

# Why Not Cash? Lessons from US Disaster Projects

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**GiveDirectly**

## Executive summary

After a major disaster like a hurricane, everything needs fixing. Houses are unlivable. Jobs are unavailable or unreachable. Simple tasks like putting food on the table or traveling across town become major challenges. And each person's circumstances, needs, and opportunities are different. Facing such a bewildering array of problems, we face the hard choice: where to begin?

Historically, that choice has been made by donors and aid agencies. They decide whether to ship in bottles of water, sheets of drywall, or any number of other goods and services that victims of a disaster may need. They could instead simply send cash. Cash transfers let the recipients decide what goals to prioritize and how to get the job done. Cash has a strong track record in evidence around the world, and verbal support from world leaders. Yet it still makes up a small share of disaster response spending.

Following the 2017 hurricanes in Texas and Puerto Rico, GiveDirectly and the Laura and John Arnold Foundation worked together to deliver nearly \$10M in cash transfers to hard-hit, low-income families. In addition to directly supporting these families as they rebuilt their lives, we aimed to test a number of hypotheses that would inform our longer-term thinking about the strategy and capacity-building needed to bring fundamental change to the sector.

This note describes the goals, methods, results, and lessons of the project. In summary:

- 1. An efficient cash-based response was feasible.** We delivered 92% and 94% of project funds directly into the hands of recipients in Texas and Puerto Rico, respectively; few (4%) recipients experienced issues using their funds, and most (93%) were able to purchase the majority of the items they wanted. Detected fraud rates were low (<1%) and in line with our experiences elsewhere.
- 2. Recipients greatly valued the flexibility that cash afforded them.** Spending patterns varied widely, as illustrated by the fact that, had we provided the most commonly observed purchase bundle in Puerto Rico, we would have matched the preferences of only 6% of recipients. A majority of recipients (84%) preferred cash to in-kind assistance because of its relative flexibility and because they intrinsically valued the trust and respect it embodies.
- 3. The diversity of needs translated to a wide range of reported benefits.** We saw the strongest evidence of impact on debt avoidance, stress reduction, and recipients' ability to improve their living conditions. While most households spent their money on a mix of short-term consumption and investment in long-term recovery, nearly 90% of recipients said they expected to still be benefiting from the cash in a year's time.
- 4. Important questions remain about cash design and impact in a disaster context.** Our future project work will be guided by what we view as key outstanding questions: Would cash perform similarly in the immediate aftermath of a disaster as it did when delivered 8-9 weeks later (as was the case here)? What kind of impact do varying transfer sizes have? Do cash programs, at scale, generate economic multipliers?

## Context and motivation

The challenges of traditional humanitarian responses are well-documented. In crisis after crisis, a pattern unfolds in the months after a disaster: money flows from donors, relief organizations dictate which forms of assistance are most needed, and expensive supply chains are constructed for everything from meal to diaper delivery. At the end of this cycle, donors and recipients may reasonably find themselves struggling to trace where resources have gone, let alone what impact they have generated. Even when goods reach intended beneficiaries, they are often not what is needed. For example, a study of Syrian refugees showed that the majority (68%) reported selling a portion of their food aid.<sup>1</sup>

Direct cash transfers are gaining momentum as an alternative to the status quo. Deemed “crazy” in the early days of implementation, cash has now become a staple of social programming and is being supported by former Secretary General of the UN Ban Ki-moon, head of the World Bank Jim Kim, and other leaders. That said, action lags behind rhetoric, with the latest statistics showing at most 10% of humanitarian resources being spent on cash transfers.<sup>2</sup> Moreover, the current literature is under-developed in two important areas: (1) the recipient experience and operational challenges associated with cash programs in domestic disaster contexts, and (2) the preferences of recipients who have been impacted by disasters (globally) when it comes to cash versus other forms of aid.

Against this backdrop, we conceived of an initiative to respond to the 2017 hurricanes in Texas and Puerto Rico using cash transfers. Broadly speaking, this initiative had two main objectives.

