

Santeon treatment standard and shared decision-making tool for patients receiving hemodialysis – a focus on preservation of residual diuresis

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Background

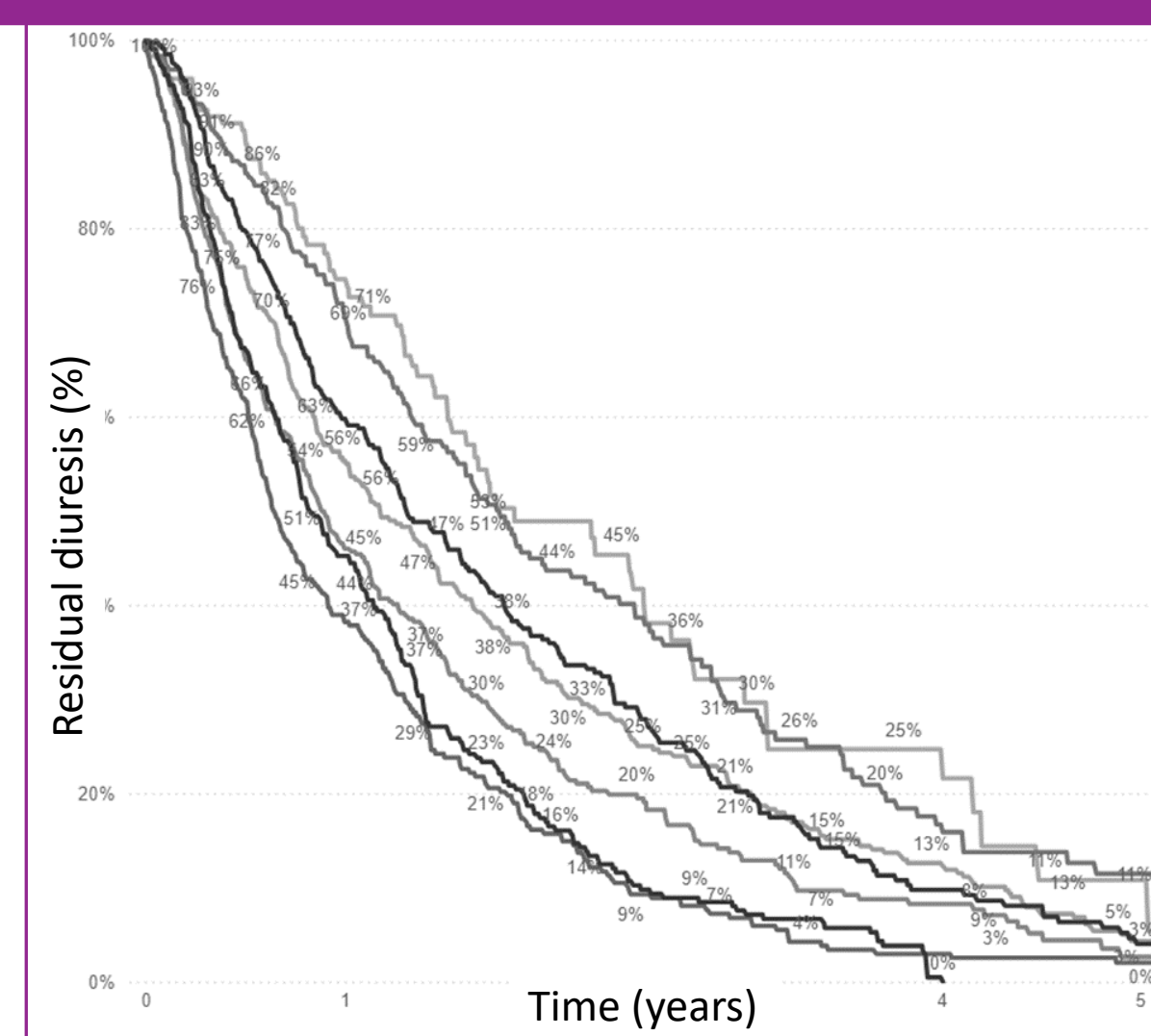
In dialysis patients, residual diuresis gradually decreases. Longer preservation of residual diuresis is associated with higher quality of life and higher survival probability. A complicating factor is that preservation of residual diuresis can be in conflict for the strive for euvoemia. Ultrafiltration is a manner to quickly remove fluid from the body, but has a negative effect on residual diuresis. In the Santeon Better Together program for chronic kidney disease we explored residual diuresis in dialysis patients and identified differences in residual diuresis in hemodialysis patients between hospitals. Subsequently, we aimed to raise awareness for preservation of residual diuresis as a treatment goal among healthcare professionals and patients in the Santeon hospitals.

