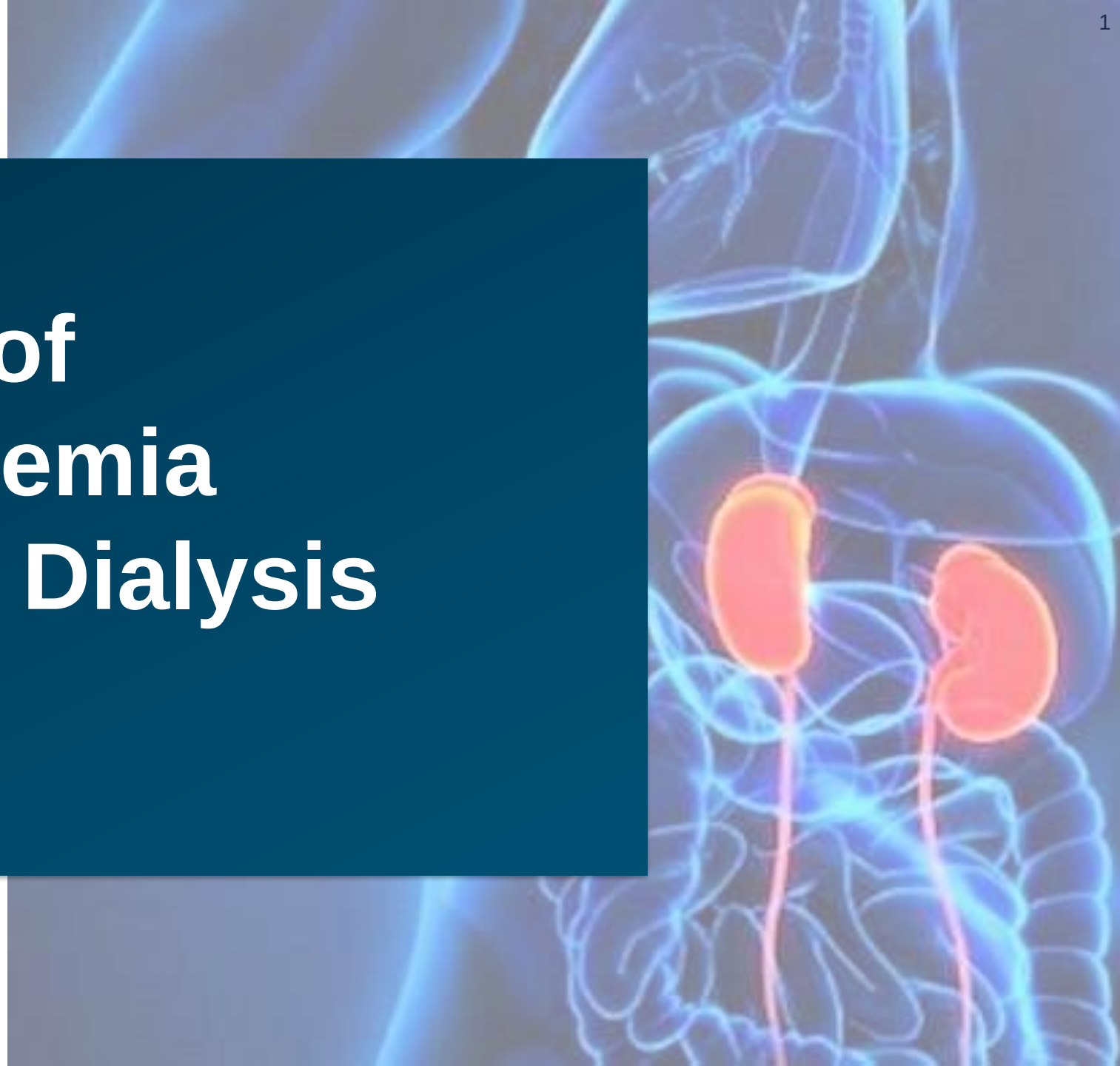

The True State of Hyperphosphatemia Management in Dialysis

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Spherix Global Insights

Disclosure Information

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Tucker Hurtado

Spherix Global Insights

J.Robinson is president and founder and T.Hurtado is an employee of **Spherix Global Insights**, an independent market intelligence firm, and have received no industry funding to conduct and report on this study.