- First, we sought to directly benefit the people affected, enabling them to better cope with the initial shock of the hurricanes and then to begin rebuilding their lives. The hurricanes caused widespread devastation and disruption to the lives of hundreds of thousands of people, creating a real opportunity to quickly improve human well-being.
- Second, we sought to address some of the current gaps in the disaster relief literature by testing a number of hypotheses related to recipients’ preferences and cash implementation. In particular, we sought to answer the following questions:
  - A. How important is the flexibility that cash enables in a post-disaster context?** One of the primary benefits of giving people cash, as opposed to specific goods or services, is that it gives individuals the flexibility to buy what they most need. We sought to understand the degree of variation in spending across recipients, and also the extent to which this translated to preferences for cash.
  - B. To what degree are in-kind organizations able to forecast what communities need?** If everyone needs the same things, and aid agencies can correctly identify those needs, the flexibility and choice afforded by cash becomes less important. For individuals in our sample who did receive in-kind aid, we sought to understand the degree to which in-kind options matched their needs.
  - C. How quickly and efficiently can GiveDirectly deliver transfers in a post-disaster context?** GiveDirectly had 7+ years of experience delivering cash transfers across a range of extremely challenging environments in East Africa, from remote mountainous regions of northern Uganda to politically sensitive communities in Kenya. It was unclear how readily the practices and skills

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<sup>1</sup><https://reliefweb.int/report/iraq/multi-sector-needs-assessment-syrian-refugees-camps-kurdistan-region-iraq-assessment>

<sup>2</sup> <http://www.cashlearning.org/downloads/calp-sowc-report-exs-web.pdf>

developed in these contexts would apply to the new challenges of disaster response in more developed countries. We therefore sought to quantify the speed and efficiency with which we could respond and to identify opportunities for further improvement in the future.

- D. Are there new forms of fraud or leakage to manage in these settings?** At its core, much of the operational work GiveDirectly does is anti-fraud work: ensuring that only eligible people are enrolled and that they receive their transfers safely and securely. We planned to test whether fraud rates were higher in Houston or Puerto Rico than we have historically observed and to identify any novel risks.
- E. Can local markets respond to an influx of cash and provide the things beneficiaries want?** Major disasters are potentially disruptive to the functioning of markets as well as to the well-being and livelihoods of individual families. Traditional humanitarian aid often involves major logistical efforts to ship in specific supplies for distribution; this approach has many known issues, but also raises the question of whether private sector supply chains in Houston and Puerto Rico would be able to respond effectively to the demand created by our transfers.
- F. How do communities perceive targeted assistance?** While aid in any context risks being perceived as unfairly creating “winners” and “losers,” the stakes in disaster settings are arguably higher. Communities are often enduring collective trauma, and additionally, subjected to opaque and onerous processes for seeking assistance. We sought to understand the trade-offs associated with narrowly targeting in the interest of identifying particularly vulnerable recipients versus taking a more inclusive approach.

We describe lessons related to each of these questions below.

## Program design and execution

- **Targeting.** We aimed to select beneficiaries who were poor to begin with, significantly affected by the hurricanes, and able to receive payments efficiently. We first selected communities using administrative data on poverty rates and various sources of information on damage rates (e.g. aerial imagery). Within chosen communities, we either enrolled everyone or used home visits to assess damage visually and, in a minority of cases, conduct proxy means tests for poverty (see Appendix for more details).
- **Transfer sizing.** We aimed to deliver transfers large enough to make a meaningful difference either for subsistence during the initial recovery period or for longer-term rebuilding efforts. We triangulated transfer sizes by examining the costs of typical baskets of goods recipients might need (e.g., rent, food, and gas) and also by setting transfers at multiples of what other organizations were offering (e.g., the Red Cross was targeting immediate needs with \$400 in Texas). We ultimately landed on \$1,500 per household.
- **Staffing.** We rapidly hired teams of roughly 20-30 per location, including field officers to screen and enroll recipients and field managers to supervise them; we hired bilingual individuals in a number of roles to accommodate language preferences. Our most effective sourcing methods were to snowball search within the network of an initial high-quality hire and to access the networks of local community organizations.
- **Payment modality.** We sought methods of payment that were secure, cheap, and widely available. We selected prepaid debit/gift cards, as significant proportions of recipients in both locations (10% in Texas, 30% in Puerto Rico) did not have bank accounts. We suspected more recipients in Puerto Rico would need to purchase items in cash, and as such, prioritized cards that could be liquidated at ATMs (Banco Popular-issued).
- **Data management.** We aimed to collect enrollment data digitally from the point of origin. We used a technology stack including the Taroworks app on mobile devices and Salesforce on the back end.
- **Anti-fraud systems.** We aimed to keep fraud rates low, comparable to those we hit in East Africa, while also running a much faster enrollment process. We used a mix of prevention, detection, and auditing techniques to manage fraud. These included, for example, defined staff roles, controls on the number of cards that could be ordered per batch, spot checks of data captured in the field, remote GPS coordinate checks, and independent follow-up calls with recipients themselves, among others.
- **Customer service systems.** We sought to provide high-quality customer service to recipients, recognizing that these communities had suffered meaningful trauma that chaotic or unreliable service delivery could compound. We invested in clear, visible communication of program parameters via community events, meetings with local leaders, and flyering. We solved for rapid delivery of cash after our first point of contact with recipients (7 days, on average) and low wait times at payment events. Finally, we prioritized high-quality follow-up via individualized outreach after cards were distributed.
- **Monitoring and evaluation.** In addition to our usual operational data collection, we collected data to answer the questions posed above. We used three approaches: surveys (administered to a total of 76% of recipients after they had received transfers), focus groups (two in Texas and three in Puerto Rico), and in-depth interviews (7 in each location). GiveDirectly field staff underwent qualitative research training

