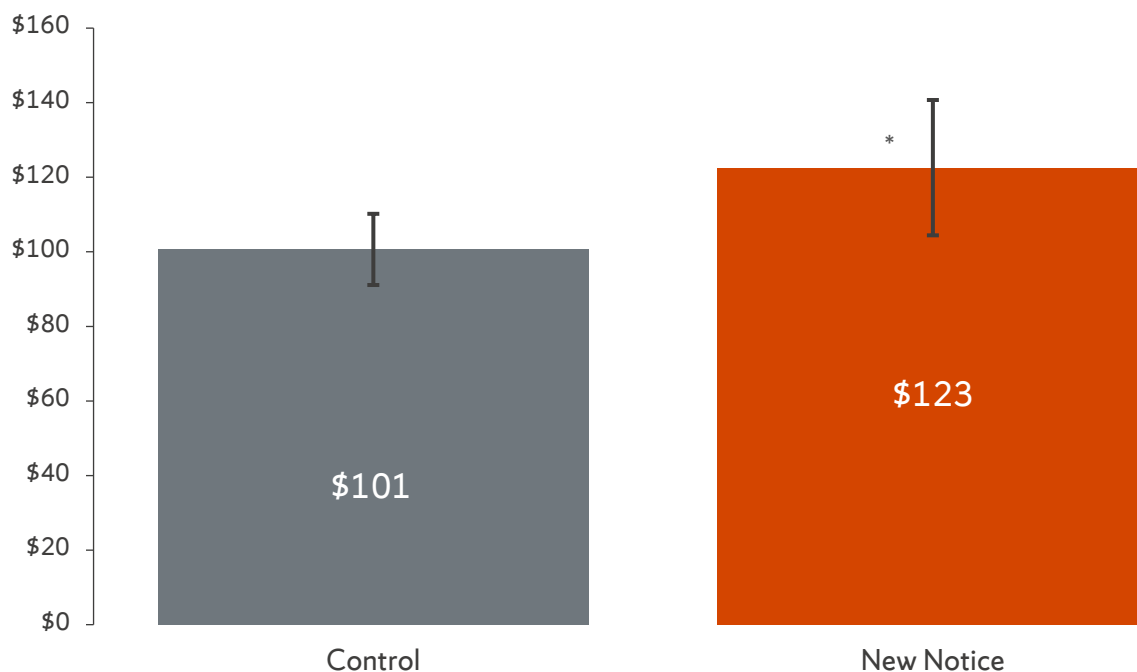# Improving Water Bill Payments: City of Buffalo

We tested whether redesigned notices for overdue water bills would improve payments. The redesigned notices leveraged behavioral science: they were simplified, salient, and encouraged prompt payments. **In total, accounts that received the new notices paid over $255,000 more than the regular notice group.** We recommend rolling out the new notices and continuing to experiment with different envelopes, letters, and electronic notifications to nudge residents to pay the balance on time.

Disconnect Notices

Each day from September 2018-April 2019, accounts were randomized into business-as-usual or new disconnect notices. For disconnect notices (Figure 1; n = 6,688), accounts who received the new disconnect notice paid 22% or $22 more on average than control accounts (and were 12% more likely to make a payment of any kind).[1] In total, the new notice group paid $74,000 more than the control notice group.

Figure 1: Average Amount Paid - Disconnect Notices

n = 6,688 | *** p<.001, ** p<.01, * p<.05

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For subset of accounts, we sent the disconnect notice in the treatment group to the billing rather than service address (when service and billing address were not the same). Accounts that received the new notice to the billing address (Figure 2; n = 2,872), as opposed to the usual notice to the service address, paid 35% or $40 more on average (p = .054). This evidence suggests there is additional value in sending disconnect notices to the billing rather than service address alone.[2] The new notice group paid over $58,000 more than the control notice group.