Background and Methods

Spherix Global Insights

Background: Hyperphosphatemia affects more than 80% of US dialysis patients and has been shown to have a direct link to increased morbidity and mortality. The objective of this study was to assess the current management of hyperphosphatemia in US dialysis patients and the ability to consistently control serum phosphorus over a six-month period.

Methods: Patient level data was collected via an online, HIPAA-compliant form in June 2019 as part of an independent chart audit. A total of 1,015 patient records (789 in-center hemodialysis, 200 peritoneal dialysis, and 26 home hemodialysis) were submitted by 159 nephrologists. Patients had been on dialysis for at least six months (Mean: 26 months, Median: 15 months) and most were in units affiliated with large dialysis organizations (LDOs).

Results

Figures 1, 2a & 2b

The normal serum phosphorus concentration is 2.5mg/dL to 4.5mg/dL, however the target for dialysis patients has generally been relaxed to levels of up to 5.5mg/dL.

Among phosphate binder-treated patients (83% overall), 42% were above 5.5mg/dL at the last measure. Analyzing the target range over a six month period revealed that 17% of binder-treated patients were consistently above target and another 60% of patients fluctuated between being in target and above target.

Figure 1

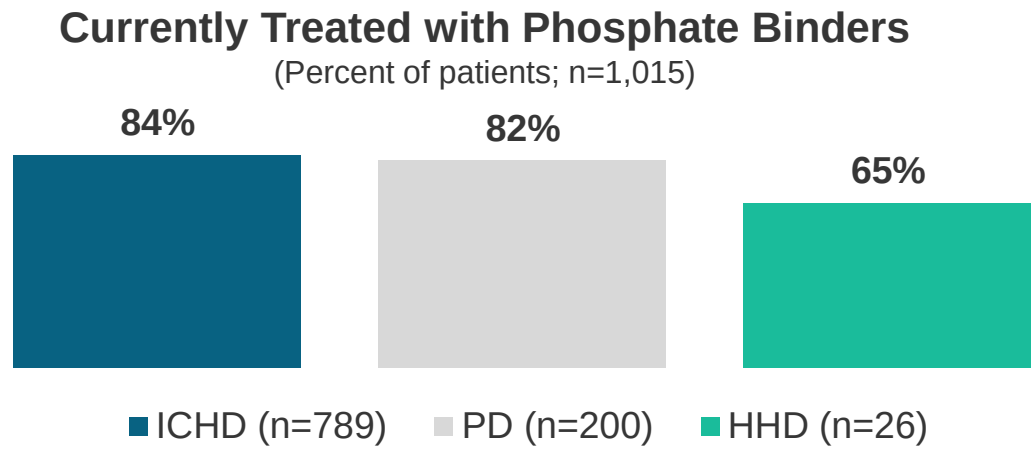
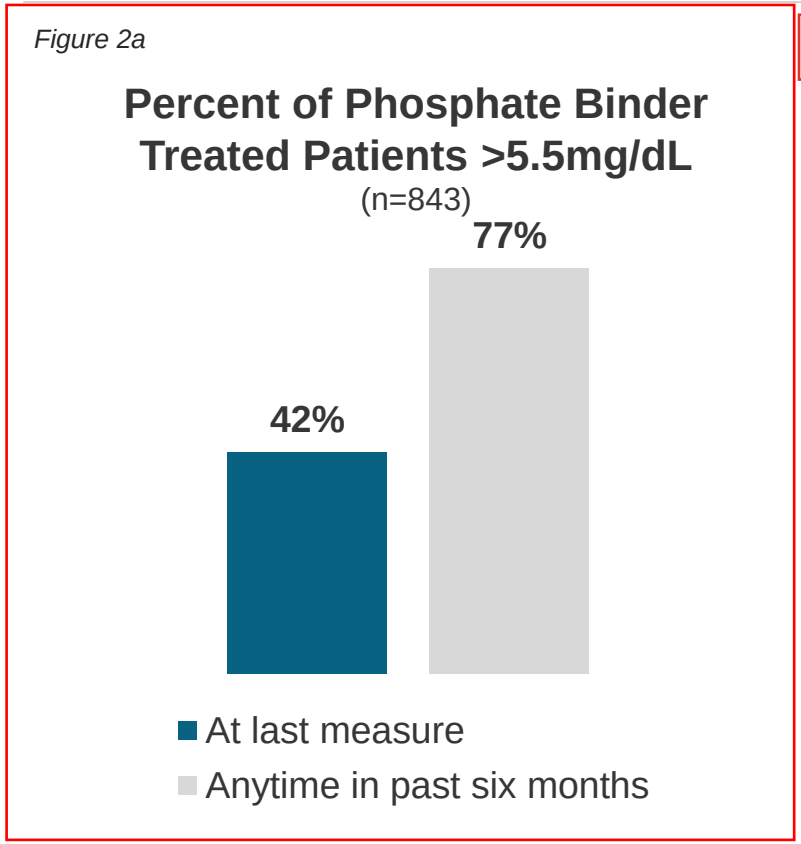
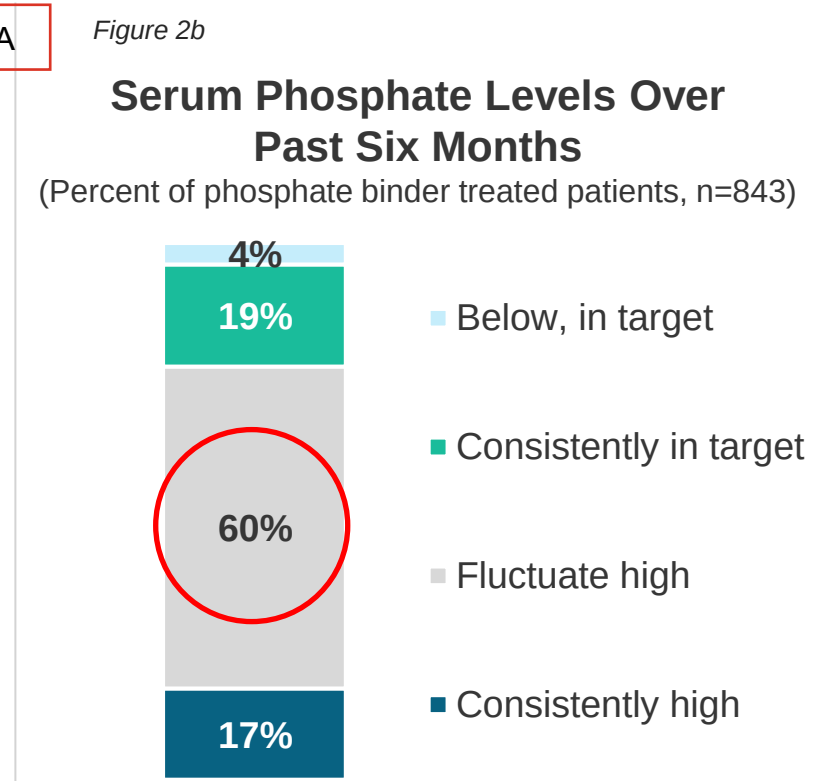