before conducting interviews and focus groups, and applied a common semi-structured discussion guide. Interactions were recorded, transcribed, coded, and analyzed thematically.

## Results

With support from LIAF, GiveDirectly deployed a team to Texas in September of 2017 and to Puerto Rico the following month. Over the course of the following 7 months GiveDirectly transferred a total of \$9.5M dollars, broken down as follows:

- \$2.4M to 1,594 families in Rose City (pilot) and three super-neighborhoods of Houston
- \$7.1M to 4,769 families in 24 Puerto Rican communities

### Effects on recipients' lives

Recipients self-assessed the transfers as having impact across many aspects of their lives (Table 1). To better understand the impact, we probed in structured interviews and focus group discussions for examples. We take these responses with a grain of salt, recognizing that recipients tend to be more comfortable giving positive rather than negative feedback.<sup>3</sup>

Impact category	% of recipients in Texas	% of recipients in Puerto Rico
Avoided debt	48.3%	70.5%
Avoided losing job	13.1%	7.6%
Experienced faster return to work	20.3%	13.9%
Avoided unsafe living conditions	22.0%	62.2%
Enabled to keep home	18.0%	20.7%
Enabled to move back home	44.2%	30.3%
Enabled to maintain health	15.6%	43.8%
Experienced stress reduction	55.0%	98.0%
Expect to be incurring benefit a year from now	93.0%	84.0%

**Financial health.** Not surprisingly, recipients spoke about the financial pressures the hurricanes placed on their communities. Many faced income shortfalls after the storms due to employers being closed, childcare options being eliminated, and/or having to reallocate work hours toward home repairs. At the same time, families faced rising costs of living as they attempted to replace large portions of assets, rebuild homes, and meet day-to-day needs. These issues were compounded by the fact that —because GiveDirectly targeted low-income households — many recipients had little in the way of pre-existing savings to mitigate the storms' impact.

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<sup>3</sup> The most negative feedback we received came from someone who suggested alternative ideas for targeting and transfer sizing: "I would just say like, I don't know where the money came from and I really appreciate it but, maybe more looking into who needed more than the \$1500. That would have helped them, or who didn't get anything else, but the \$1,500 that may need more. That is that's all you got was the \$1500, maybe we could have received like \$1500 now, and hey let's give \$1500 later..."

We suspect that \$1,500 was, in many cases, insufficient to address the full financial burden placed on families by the recovery process. However, one of the areas wherein transfers appeared to have the largest benefit was debt avoidance. While none of our interviewees spoke to it directly, we infer that one channel by which the transfer minimized debt was by allowing recipients to invest in assets and home recovery, thereby reducing expensive “tie-over” costs (e.g. rentals, eating out, Ubers etc). In other cases, cash simply provided families with liquidity to cover mounting bills:

*“So all the furniture would've had to go on credit plus the sheets and the pillowcases and the everything else, they would've all had to go on credit. So that gift card helped me not put so much stuff on credit.”* (Puerto Rico)

*“Honestly, since I was unemployed, I had car debt; I couldn't make the payments. They'd granted me a moratorium, but that period was ending, and I was so close to simply turning in the car. When I received the cash aid, I paid my dues and saved my account.”* (Puerto Rico)

We saw a minority of recipients reporting impact on employment. For those who were able to keep jobs or return to them faster, transportation appeared to be one channel through which cash operated:

*“[Buying a car] allowed me to get to work, allowed me to get to the stores and just handle all of my business. Stores in the nearby area were all flooded so you had to travel, so it allowed me to travel to take care of the necessary things I needed to take care of... The transportation allowed me to do things to help me get myself, I mean get back on my feet.”* (Texas)

While we lack the data to say conclusively, one explanation for the difference in work impact between Puerto Rico and Texas is that the local economy suffered deeper and more protracted damage in Puerto Rico. To the extent constraints on returning to or keeping jobs had more to do with employers than individuals, cash may have offered less on those dimensions.

