ReDS Point of Care:
Rapid Follow-Up (RFU)

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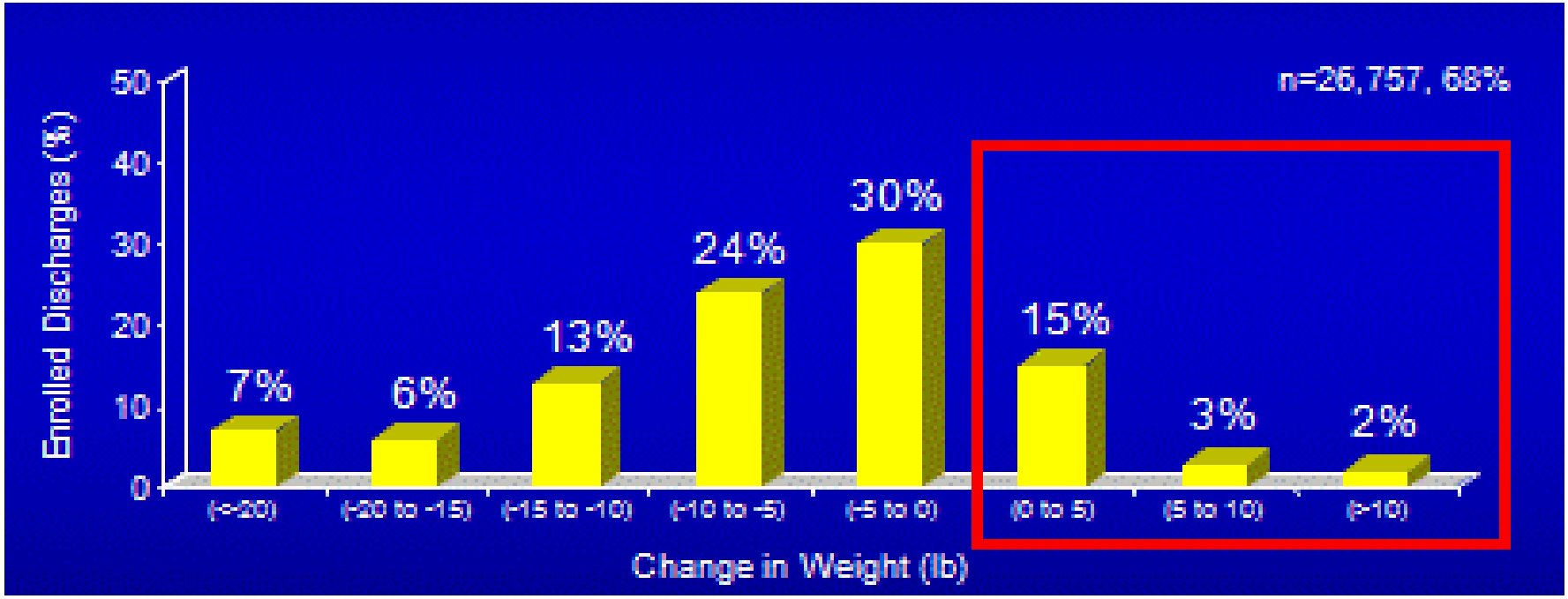
Inadequate Decongestion in ADHF

