

# 1 Problem

|                     |                            |   |
|---------------------|----------------------------|---|
| What                | Problem(s)                 | Delayed testing results   |
| When                | Date                       | October 2, 2012 (baby born)   |
|                     | Time                       | See timeline  |
|                     | Different, unusual, unique | Blood sample not tested until week after birth  |
| Where               | Facility, site             | Wisconsin hospital  |
|                     | Task being performed       | Screening for 44 rare, treatable disorders  |
| Impact to the Goals | Patient Safety             | Brain damage; potential for death   |
|                     | Compliance                 | Did not meet state guidelines   |
|                     | Patient Services           | Delay in treatment of disease   |
|                     | Financial                  | Cost of emergency treatment, rescue flights   |
|                     | This incident              | \$491,000   |
| Frequency           |                            | 1 of every 800 newborns has a potentially severe or lethal condition that can be detected through screening and treated |
|                     | Annualized Cost            | ?   |

# TESTING DELAY CAUSES

## Cause Map

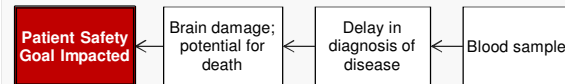
## Batching samples not prohibited, but strongly discouraged

"Hospitals should never, ever batch samples. Samples should be sent out at least daily." - Ada Hamosh, clinical director of the Institute of Genetic Medicine at Johns Hopkins University School of Medicine

"If it's not within five days, babies can die." - Brad Therrell, director of the National Newborn Screening and Global Resource Center

# 2 Analysis

Basic Level Cause Map - Start with simple Why questions.

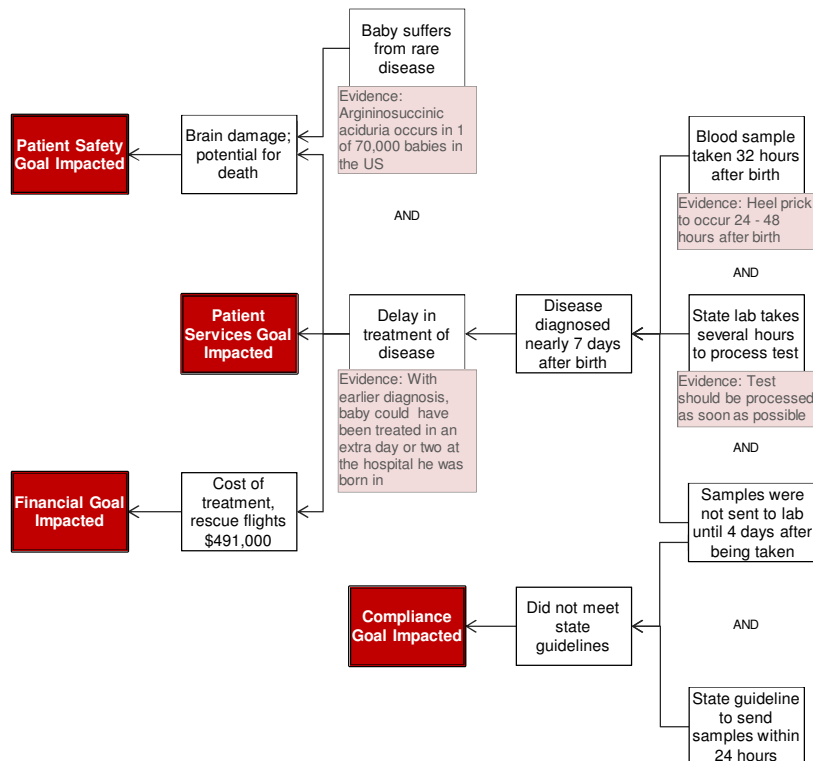


## CAUSE MAPPING

Problem Solving • Incident Investigation • Root Cause Analysis

- Step 1 **Problem** - What's the Problem?
- Step 2 **Analysis** - Why did it happen?
- Step 3 **Solutions** - What will be done?

More Detailed Cause Map - Add detail as information becomes available.



## Timeline

| Date             | Time      | Description  |
|------------------|-----------|--|
| October 2, 2012  | 8 p.m.    | Baby born at Wisconsin hospital  |
| October 4, 2012  | 4:05 a.m. | Blood sample for newborn screening test  |
| October 5, 2012  | 2:30 p.m. | Baby displays some symptoms  |
| October 6, 2012  |           | Baby sent home from hospital   |
| October 6, 2012  |           | Baby could not be woken  |
| October 6, 2012  |           | Baby is not roused by cold water   |
| October 6, 2012  | 6:30 p.m. | Baby returned to hospital  |
| October 6, 2012  |           | Baby rushed by rescue helicopter to larger hospital                            |
| October 6, 2012  |           | Blood tests show off the chart ammonia levels                                  |
| October 7, 2012  | 5:30 a.m. | Baby is airlifted to one of 2 hospitals in state that performs infant dialysis |
| October 7, 2012  | 5:40 a.m. | Baby's breathing and heart stop  |
| October 7, 2012  |           | Experimental cooling & dialysis used on baby                                   |
| October 8, 2012  |           | Lab sample sent to state lab   |
| October 9, 2012  | 7:40 a.m. | Lab testing received at state lab  |
| October 9, 2012  |           | Doctors are notified that baby has argininosuccinic aciduria                   |
| October 13, 2012 |           | CT scan shows major damage to baby's brain, including blood clot               |
| October 14, 2012 |           | Baby opens eyes and tries to move  |
| November 9, 2012 |           | Baby returns home  |

Per existing guidelines, the baby's test results should have been received before he returned to the hospital

For a free copy of our Root Cause Analysis Template in Microsoft Excel, used to create this page, visit our web site.

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