**Living conditions.** Both hurricanes left in their wake a large swath of damaged homes and ruined assets. Households faced meaningful disruption in the form of either displacement or seriously compromised living conditions. One recipient described the situation in stark terms:

*“To put it simply, the hurricane took everything. Kitchen cabinets, our beds, our clothes, televisions, everything. Everything a house can have, all was destroyed.... We were left with nothing but to start from zero.”* (Puerto Rico)

Our data suggest that transfers generated an impact on four main dimensions. First, a sizeable number of recipients reported that cash enabled safer living conditions. We anecdotally observed two mechanisms for this effect: reduced vulnerability from crime and removal of mold or other unsafe substances, both likely a result of families moving back home or improving the condition of their home. The relative strength of this metric in Puerto Rico (62% vs 22%) is plausible, given structures were, on average more damaged and situated in less safe neighborhoods. One recipient alluded to the impact of cash on restoring a sense of safety at home:

*“When I received those \$1,500, I thought, ‘[roof] holes covered, tranquility, security’... with the aid you gave us, we were able to start roofing.”* (Puerto Rico)



Second, a subset of recipients reported being able to actually keep their homes after receiving money. Our interviews suggest this occurred largely because families were able to make essential repairs that rendered their homes habitable:

*“If I hadn’t received that cash aid, I would have given up on this house, I would have just up and left ... I would have moved in with one of my kids, or maybe gone to the United States to live with my sister... With your cash aid, I was able to buy materials and I was also able to buy a generator; I was able to solve some of my problems, because not even electrical power is stable.”* (Puerto Rico - a recipient whose FEMA application was rejected)

Third, cash appeared to help a significant number of recipients who had been displaced to move back home, presumably via investments in home repairs and asset recovery. Displacement was common in both locations, with families forced to squat in hotels or the homes of neighbors and relatives for anywhere from days to months. While we cannot say definitively, the lower magnitude of the Puerto Rico metric may be due to greater damage levels (*i.e.* if a larger percentage of families experienced complete home ruin, \$1,500 would plausibly not cover the repairs necessary to facilitate a move back home).

Finally, many recipients used transfers to purchase essential consumer durables that allowed them to resume day-to-day functioning within their homes. Purchases ranged from generators (power outages were particularly prolonged in Puerto Rico) to mattresses and clothing:

*“We were using like a small fridge for a house. Our family’s big, we’re six, so a small fridge was not good for us, and it was not working properly. So we purchased a fridge, and other essential things that we needed... Every time I see the fridge, I feel thankful for your organization.”* (Texas)

*“Well Puerto Rico’s situation was chaotic after the storm, and since I didn’t have financial stability, I became very stressed. You don’t have power, no water, washing by hand, clothes look dirty even after you’ve washed them, well your help was significant because it helped me buy a washing machine, one of my most pressing needs. And that really calmed me.”* (Puerto Rico)

**Physical and mental health.** A significant portion of recipients in Puerto Rico (to a lesser degree in Texas), reported benefits in the category of health maintenance. The figure (nearly half) in Puerto Rico may seem surprising, but our interviews and observations point to several channels for impact.