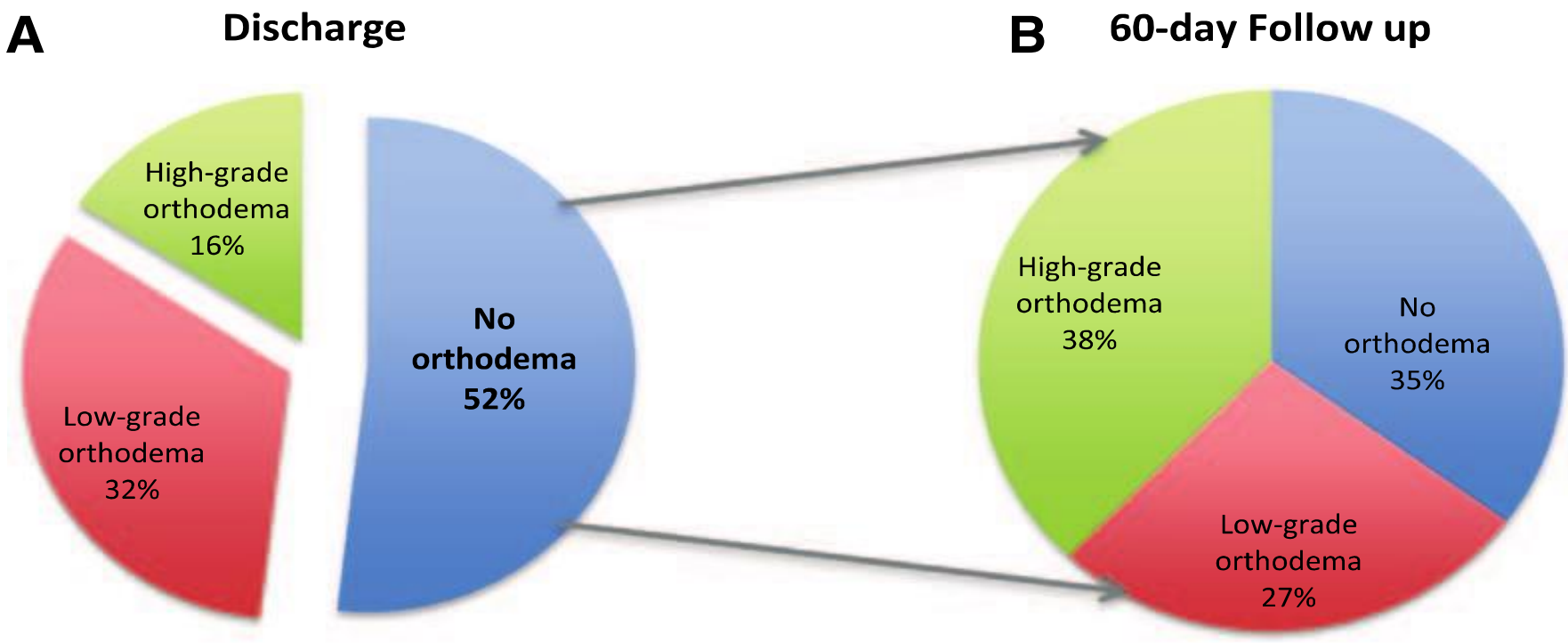


Change in Weight From Admission to Discharge

Note: For the chart, n represents the number of patients who have both baseline and discharge weight, and the percentage is calculated based on the total patients in the corresponding population. Patients without baseline or discharge weight are omitted from the histogram calculations.