Figure 2: Average Amount Paid - Disconnect Notices - Billing Address
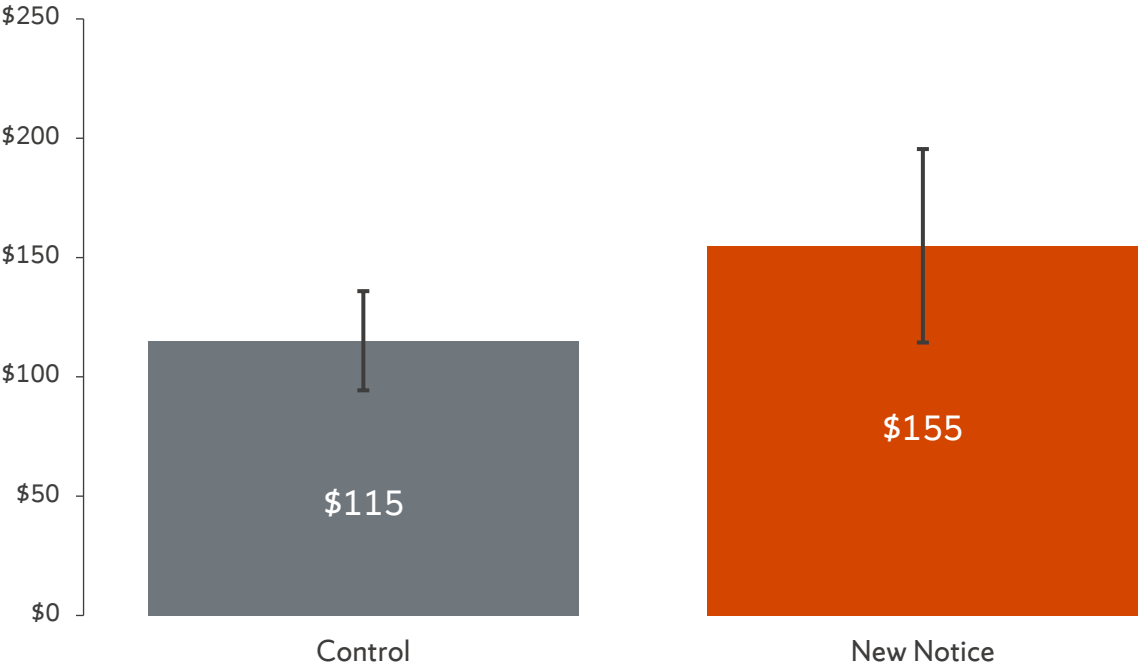
n = 2,872 | *** p<.001, ** p<.01, * p<.05

Late Notices

Each day from September 2018-April 2019, accounts were randomized into business-as-usual or new late notices. For initial late notices (Figure 3; n = 12,327 accounts), accounts who received the new notices paid 15% or $20 more on average than accounts who received the control notice (and were 5% more likely to make a payment of any kind).[3] The new notice group paid at least $123,000 more than the control notice group.

Figure 3: Average Amount Paid - Late "Red" Notices
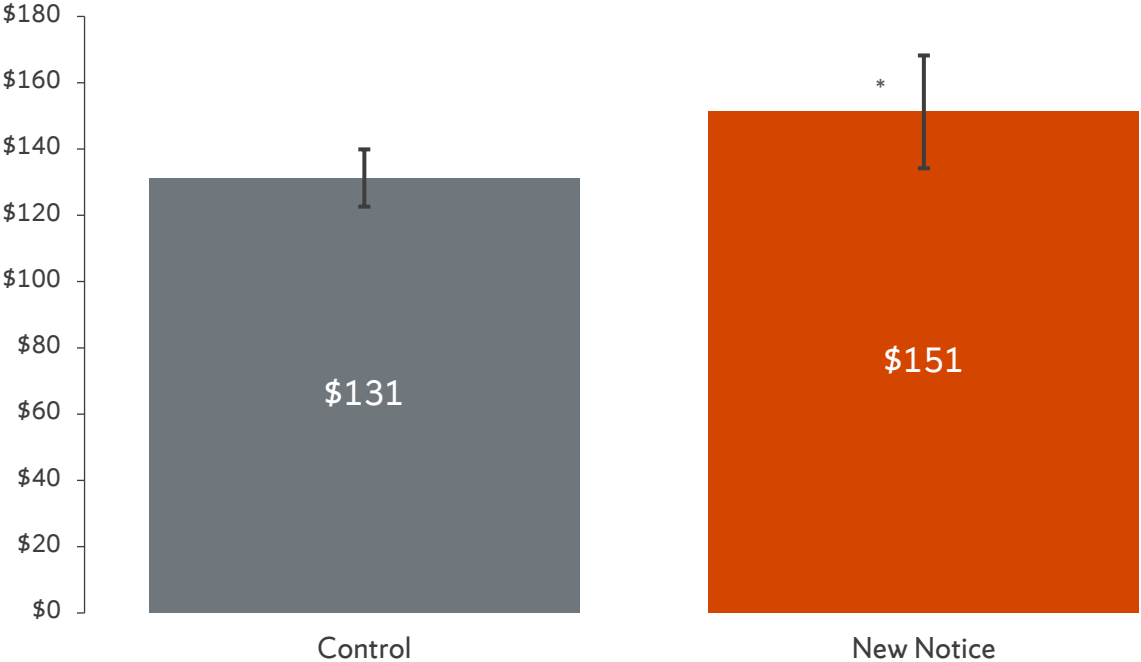
n = 12,327 | *** p<.001, ** p<.01, * p<.05