First, a subset of recipients faced urgent medical challenges, and directed funds toward doctor’s visits or medication. The reflections of one recipient point to the dire scenarios that some individuals found themselves in:

*“I administered myself insulin without knowing if it would kill me for not being refrigerated.”* (Puerto Rico)

Second, the transfers improved the day-to-day health of some recipients by enabling them to purchase medication for minor ailments (e.g., Advil) and to improve their diet:

*“It also helped with my mother’s diet, you know, when the doctor said, “she can’t eat this, can’t eat that.” All we had at home was high in sodium, and her special diet was low sodium, fruits... And so we rushed to the supermarket, so she could have that better quality of life.”* (Puerto Rico)

*“After I got the money I got my refrigerator, y’know got everything. I was able to eat healthier and take care of myself, y’know what I’m saying? I wasn’t eating out of paper bags, I think that’s healthy too.”*  
(Texas)

Third, we suspect that a portion of recipients considered mental health impact when answering this question, especially given the extremely high percentage that also reported stress reduction. At the upper bound, we had several recipients tell our follow-up team that receiving the cash transfers prevented them or a family member from committing suicide. Outside of that extreme case, many of our interviewees spoke to the benefit of an increased sense of hope and agency:

*“It was an uplift to me. When I went there and they gave my card and they say \$1500, it’s like, it’s like somebody dropped out of heaven. It was an uplift to say I have this money now, I can do something to help myself.”* (Texas)

*“I’m not an emotional kind of guy [mumbling], but I had tears running down my eyes when I got that card. It felt good. It just, I just felt good, and I felt like [somebody actually cared], actually cared for me. It was like they were saying I love you.”* (Texas)

*“On a personal level, it was an immense impact. It allowed me to envision a light at the end of the tunnel; it was wonderful... I, we’re very grateful because that money helped us clear the path, to get up on our feet again. ... One can’t lose hope, hope is all a poor person has, and that aid was the light in the darkness.”* (Puerto Rico)

*“That card gave me a different perspective on life. I guess it was hope. Card gave me more than \$1500. It gave me a lot more than \$1500 ... It helped a lot, and another thing it did that you can’t put a money on it, it gave you, just let you believe in mankind again.”* (Texas)

### **Broader lessons and insights**

Beyond the direct consequences of the projects, we present below lessons learned about the key hypotheses outlined at the start of the paper.

**A. Recipients valued the flexibility that cash transfers gave them.** Recipients used their transfers in a wide variety of ways. If we define a “bundle” of uses as any combination of spending on one or more categories (e.g., food, furniture, appliances), recipients purchased 95 distinct bundles in Texas and 226 distinct bundles in Puerto Rico. If we had purchased the most commonly-observed bundle in each location, we would have matched the spending preferences of only 20% of recipients in Texas and of 6% in Puerto Rico. Figure 1 provides an illustrative snapshot of the variety of spending we see in a random sample of recipients, and Figures 2 and 3 show two cuts of self-reported spending breakdowns across specified categories.

Figure 1: Dollar spending breakdown for a random sample of recipients (each row represents one recipient)

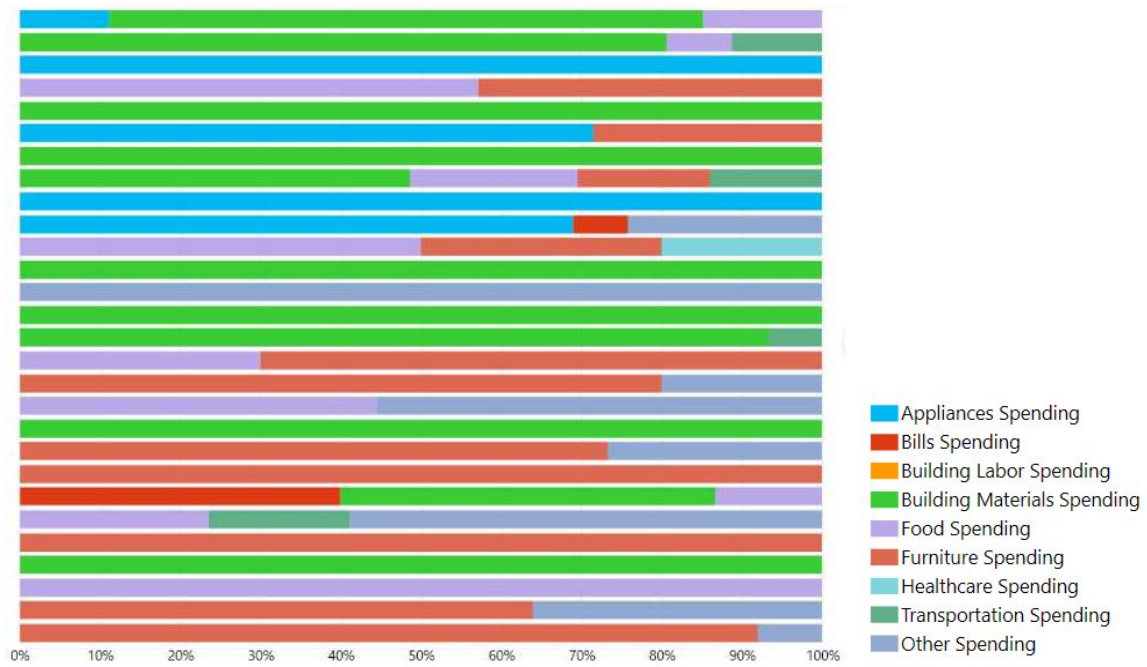


Figure 2: Proportion of recipients who reported some amount of spending in specified categories