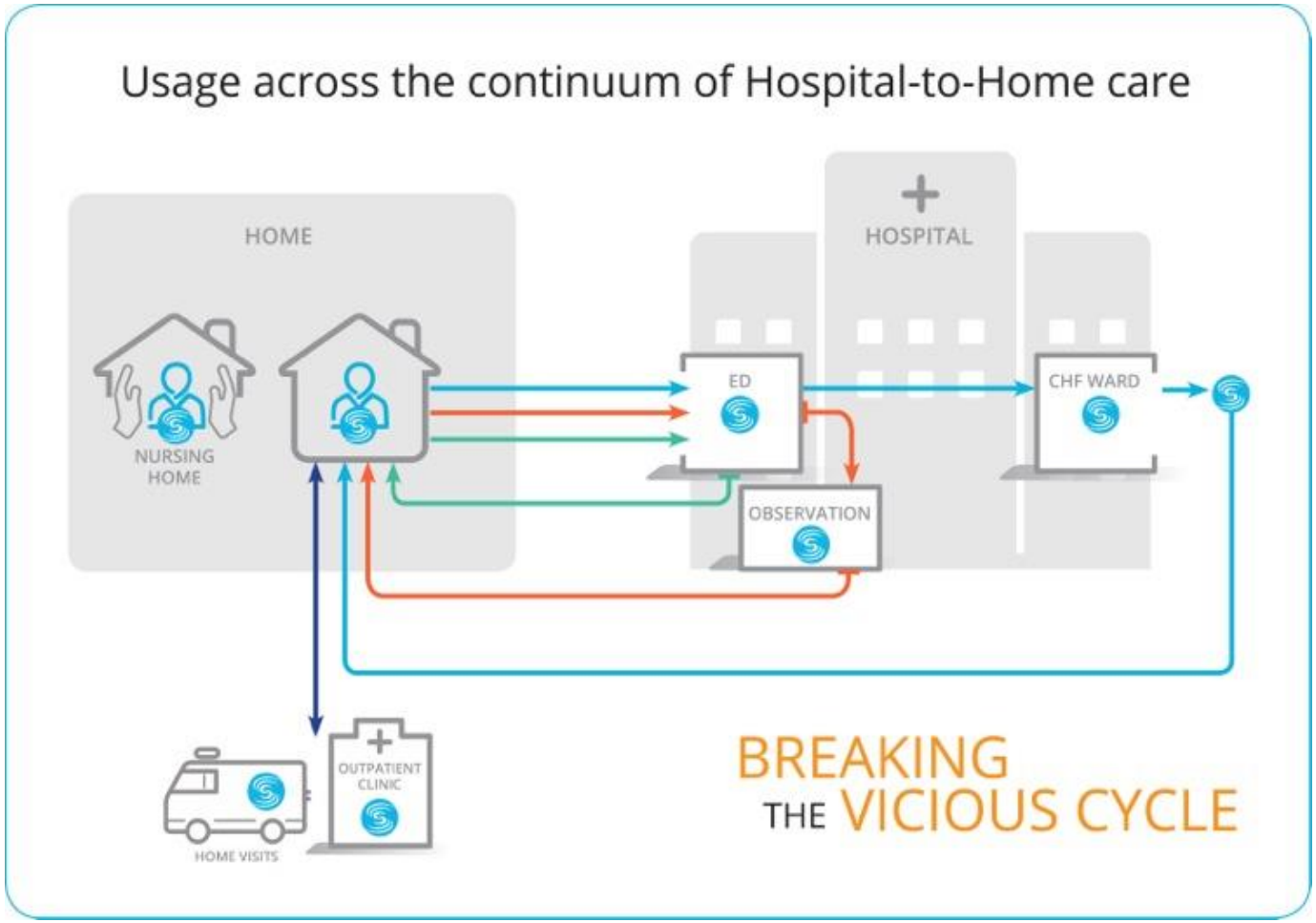
2

Congestion at Discharge and Follow-up



Lala A et al. Circ Heart Fail 2015;8:741-8.

ReDS™ POC Deployment



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Mt. Sinai - Project Implementation
05-June-17

Point of Care Testing Using Remote Dielectric Sensing (ReDS) Reduces Heart Failure Readmission

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ABSTRACT

One strategy to reduce 30-day readmission is to provide outpatient follow up to all heart failure patients in a dedicated clinic within 7 days of their discharge. Our center has created a Rapid Follow Up (RFU) clinic that is run by a nurse practitioner (NP) with indirect physician supervision.

OBJECTIVES

We hypothesized that the use of remote dielectric sensing (ReDS) technology to measure percent lung water volume in the outpatient setting soon after discharge from hospital for heart failure (HF) setting would improve diuretic dosing and further reduce heart failure readmission.

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Optimal Volume Status
If persistent dyspnea, consider **alternative cause** or further work up. **Periodic ReDS** as clinically indicated.

25-35

Low Normal
Consider discontinuing diuretics

21-24

Below Normal
Discontinue Diuretics and provide fluids

Below 21

36-41

Possible Hypervolemic Status
Reconfirm Reading. Correlate Symptoms. **Oral Diuretic** titration and/or adjustment of HF medications. Repeat **ReDS reading weekly** until at goal for > 2 weeks.

Over 41

Hypervolemic Status
Reconfirm reading. Correlate symptoms. IV diuretic therapy or aggressive oral diuretic therapy that includes adjunct high potency thiazide. Repeat ReDS twice weekly until at goal.