Methods

The following three improvement initiatives were formulated:

- 1) Including residual diuresis as an outcome indicator in our data platform (Health Intelligence Platform Santeon (HIPS)) to provide healthcare professionals direct insight into residual diuresis of their own patient population.
- 2) Developing a Santeon treatment standard focusing on preservation of residual diuresis in hemodialysis patients based on existing literature, results of a survey among Santeon nephrologists, and best practices in the Santeon hospitals.
- 3) Developing a Santeon shared decision-making tool for hemodialysis patients who are hypervolemic in collaboration with the Dutch Kidney Association and patient experts.

FIGURE 1: RESIDUAL DIURESIS IN HIPS DASHBOARD



Results

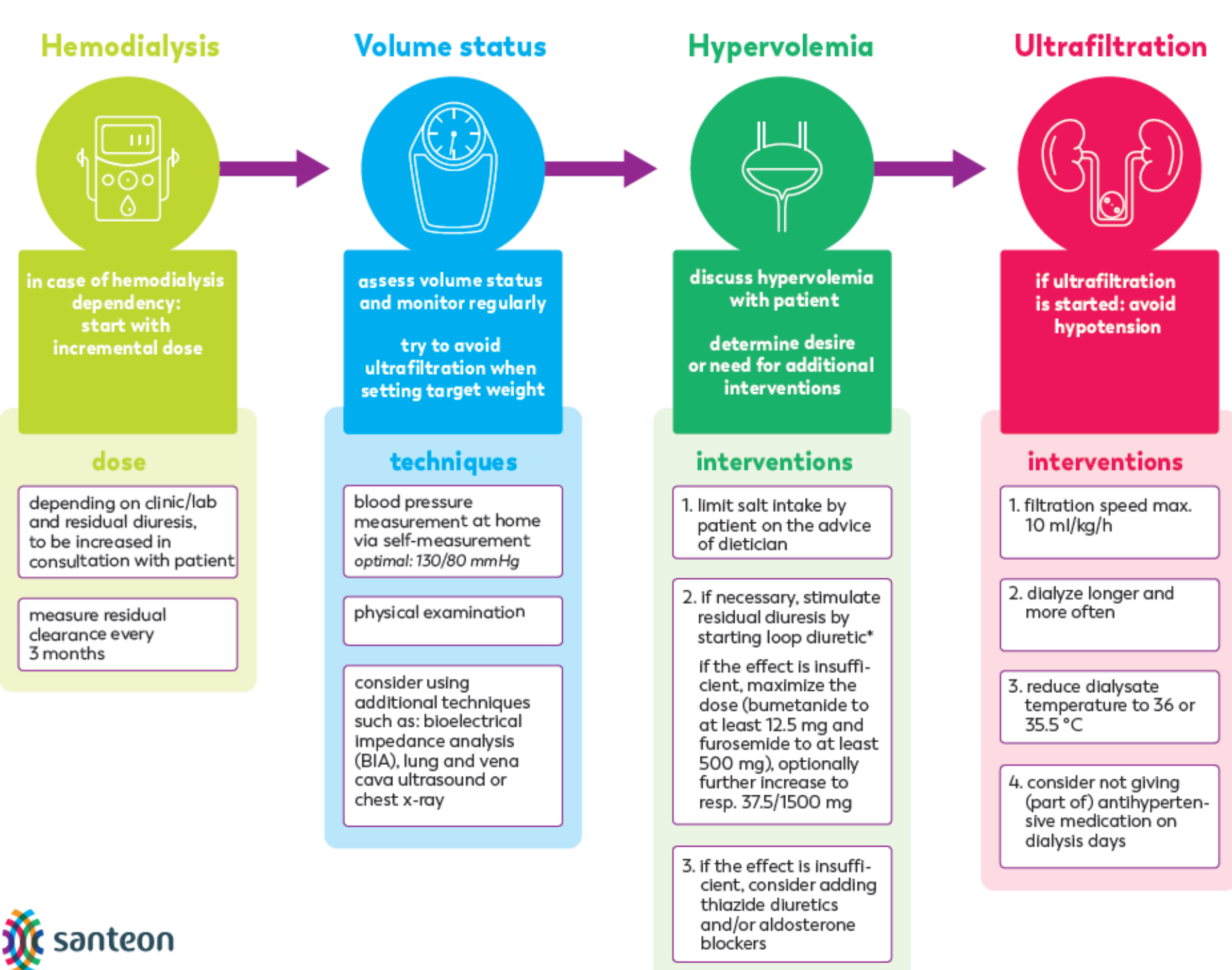
The figures respectively show the visualisation of residual diuresis in the chronic kidney disease HIPS dashboard (figure 1), the Santeon treatment standard focusing on preservation of residual diuresis in hemodialysis patients (figure 2), and the Santeon shared decision-making tool for hemodialysis patients who are hypervolemic (figure 3). Currently, both the treatment standard and shared decision-making tool are being implemented in the Santeon hospitals. All dialysis nurses in the Santeon hospitals are taking a uniform clinical class on preserving residual diuresis and the use of both tools. The improvement initiatives will be monitored via the HIPS dashboards.