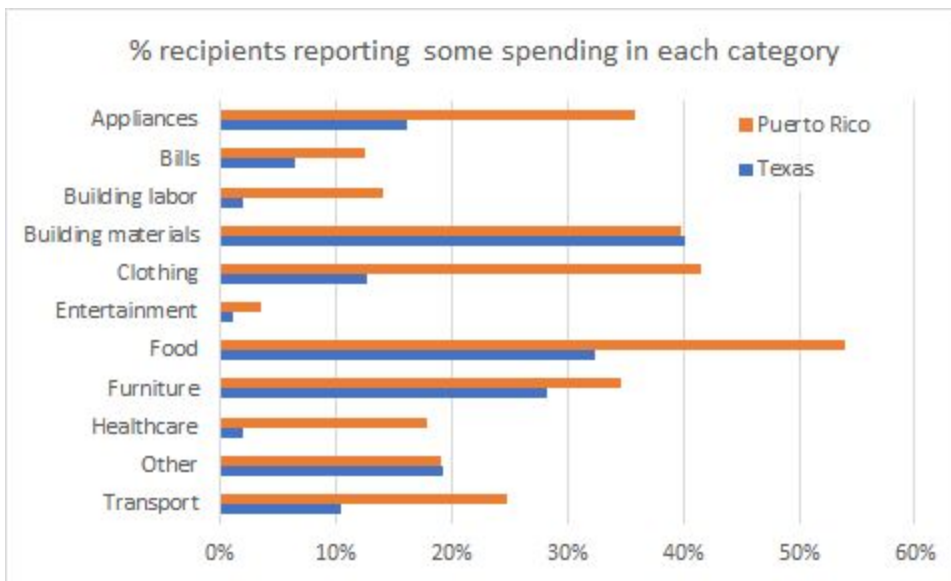
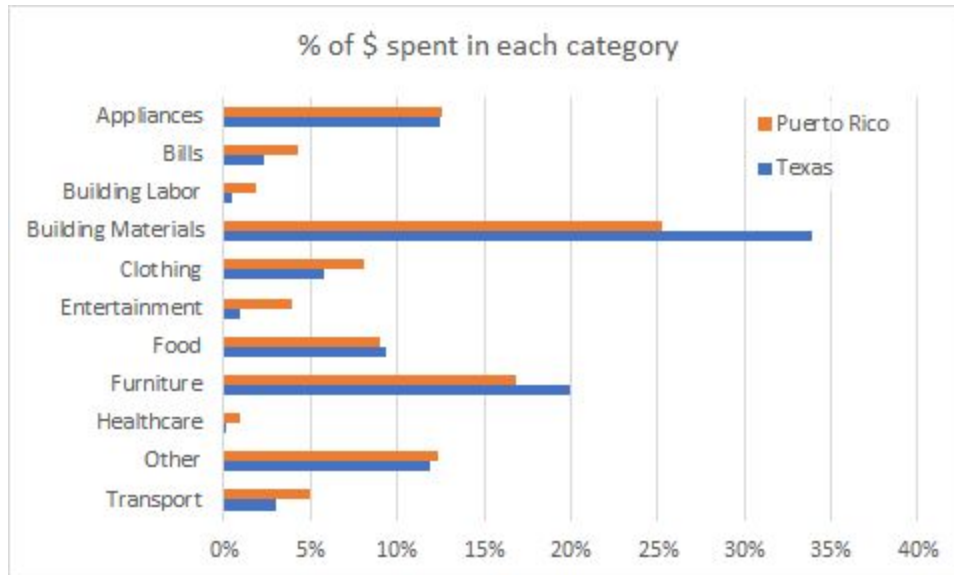


Figure 3: Reported break-down of average dollars spent across specified categories