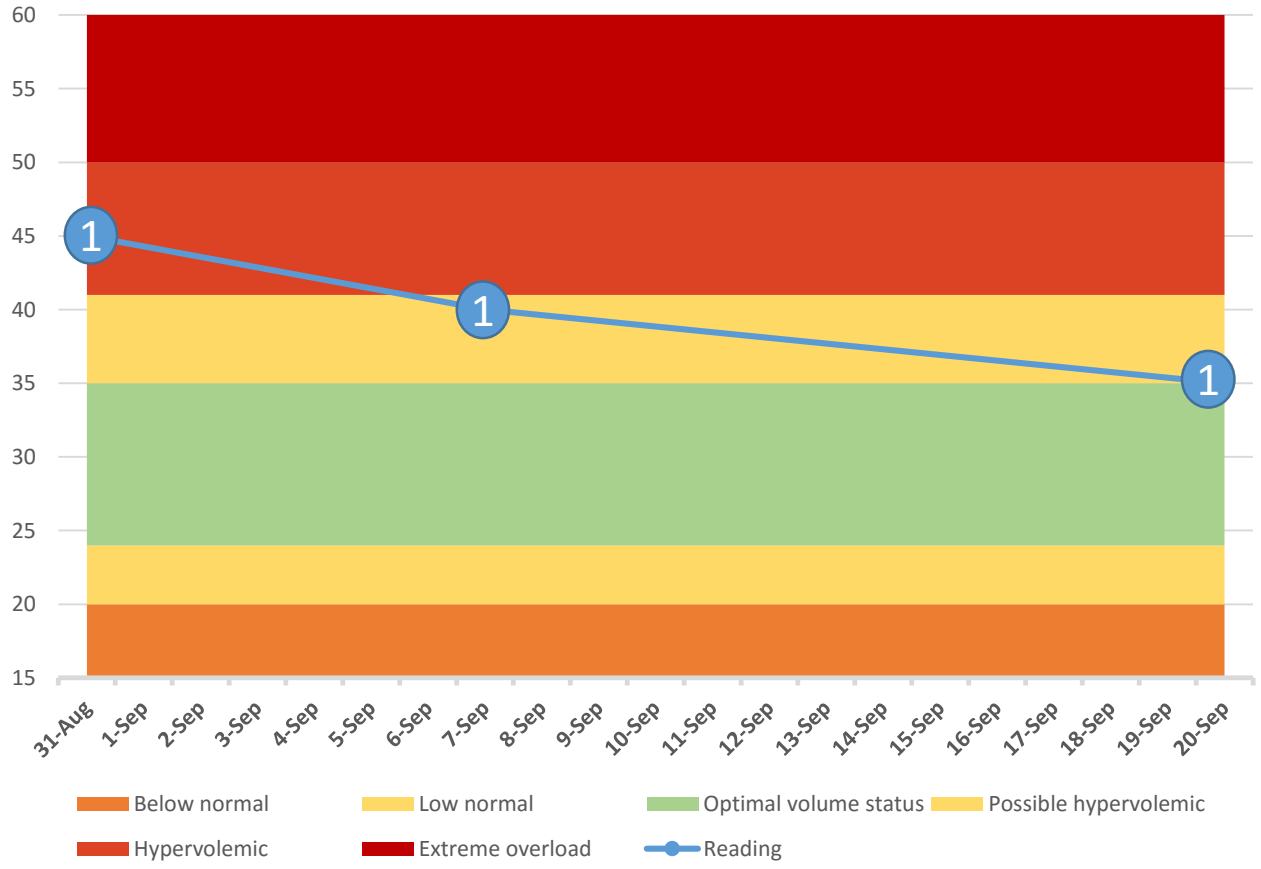
Over 50

Extreme overload
Consider Hospitalization

Diuretics were adjusted based upon these readings:

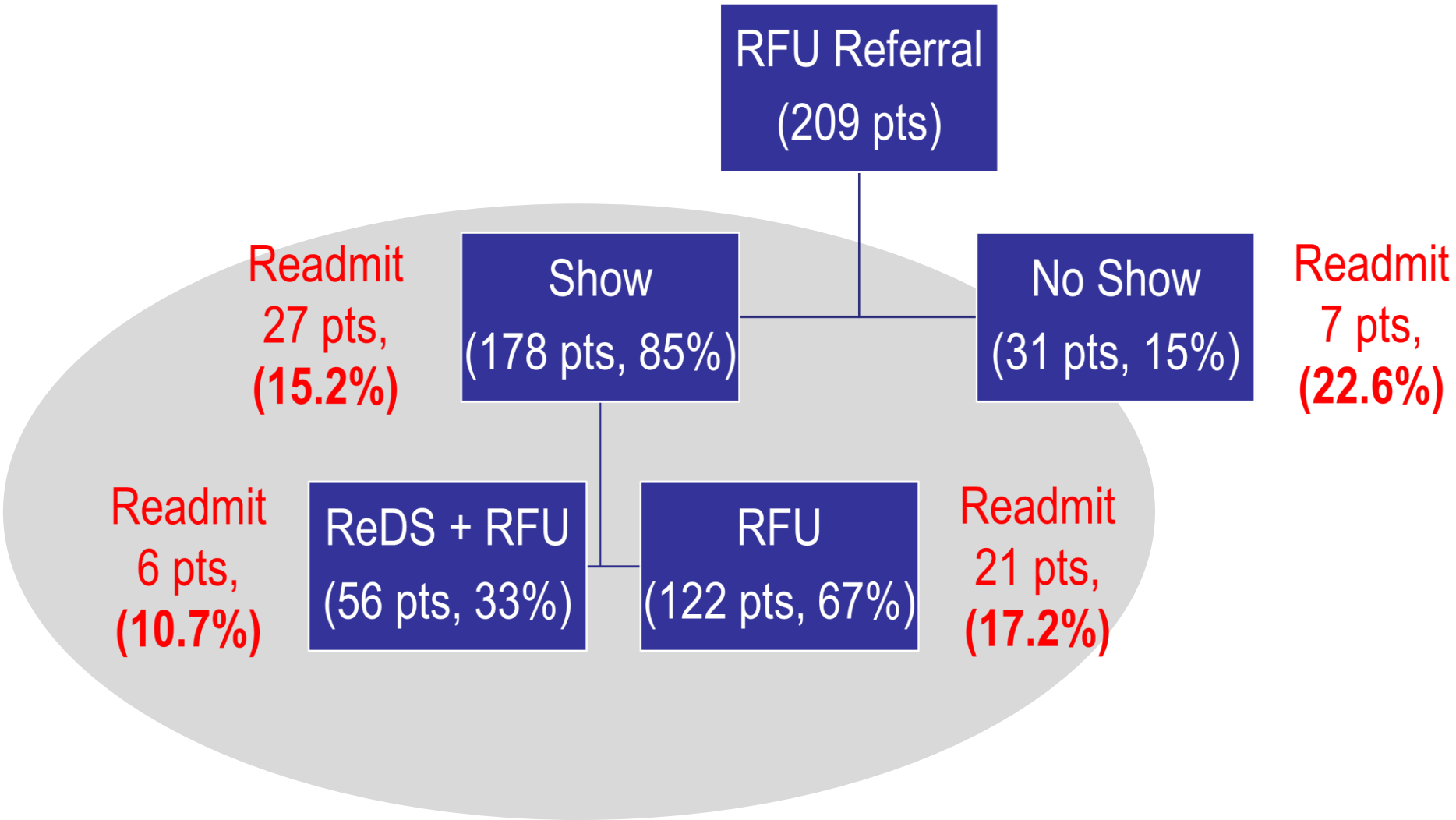
< 20%	Hold diuretics
21-35%	Maintain current diuretic dosing optimize guideline directed medical therapy (GDMT)
36-45%	Increase diuretics and return to RFU in one week
> 46%	Consider outpatient IV loop diuretic infusion or hospitalization.