We had a chance to implement a second red notice in February 2019. When we look at the performance of that notice alone (Figure 4; n = 2,651), we find that it outperforms the $20 average increase across the new notices group by $10 (+$30 or +21% on average). The sample is not large enough yet to reach statistical significance, but the cumulative evidence (including that these accounts are 7% more likely to make a payment of any kind) suggest that the second version of the new notice is improving payments more than the first version of the new notice.

Figure 4: Average Amount Paid - Late Notice Version 2

$250 —

$200 —

$150 —

$100 —

$50 —

$0 —

$140

$170

Control

New Notice
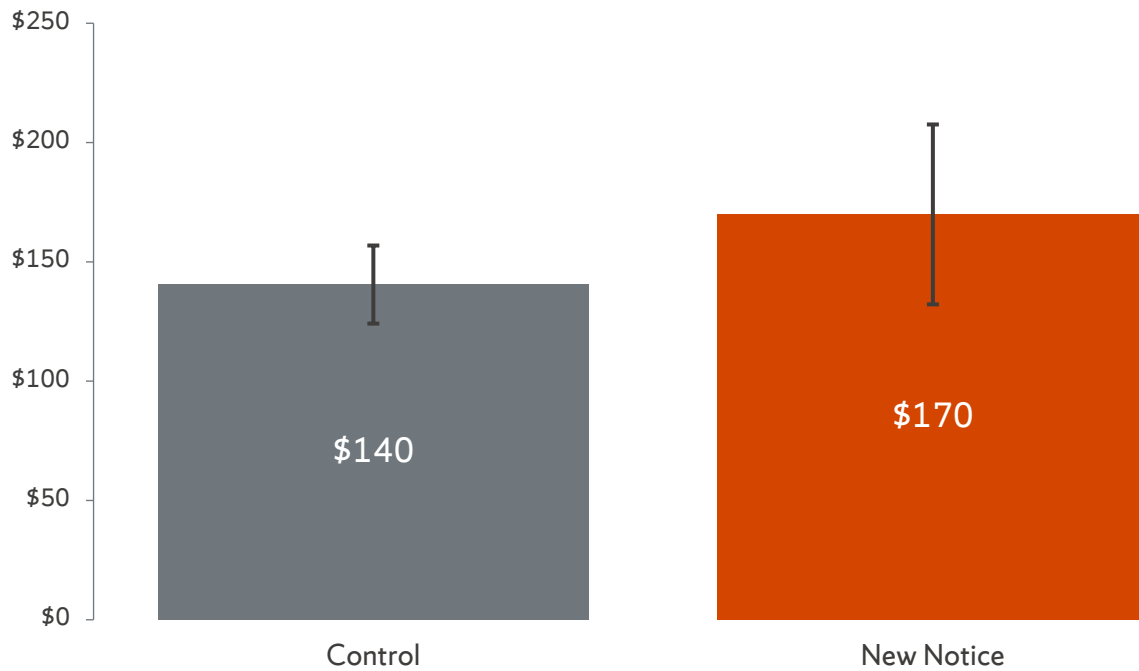
n = 2,651 | *** p<.001, ** p<.01, * p<.05

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[1] This analysis is on the first instance for accounts.
[2] To address notification concerns, a simpler notice could be sent to the service address about a potential shut off.
[3] This analysis is on the first instance for accounts.