BLOOD TEST FOR DEPRESSION?

Cause Mapping is a Root Cause Analysis method that captures basic cause-and-effect relationships supported with evidence.

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?

1 Problem

Step 1. Outline the Problem

What	Problem(s)	Depressed teens not receiving treatment, higher risk of substance abuse, higher risk of suicide
When	Date	2012
	Differences	Teens are more likely to suffer from depression
Where	Physical Location	USA
Impact to the Goals		
Safety		Depressed teens may not be receiving appropriate treatment

This incident ??

Cause Map

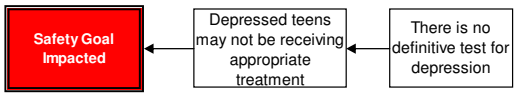
A new study found that it may be possible to develop a blood test to diagnosis depression.

"The future is really personalized medicine for every disease, and depression is not an exception"

- Dr. Eva Redei, a professor of psychiatry and behavioral sciences at Northwestern University Feinberg School of Medicine

2 Analysis

Basic Level Cause Map - Start with simple Why questions.



Basic Cause-and-Effect

Diagnosing depression is currently subjective and relies on a patient's ability to identify and describe their symptoms to a doctor. Researchers are working on developing a blood test to diagnosis depression which should lead to more teens receiving proper treatment.

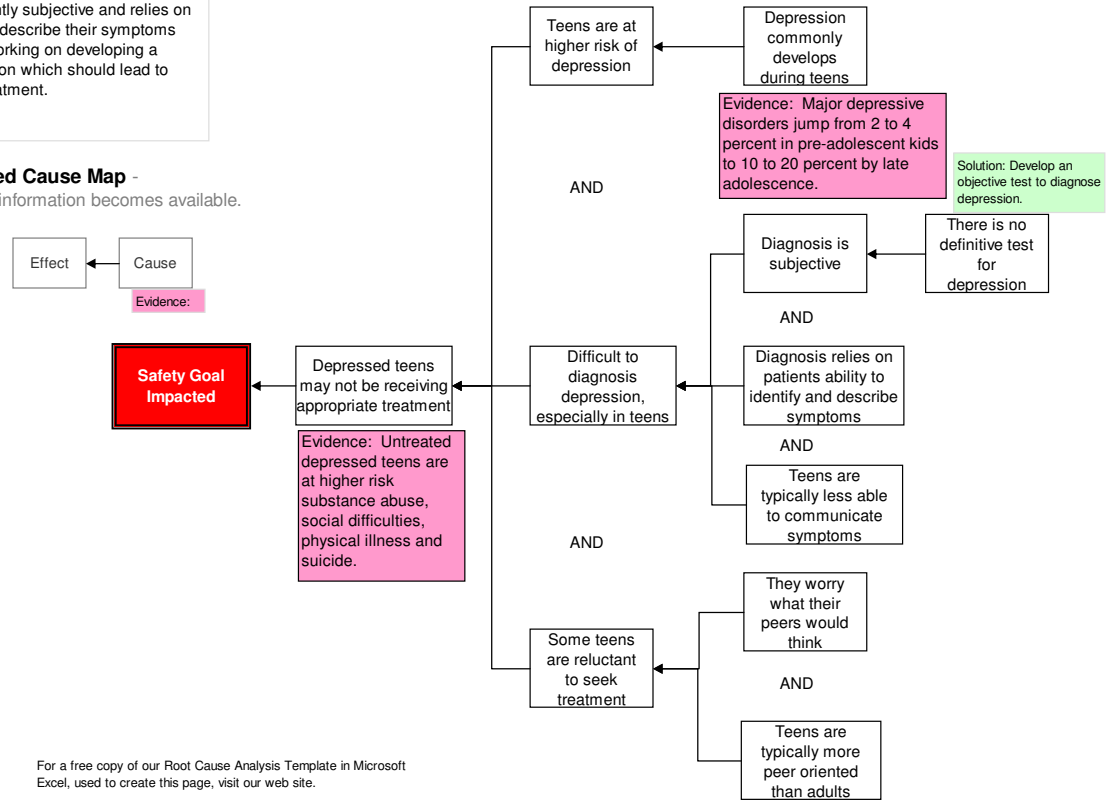
More Detailed Cause-and-Effect

A new study has determined that it may be possible to develop a blood test to diagnose depression in teens. Finding better ways to treat depressed teens is important because untreated depressed teens are at higher risk for substance abuse, social difficulties, physical illness and suicide. Teens are particularly at risk from depression because this is an age when depression frequently hits and teens can be difficult to properly diagnose and treat.

Currently, the process to diagnose depression is subjective and relies on a patient's ability to identify and describe symptoms, something that is typically more difficult for teens. Depressed teens are even more likely to struggle with steps needed to receive treatment for depressions. Teens are also typically more worried about others opinions than adults and the fear of judgment from their peers may prevent depressed teens from seeking treatment.

In a recent study, experimental blood tests were done looking for genetic markers that had been identified in earlier studies using rats. Eleven genetic markers were found that were tied to depression. The researchers were also able to identify which participants had major depression and which suffered from major depression with anxiety. The hope is that a blood test could eventually be used not only to diagnosis depression, but also to differentiate between subtypes of depression, information that would certainly be useful when determining the best course of treatment for patients.

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



3 Solutions

The final step of the Cause Mapping process is to come up with potential solutions that could be used to prevent the problem from reoccurring.

An objective blood test would help simplify the process of diagnosing teens with depression and should help more depressed teens receive appropriate treatment. A straight forward test, like a test for blood sugar or for cholesterol, should also help remove any remaining social stigma of depression treatment so hopefully more affected individuals would seek treatment.

Significantly more work is needed to develop an effective blood test, but this early study hints that it could be possible to create an objective test for depression. This study used a limited number of subjects, 28 teens between 15 and 19 years old, so larger studies will be needed in the future.

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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