Patient Example



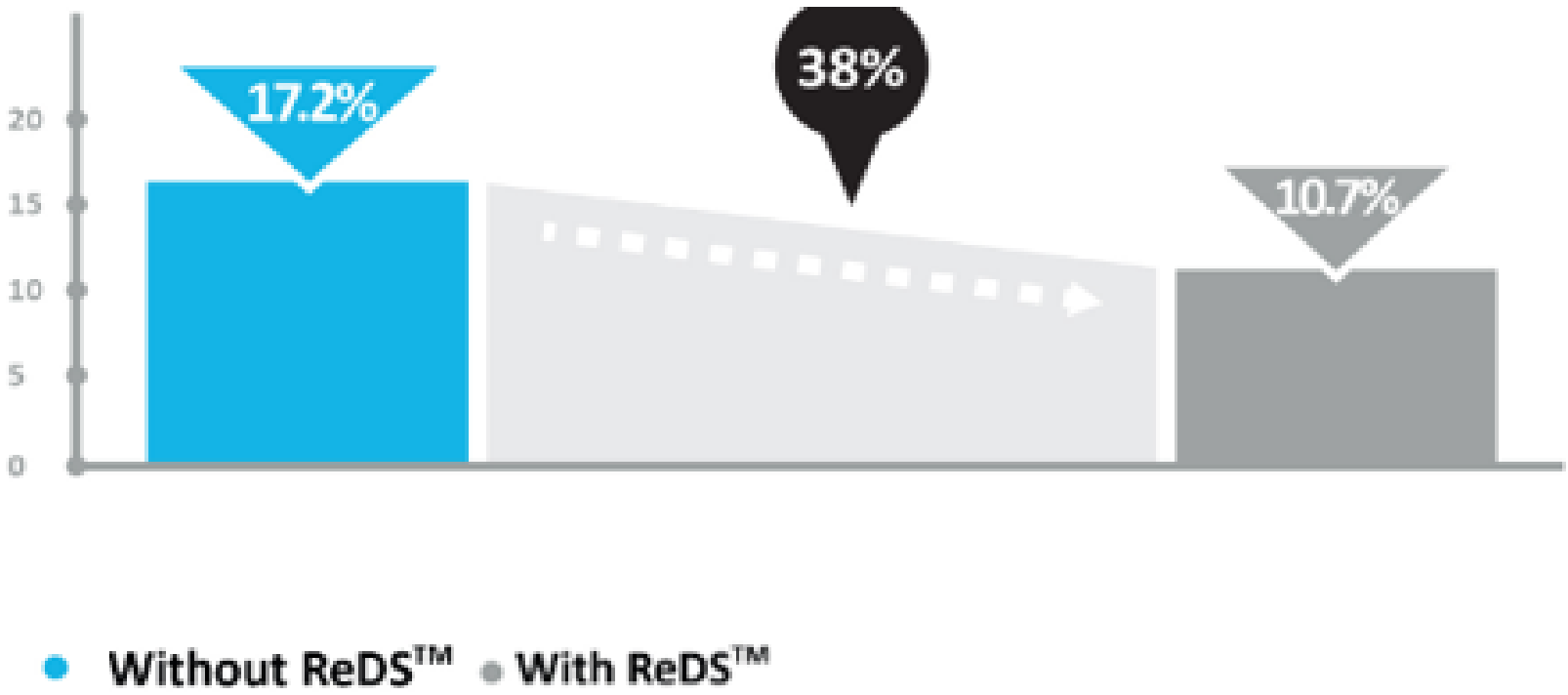
- 45 yo man DCM, LV thrombus, CKD, LVEF 15%
- 6 Hospitalizations in 1-year
- 1st – Furosemide 80 mg bid
- 2nd – Furosemide 160 mg bid
- 3rd - ?

Outcomes


RFU Referral
(209 pts)
Show
(178 pts, 85%)
No Show
(31 pts, 15%)
Readmit
27 pts,
(15.2%)
Readmit
7 pts,
(22.6%)
ReDS + RFU
(56 pts, 33%)
RFU
(122 pts, 67%)
Readmit
6 pts,
(10.7%)
Readmit
21 pts,
(17.2%)

Outcomes

30 days all-cause readmission reduction



Early Observations

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- Experience
  - Easy to deploy
  - About 3 minutes to size, fit and record
  - Patients like the immediate feedback
  - Not disruptive to workflow

- Reasons for Not Using ReDS™
  - BMI (too high >> too low)
  - Hickman or PermCath
  - LifeVest
  - Patient refusal
  - Study visit

Conclusions

- These results show that:
  - Early follow up in an NP clinic is associated with lower rates of 30-day all-cause re-hospitalization.
  - The use of the ReDS system at the clinic demonstrated **~40% lower all-cause re-hospitalization rates**.
- Further experience with POC testing could provide insights into the frequency of congestion early after heart failure discharge, reductions in hospital readmission and the optimization of medical therapy.