**Data source and definitions:**

For county-level estimates of households in the United States that have inadequate plumbing, inadequate kitchens or are overcrowded, KHN utilized data from the American Community Survey (ACS) five-year estimates (2014-18). Only occupied units are included in the analysis.

Plumbing is considered inadequate if it lacks one or more of the following: piped hot and cold water; a bathtub or shower; or a toilet. A kitchen is considered inadequate if it lacks a refrigerator, a stove or range, or a sink with a faucet. A household is considered overcrowded if it has more than one person per room.

**Notes:**

Each housing metric (inadequate plumbing, inadequate kitchens, overcrowding) in the data is an estimate. For plumbing and kitchens, KHN has included the margin of error (e.g. ‘plumbing\_inadequate\_moe’) which is a measure of the possible variation of the estimate (‘plumbing\_inadequate\_est’).

Since overcrowding is a calculation (a comparison of the number of rooms to the number of people in each unit) there is no margin of error.

Inadequate plumbing, kitchens and overcrowding are not mutually exclusive–some housing units have more than one problem. These variables cannot be added within a county.