**What is already known**:

U.S. suicide and overdose mortality rates are rising for working age adults with no college education.

Manufacturing has been declining in the U.S. for decades, as precarious work has been increasing.

Economic contraction and job loss have been linked to suicide, depression, and substance abuse.

**What this study adds**:

Individual-level findings from a large established cohort study of autoworkers followed from 1970 to 2015, covering the recent period of decline in the U.S. automobile industry.

The cohort included all workers who ever worked at three automobile manufacturing facilities in Michigan, all of which closed by the end of the study period.

We found that suicide was associated with employment status; the hazard rate was 17 times higher among inactive workers who had terminated employment.

When compared to rate among retirees, the rate of suicide combined with overdose was elevated for workers who left work younger, when leaving was less likely to be voluntary.