

Urea Reduction Ratio Fact Sheet for People with End-Stage Renal Disease

What Is Urea?

Your body normally makes and removes waste from what you do every day, such as exercise and eating food for energy. Urea is one type of waste your body makes and must remove. People who use dialysis can't remove waste through their kidneys, so the buildup of urea can make them very sick.

What Is the Urea Reduction Ratio?

The Urea Reduction Ratio (URR) shows how much urea is in your blood when you start and finish a dialysis session. Your URR amount tells you and your dialysis medical team how well dialysis worked, and how much waste was cleaned from your body.

How Is the URR Calculated?

The URR is how much (a percentage) urea has been taken out of the body by dialysis.

There are steps used to find out how urea is taken out of the body:

$$\frac{\text{Amount of urea before dialysis} - \text{Amount of urea after dialysis}}{\text{Amount of urea before dialysis}} = \text{Fraction of urea taken out}$$

To find out what fraction of urea is taken out of the body:

$$\frac{\text{Amount of urea taken out}}{\text{Amount of urea before dialysis}} = \text{Fraction of urea taken out by dialysis}$$

To find out the percentage of urea taken out by dialysis:

$$\text{Fraction of urea taken out} \times 100 = \text{Percentage of urea removed} = \text{URR}$$

Why Is the URR Important?

When you have a high amount of urea in your blood, it could mean that dialysis is not taking enough waste from your body. If your URR result is 65% or higher, then your dialysis treatment is doing a good job of cleaning waste from your body. Your URR will be taken each month. Sometimes many of your URR results are put together to find the average (mean) amount of urea that dialysis is cleaning from your body. The URR is used because it is an easy way to find out how well dialysis is working.

How Does Medicare Help to Make Care Better for People with End-Stage Renal Disease?

Medicare has put in place the End-Stage Renal Disease (ESRD) Quality Incentive Program (QIP). In this program, each outpatient ESRD facility is measured on the quality of the care it gives. Facilities that don't give care that meets Medicare's standards are paid less.

Dialysis medical teams and the ESRD QIP use URR results to help make care at dialysis centers better. The URR is an important performance measure because it shows how well a facility does dialysis. A higher URR percentage shows that a dialysis facility is doing a better job. While some quality of care performance measures may change from year to year, the main goal of paying dialysis facilities for how well they give care stays the same.