

ReInforcedCare™

Thirty- and Seven-Day Readmission and Hospitals' Improvements with ReInforced Care

Introduction

The establishment of the US Hospital Readmissions Reduction Program has sparked a remarkable body of research. We have followed its progress, noting the pioneering work of [Jencks, Williams, and Coleman](#); the ongoing innovations of [Krumholz and colleagues](#) at Yale that enable the CMS¹ system to be implemented; the fairness issues brought up by [Joynt and Jha](#) and [Sahni, Cutler, and Kocher](#); the ingenious work of [Nagasako, Reidhead, Waterman, and Dunagan](#) highlighting socioeconomic factors not captured by the current system; and the meta-analysis of [van Walraven, Jennings, and Forster](#), which determined that fewer than one in four 30-day readmissions are even preventable. (We have also tried to add to this body of research with our own [studies and commentary](#).)

Now, four researchers from the University of California at Davis have published a landmark paper that should change the way CMS and hospitals themselves evaluate readmission performance.

Why Seven Days?

Other recent articles^{2,3} have suggested the value of measuring readmission performance using a post-discharge interval of seven days rather than thirty. Now David L. Chin, Heejung Bang, Raj N. Manickam, and Patrick S. Romano have demonstrated, using solid statistical methods, that an interval of seven days makes a fairer and more accurate indicator of hospital performance. Their article [Rethinking thirty-day hospital readmissions: Shorter intervals might be better indicators of quality of care](#) draws on a national sample of fifteen million hospitalizations involving three common conditions, all tracked by CMS to assign readmission penalties: heart attack, heart failure, and pneumonia.

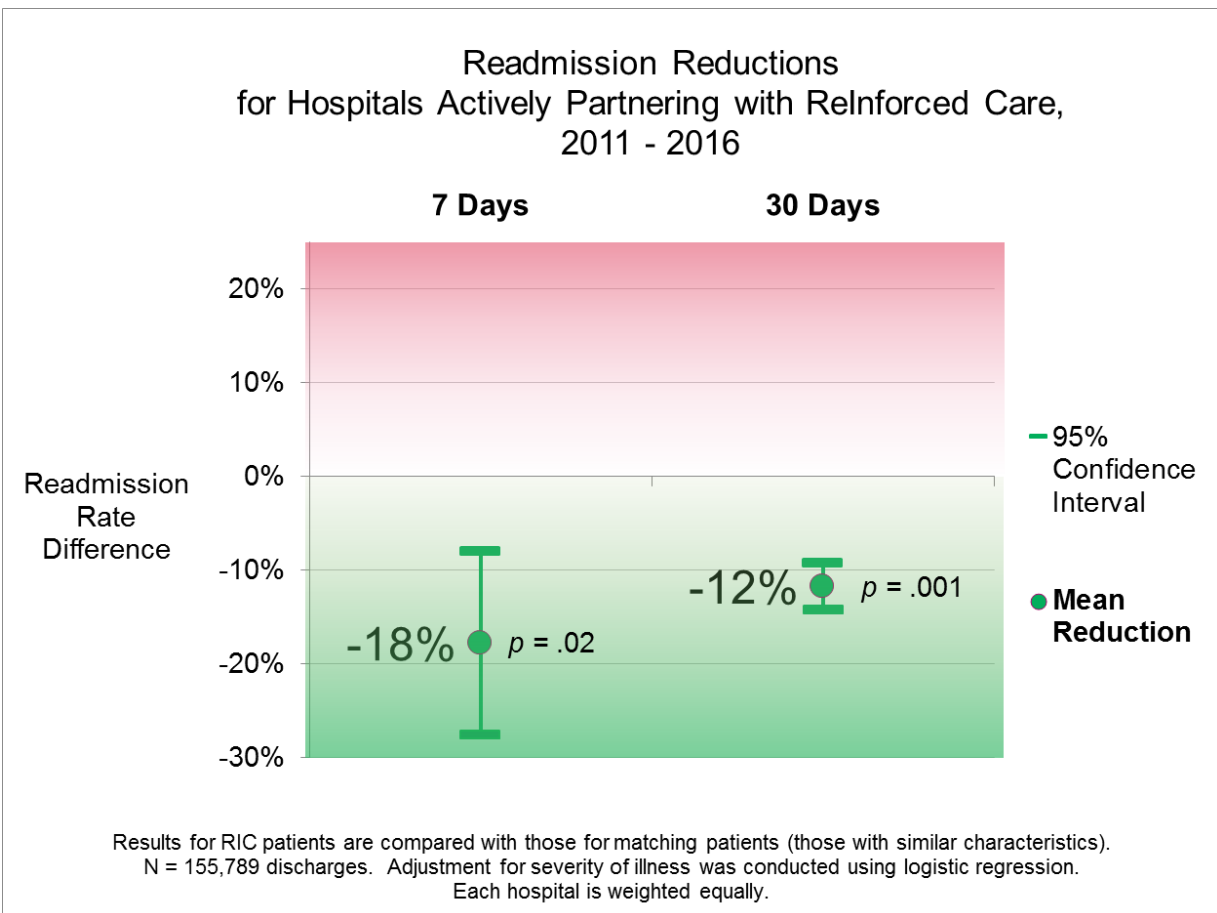
The article's modest title notwithstanding, it establishes a key difference. Through day seven, hospitals can be legitimately distinguished as having better or poorer performance. Beyond day seven, any differences that occur are less effective as indicators of hospital performance and are instead more consistent with causes beyond a hospital's control, such as socioeconomic factors or degree of family support. In short, hospitals can greatly affect seven-day readmission rates but can have less effect on results from days eight to thirty.

¹ The US Dept. of Health and Human Services' Centers for Medicare and Medicaid Services.

Implications for ReInforced Care's Hospital Partners

These findings have been borne out by readmission reductions achieved in conjunction with our post-discharge outreach program. Critical to program success is that hospital care managers, pharmacists, and social workers respond promptly to the Clinician Portal alerts, or escalations, that Reinforced Care transmits electronically when our telephone outreach has identified an unmet patient need. We have tracked performance separately for those hospitals actively collaborating in this way. The dividing line is easy to see: the response teams at fully collaborating hospitals attend to at least two thirds of such needs within one day. For these hospitals, we have long seen statistically significant readmission improvements even at the 30-day interval: the average reduction has been 12%, or 1.6 percentage points ($p = .001$).

But the greatest gains appear within seven days: an average reduction of 18%, again statistically significant with $p = .02$. Average results as well as confidence intervals under both time-frames are shown in the chart below.



Conclusion

While a program such as ours carries with it many benefits – for patient well-being and satisfaction, for the efficiency of a hospital’s care management staff, for better understanding of post-discharge experiences and behaviors, and to inform the work of a Quality team – 30-day readmission reductions will take precedence as long as hospitals are incentivized for them. We are proud of our success throughout this decade in helping hospitals improve care and their bottom line in this way. Now, prompted by this rigorous study by Chin and colleagues, we have another reason to be proud: helping our partners achieve an even larger drop in 7-day readmissions.

Additional References

² Futoma J, Morris J, Lucas J. A comparison of models for predicting early hospital readmissions. *Journal of Biomedical Informatics* 2015;56:229-238.

³ Graham KL, Wilker EH, Howell MD, Davis RB, Marcantonio ER. Differences between early and late readmissions among patients: A cohort study. *Ann Intern Med.* 2015;162(11):741-749.

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