Conclusions

Santeon healthcare professionals gained better insight into the preservation of residual diuresis of dialysis patients and developed tools to further standardize, improve, and personalize care for patients receiving hemodialysis.

TREATMENT STANDARD FOR RENAL FAILURE to preserve residual diuresis

FIGURE 2



SHARED DECISION-MAKING TOOL FOR FLUID OVERLOAD IN HEMODIALYSIS

FIGURE 3

When your kidneys stop working properly, they do not convert enough fluid into urine. In that case, too much fluid remains in your blood vessels and tissues. Doctors also call this **fluid overload**. Fluid overload can increase your blood pressure. You may also experience fluid in your legs and shortness of breath.

Are you on **hemodialysis** and do you have fluid overloads? Then one or more treatments are possible, depending on how much fluid overload you have and whether you can still urinate.

This tool shows **three treatment options** for fluid overload. Together with your doctor, you choose which treatment or combination of treatments is possible and best for you. In any case, you are advised to eat less salt.

Many people like to still be able to urinate. The more you can still **urinate**, the more you are allowed to drink. Also, some people need to dialyze less often if they can still urinate.

Eat less salt
 salt in your food causes your body to retain fluid
 a dietician can help you eat less salt

ADVANTAGES

- You only have to pay attention to what you eat.
- You feel less thirsty.
- You do not have to take extra medication or undergo more intensive dialysis (ultrafiltration).

DISADVANTAGES

- You have to pay attention to what you eat.
- Eating less salt may not work well enough to prevent fluid overload.

Water tablets
 water tablets come in different types and dosages
 water tablets cause you to urinate more or more often

ADVANTAGES

- Water tablets help to continue urinating (and drinking).
- You do not have to undergo more intensive dialysis (ultrafiltration).

DISADVANTAGES

- Water tablets may not work well enough to prevent fluid overload.

WHEN NOT POSSIBLE?

- This treatment is not possible if you urinate less than 300ml per day.

Ultrafiltration
 ultrafiltration is a heavier form of dialysis to remove extra fluid (via the dialysis fluid)
 ultrafiltration can also be done one-time in an acute situation

ADVANTAGES

- Ultrafiltration can quickly remove fluid from your body.

DISADVANTAGES

- You may be less able to urinate. In that case, you are allowed to drink less.
- You may have low blood pressure. You may feel a little dizzy for a short time.
- You may have cramps.
- You may have a dialysis hangover. You may then feel a little sicker.

More information?

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