Figure 2a



A

Figure 2b



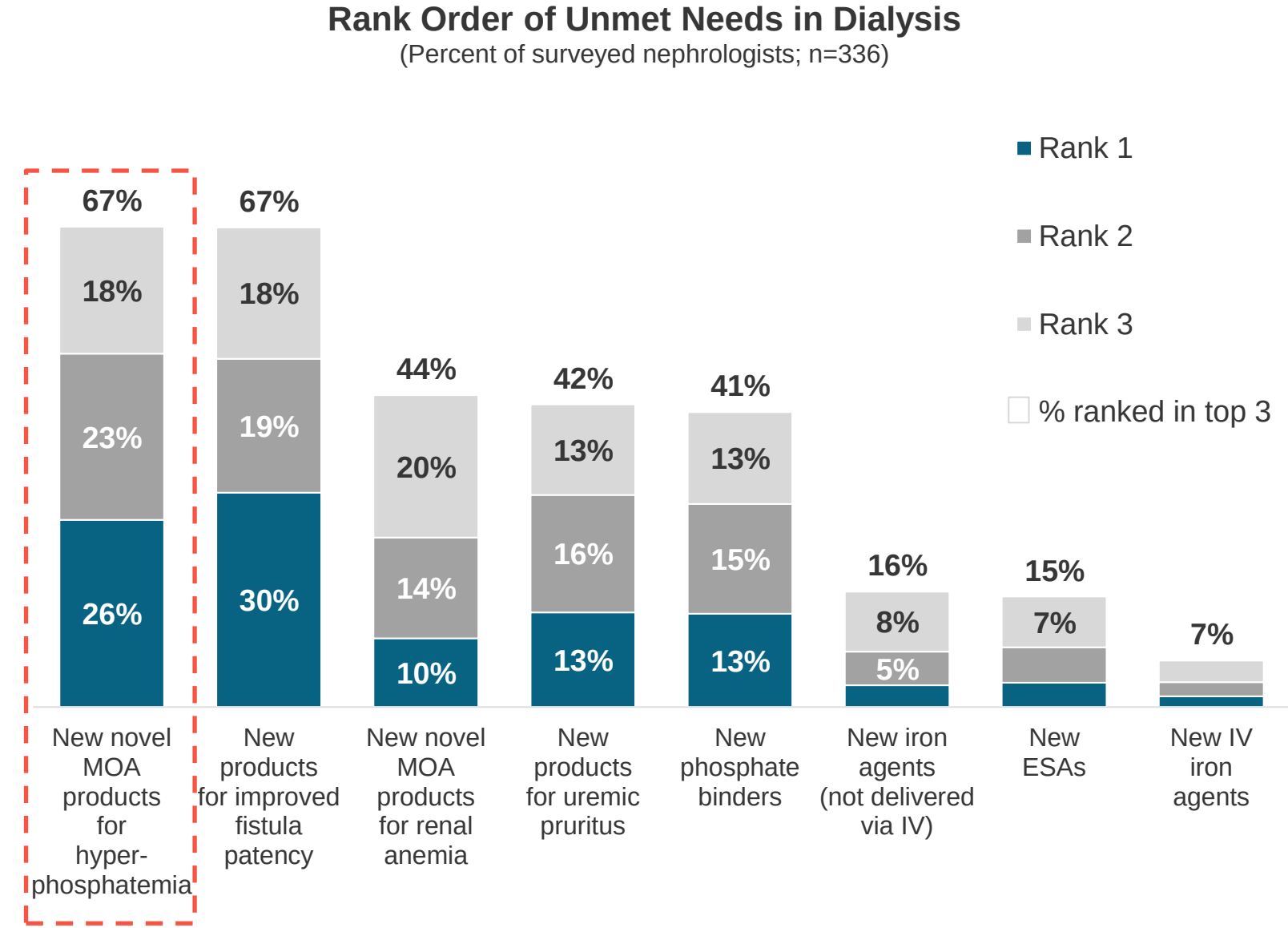
Results

Figure 3

With hyperphosphatemia being so rampant in the dialysis population, the unmet need for new therapeutic agents to address this issue is extremely high.

Notably, nephrologists reported a higher preference for a new mechanism of action to treat hyperphosphatemia over simply a new phosphate binder.

Figure 3



Results

Figure 4 & 5

Patients who have persistent hyperphosphatemia are more likely to be on multiple phosphate binders to attempt control. Despite being consistently high, this group also has the highest pill burden.

In fact, those patients consistently above target phosphorus levels had a 70% higher daily pill burden than those who consistently stayed below 5.5 mg/dL. Those who fluctuate above and within target phosphorus levels have a 30% higher daily pill burden than those consistently below 5.5 mg/dL; however, they take nearly two pills per day fewer than those consistently above target.