Recipients generally preferred cash to in-kind support. In Texas, this view was nearly unanimous, with 95% indicating that they would prefer cash. In Puerto Rico, 80% shared this view, while a 20% minority reported they would prefer in-kind support (we present more detail on this subgroup below). Among those who preferred cash transfers, the flexibility that cash affords was often cited as an important factor:

*“If you give [cash] to me, let me figure out how to make it work. It’s a lot better than giving me X amount of sheetrock, because not only did I need sheetrock, I needed insulation, I needed cement to raise up the floors, I needed cement to cover holes in the floors, between the wall and the brick wall and the inside floor.” (Texas)*

*“No, I think that the \$1500 was a blessing because sometimes when people were giving you things, a lot of times you received a whole lot of stuff that you really didn’t need at the time... Like, Clorox. I still have Clorox ... we may have had just stacks and stacks of that.” (Texas)*

*“Well, the cash is better. As they say: that’s the key that opens all the doors, the cash. Because with that, one can buy everything. Imagine that they gave me two boxes of beans, three packages of rice. Well, what was I going to do with that? With the cash I can buy the rice, the meat and whatever else. If I need material to build something, I can buy it. It is not the same as choosing something for me that maybe I did not need.” (Puerto Rico)*

Interestingly, a theme we often heard was that recipients placed *intrinsic* value on the signal of trust and respect that cash transfers embody:

*“You know they didn’t come say ‘We gonna give you some shoes that don’t fit or some food that you don’t like, some cold water that you don’t need,’ they say ‘Here, take this and do’... and they trusted us with it... I know what I need, don’t kinda second-guess me.” (Texas)*

*“When you go from having nothing to having, just like that out of the blue, well it was definitely*

*emotional. I felt the power to go to the supermarket and make a purchase, to buy some shoes I needed, to go to the pharmacy and buy my medicine, my ointments, detergents to clean the house. Whenever I wanted.” (Puerto Rico)*

Among the minority who preferred in-kind transfers, their most common rationale was a concern that it would be difficult to withdraw or spend cash, particularly in the days immediately after a storm. As one recipient put it:

*“Three weeks after the hurricane, well I had no need for money. In truth, I had money, because I’d recently been paid, and I couldn’t do anything with it. There were no supermarkets, no department stores, it looked like The Walking Dead. But 2 months after, well then the money comes in handy, because you could buy building materials, food. Three weeks after, what’s the point of having \$20 if you can’t spend them? There were no ATM systems. But at the moment you guys arrived, it was good; it was glorious.” (Puerto Rico)*

Consistent with this observation, recipients’ preferences depended on the timing of the help relative to the storms. Of Puerto Rican recipients who preferred in-kind transfers on day zero, two-thirds preferred cash transfers by day 30, meaning a total of 93% would prefer cash a month after the storm. This suggests that the best times to use cash are closely linked to the timing of market recovery, an issue we return to below.

**B. In contrast, in-kind support often did not match recipients’ needs.** The fact that recipients’ priorities varied so widely suggests it would be intrinsically challenging to support them using in-kind donations, no matter how well-administered. Our data indicate most recipients did, in fact, receive in-kind assistance from other programs (62% in Texas and 85% in Puerto Rico). In some cases, the aid addressed a subset of gaps (e.g., food and water). However, in-kind provisioning often fell short of the full range of what was needed (importantly, with respect to categories of goods, not just quantity). Specifically, 64% of Texas recipients and 76% of Puerto Rican recipients reported using their cash to buy at least some items that were not offered by in-kind organizations. Recipients highlighted this disconnect in interviews and focus groups:

*“I didn’t need water, everybody wanted to bring you water ... I needed some cleaning aids, I needed a shower, I needed hammers, I needed, stuff like that...” (Texas)*

*“And you can't bring me supplies because I didn't had nowhere to keep them, just give me a truckload of sheetrock, where am I gonna keep it? I can't put it inside my house cause I'm still cleaning it out. So I have to do it at a certain time, each one of us recovered at a different time. So you can't drop a truckload of sheetrock, what're we gonna do with it? It get wet before we even use it ” (Texas)*

In some cases the in-kind “assistance” recipients were given would literally have been lethal for them:

*“But we don’t eat what they gave in those boxes. I’m diabetic, and one time they gave me a box with, I’m not lying, twelve Baby Ruth chocolate bars, twelve fruit cocktails, twelve cookies. If I would have eaten what was in that box, I would have died.” (Puerto Rico)*

**C. Delivering transfers quickly and efficiently was feasible.** GiveDirectly delivered 92% of funds directly to recipients in Texas and 94% in Puerto Rico, for a weighted average of 94%. This compares well with historical averages in East Africa, which have typically ranged between 85-90% depending on context and program parameters. This partly reflects the fact that transfers in this project were larger than in typical East African projects (\$1,500 v.s. \$1,000), but even had we scaled transfer sizes down while holding all other costs fixed the projects in Texas and Puerto Rico would have run at 89% and 91% efficiency, respectively. This suggests that the economic model translates well across these very disparate contexts.

