Health Nursing Lead Program, Safe Families Program, Mental Health Doctor, Special Education Teacher and Director and mother.

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Lead Screening
Results
11/17/08
19 Venous

Drop in visit - Safe Families Programs informed mother of the suspicion of meth use in the home. Mother states that she is not using drugs and will have a drug test done at delivery to prove it.

Lead screening on Matthew was completed at Physicians office. Results are lower, but still too high.

Drop in Home Visit – Informed mother of lead screening results. Mother was vacuuming; house appears clean with no clutter. She states that she had removed all food from the back porch and that the landlord will be sealing it off for the winter. Mother reports that she was diagnosed with bi-polar disorder but was unable to take the medication due to a severe reaction. She states that the plan is that another adult will be with her and the children during the rest of her pregnancy so that she will not be left alone with the children since she is unable to take medication for the disorder. Drug Task Force was notified of the possible drug activity of the household. RN verified date and time of upcoming case conference.

December, 2008

Community agency involvement

Telephone call from Nurse Practitioner at mental health facility states that they see mother as being able to properly care for the children. RN called the discharge planner at the hospital to inform of the continued problem of lead in the home and discussed the need for the house to be lead safe before new baby is discharged after birth in January.

Case conference

Reports were sent to mother and all agencies involved. Resulting recommendations include:

1. Mother is to make weekly contact with school regarding Matthews home behaviors
2. Environmental Health will contact landlord regarding lead hazards at current home and complete a follow up assessment
3. Mother and boyfriend will attend parenting classes
4. Safe families will assist mother in organization skills and assisting with immediate needs
5. Mother is to keep a journal to take to meetings
6. Random drug screen for mother prior to birth of infant
7. Boyfriend should be present at scheduled home visits
8. Father's home to have a follow-up assessment to assure that home is lead safe
9. Current home to have work completed to make home lead safe. Boyfriend will do the work if the landlord does not. Mother and children are not to be present during the remodeling or cleaning. A clearance examination will be completed by Environmental Services when work is done.

Purple County Health Nursing Lead Program

RN called OB doctor to request random drug screening on mother at next OB appointment.

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Drop in home visit - Matthew and mother not present. Boyfriend showed that the landlord had cleaned up the back porch. The front porch still showed signs of paint chips. Boyfriend says he will clean up the problem. Environmental Services reports house is lead safe for baby to come home as long as the clean up continues.

Community agency involvement

Matthew's brother is living with grandmother due to anger issues. He is scheduled for evaluation at mental health facility. Drug test results on mother shows positive for THC (marijuana). Mother denies drug use stating that the upstairs tenant smokes marijuana and the smell comes through the duct work.

January, 2009

Purple County Health Nursing Lead Program

Mother states that she plans on having tubes tied at delivery. She plans to take parenting classes.

Community agency involvement

Safe Families is still working with the family to resolve many family issues.

Lead Risk Assessment

Environmental services retest showed dust high in lead. Mother advised to work on having the lead problems cleaned up. Home is not lead safe for infant.

Purple County Health Nursing Lead Program & Maternal Infant Program

Mother hospitalized for c-section. Informed discharge planner that home is not lead safe. Baby will go to grandmothers home at discharge. Mother tests positive for THC (marijuana). Baby urine test is negative, awaiting results from meconium (infant's first stool) test. CPS will be notified if baby tests positive for drugs. Home cleared for mother to go home.

Lead Screening Results 1/23/09 18 Venous

Lead screening done on Matthew. Results show a slight decrease in lead level.

Case remains open.

Although Matthew's case is an unusual one it is also typical in many ways. Purple County Health Department (PCHD) often receives information from Orange and other county health departments about children with an elevated blood lead level (EBLL) that have relocated into the county. It is the policy of PCHD to notify other counties of a child with EBLL relocating into their jurisdiction. It is standard operating procedure to have several health department divisions working together on a lead case. With the divisions working together and communicating frequently it is easier to determine any special needs of the family. Once it has been established that other entities should be involved; the divisions of PCHD work together to determine the appropriate agencies to contact.

In Matthew's case, because of the trouble in finding a suitable home for Matt to stay in and the limited resources of the family, it was quickly determined that other agencies would need to

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become involved. There was also the issue with the trustworthiness of Matt's mother and the parent's delay in taking action in some instances. There was also the issue of Matt's special needs. Because of these issues there have been numerous agencies that were called upon to be involved and they all continue to work together to reach a positive outcome for Matt.

What steps might be taken when parents/caregivers don't follow through with recommendations to insure the child's health and safety regarding lead-free housing and treatment?

How could this case be used to advocate for stronger laws regarding lead testing for children, rental homes, and other public housing sources?

Can laws be changed to prevent children from living in unsafe conditions?

How can agencies better educate parents and landlords about the extreme hazards of lead?

How can agencies educate moms prenatally on hazards of lead poisoning?

Should other community facilities (daycare, shelters, missions, churches) be forced to have lead assessments completed or more education on possible risks?

Should federal funds be available to these facilities to improve living conditions?

When a county hits a roadblock in assisting a family in need; where can they turn for assistance?