Figure 4

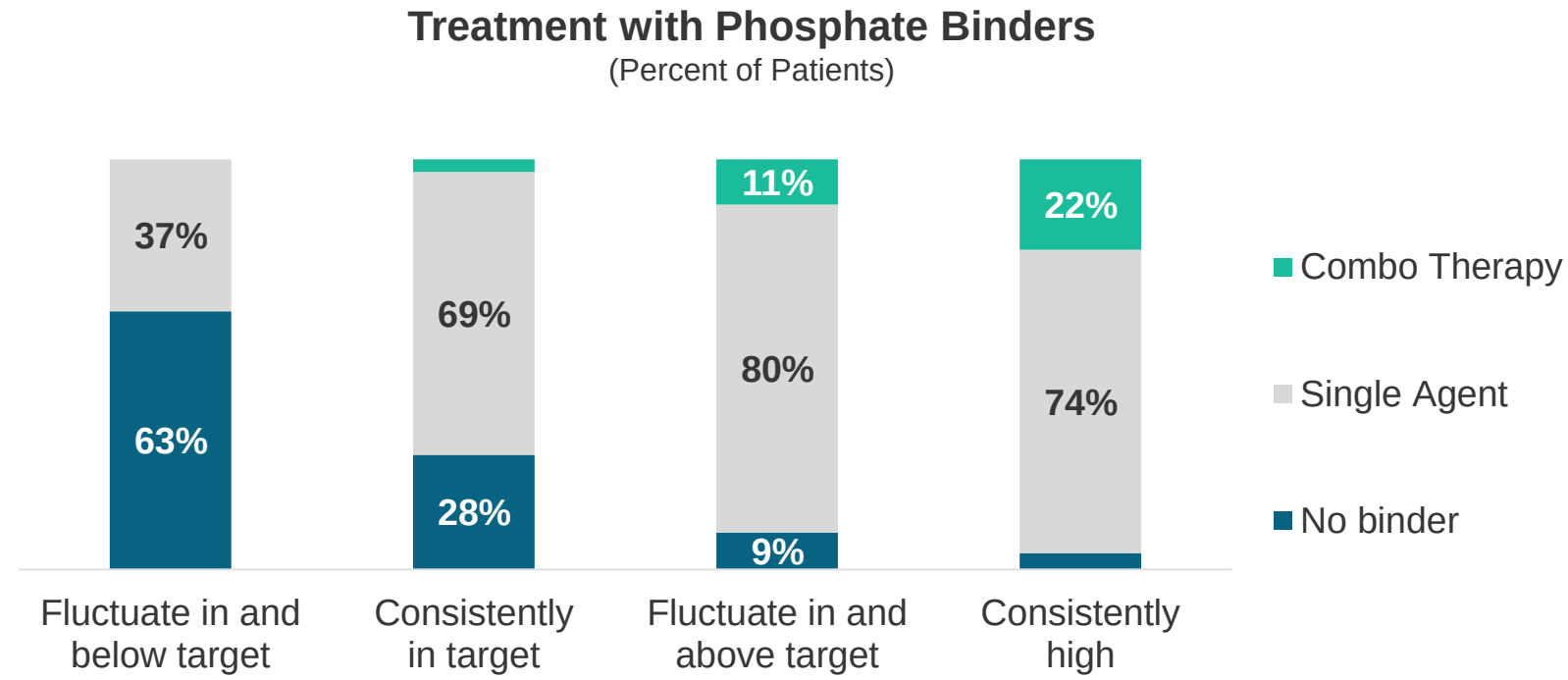
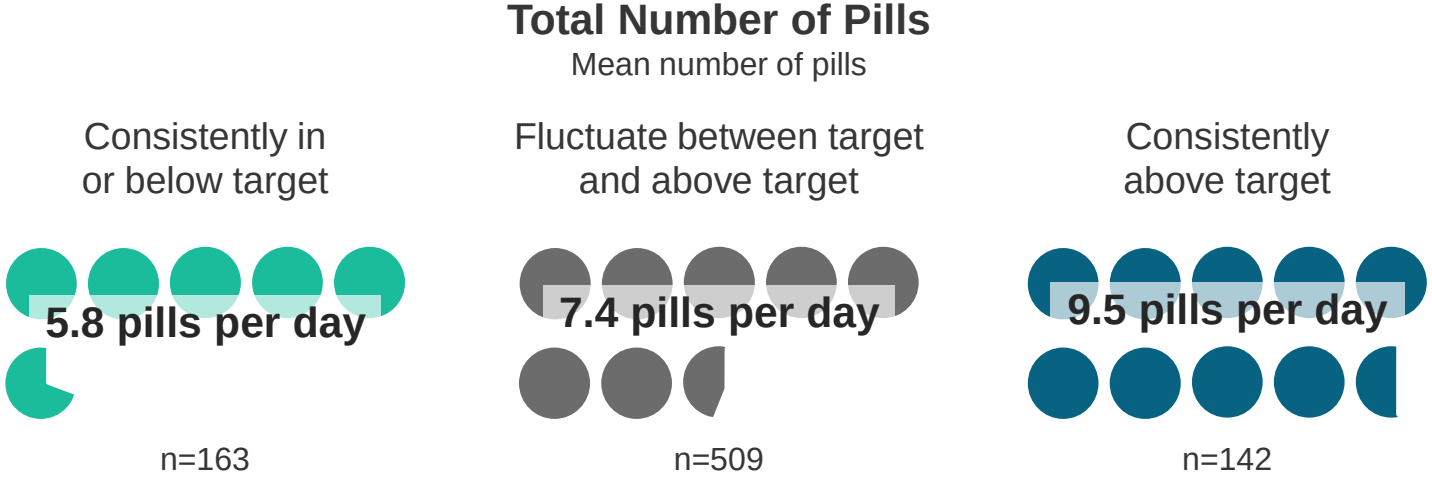


Figure 5



Results

Figure 6, 7a & 7b

While the “consistently” high group may be easier to identify, those who are fluctuating may not be getting the attention needed when it comes to phosphate control.

Interestingly, those patients who fluctuate between being in and out of target phosphorus range carry a heavier co-morbidity profile, placing them at even higher risk of poor outcomes. These patients are substantially more likely to be obese and to have heart failure, type 2 diabetes and coronary artery disease compared to those consistently in or out of range.

Additionally, education and gender may play a role in phosphate control.

Figure 6

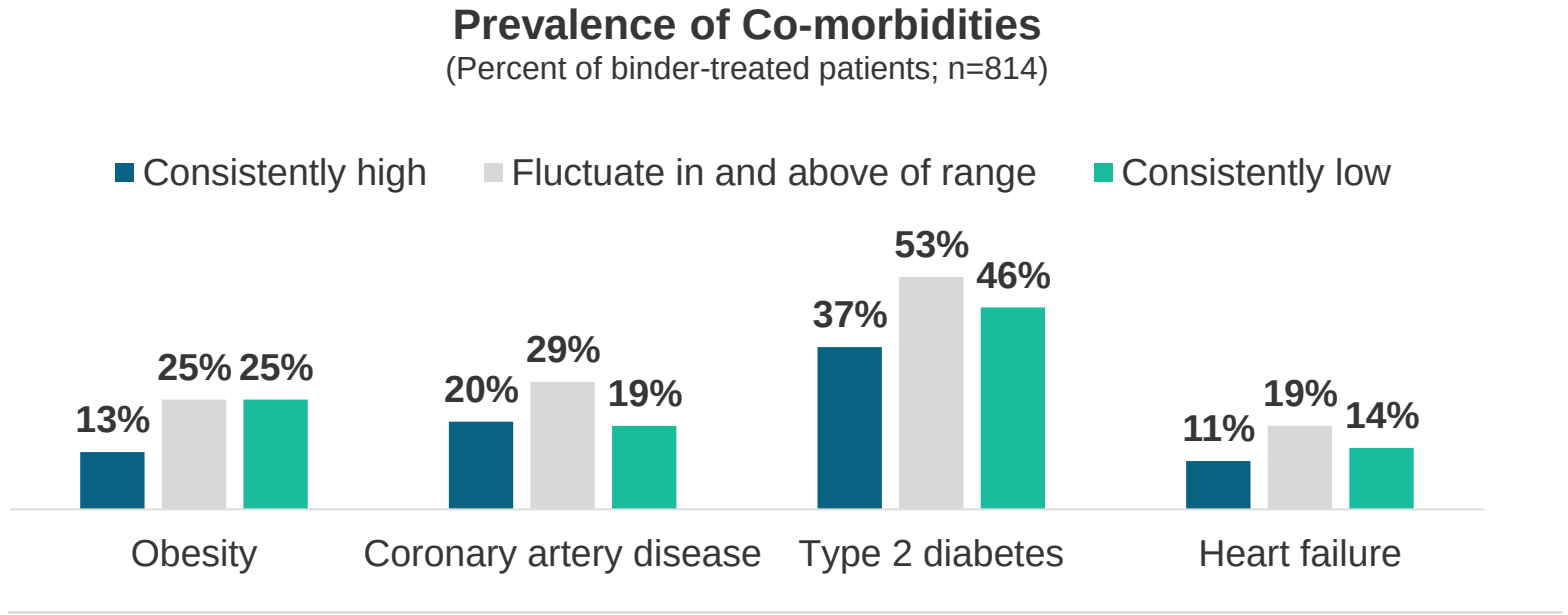


Figure 7a

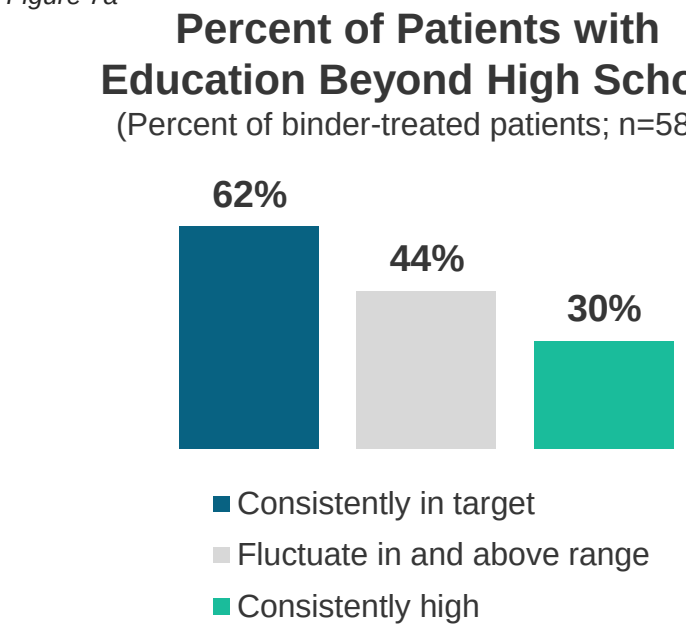
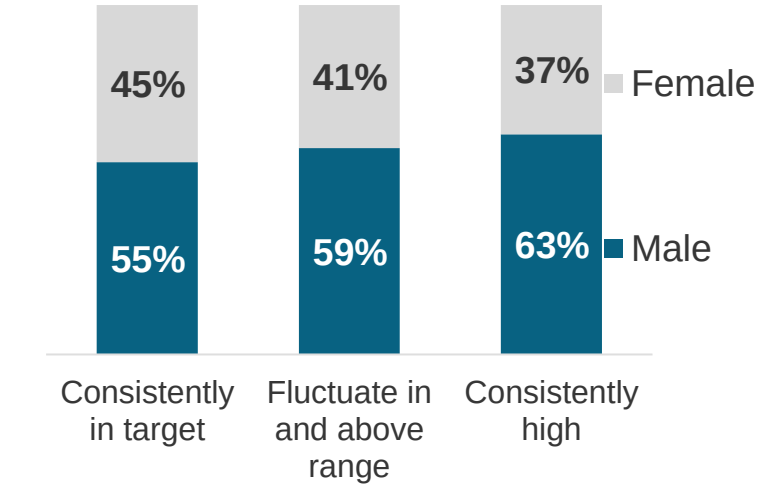


Figure 7b



Conclusions

Not only is hyperphosphatemia rampant at any given time (42%), but when observed over a longer period, close to 80% of phosphate binder treated patients are unable to consistently stay in the current target range (<5.5mg/dL). Patients who tend to fluctuate have a higher comorbidity profile and may be at increased risk of poor outcomes. Increased phosphate binder dosing was not associated with better control and suggests that a new approach to the management of hyperphosphatemia is warranted.