Drawing comparisons to the efficiency of in-kind programming is harder, both because NGOs generally do not publish (or even possess) reliable data on their own delivery costs, and because the value of in-kind donations to the recipients is itself hard to establish. (In the example above of the diabetic who received chocolate bars, for example, it was arguably negative.) In some cases, external investigations have found that efficiency rates were far lower than those claimed by the organization — for example, ProPublica [estimates](#) that the Red Cross spent 60% of Haitian earthquake relief funds on “doing the work” while claiming 91%.

Transfer delivery was fairly quick, with an average of 6-7 days from the first contact with beneficiaries to the delivery of funds. This compares favorably to typical speeds of 50-60 days in our East African programming. The difference was largely intentional; in East Africa we use a relatively intensive process with a number of fraud checks, while in Texas and Puerto Rico we aimed to test a much faster and more streamlined approach. Rates of detected fraud remained low (see below), suggesting that this pace was not reckless. Some of the difference is also due to differences in payment modality: recipients in Texas and Puerto Rico simply received prepaid debit cards, while some East African recipients must first register for mobile money accounts (or even obtain national IDs) before they can receive payments.

**D. We saw some novel forms of fraud risk, but none that posed significant challenges.** We saw several forms of fraud that were familiar from our East African work, including (i) people squatting in abandoned homes and claiming them as their own, (ii) households attempting to split into two in order to claim two transfers, and (iii) one case of a staff member colluding with a recipient to claim false residency (detected before any funds transferred). We did not observe attempts by local government officials to co-opt or subvert the process, which we see occasionally elsewhere. We also faced some novel challenges (e.g., in determining residency as many households had been displaced by flooding). Overall, under 1% of households were disqualified on the basis of confirmed fraud. We also saw relatively low rates of other potential red-flag issues (“adverse events”) including theft, bribery, and conflict (below).

Adverse events	Texas	Puerto Rico
% experienced theft	0.7%	0.1%
% experienced bribery	0.4%	0.0%
% experienced household conflict	0.6%	0.1%

**E. Local markets were able to respond effectively to the influx of cash, but may have been less effective in Puerto Rico in the days immediately following the storms.** The hurricanes in Texas and Puerto Rico are [thought](#) to have had a large impact on local and even national economic productivity, and Puerto Rico in particular suffered from extensive and long-lasting power outages. This raises the question of whether local markets in the affected areas would be able to provide beneficiaries with access to the goods and services they wanted to purchase using their transfers. On the other hand, GiveDirectly began delivering transfers 7 weeks after the storms ended in Texas and 9 weeks after they ended in Puerto Rico, so that local economies had had some time to recover. An important open question is whether markets would have sufficiently reconstituted in the immediate aftermath of the hurricanes to support a cash intervention.

On the timeline that we operated, recipients did not, by and large, report being constrained by market availability; 93% of recipients in both locations said they were able to find the majority of the things they wanted to purchase. There was meaningful variation in how many purchased locally, however; 98% of Texan recipients said they were

able to buy the majority of the items they wanted locally, while 73% said the same in Puerto Rico. This could simply reflect the fact that Puerto Rico is a smaller and more trade-dependent economy, and we do not have a benchmark figure for pre-disaster spending. This fact is also consistent, however, with the one above that a larger minority of Puerto Rican recipients would prefer to receive in-kind assistance, and that this proportion falls over time.

We did not find any suggestive evidence of impacts on market prices in our interviews with recipients, though it is still an open question of whether a quantitative study of prices would detect effects. Another open question we did not explore, but which is potentially very important, is the positive impacts of the transfers on local markets more broadly; the influx of cash could in principle have important multiplier effects.

**F. Community entry and targeting in a disaster context involved distinct sensitivities and trade-offs.** An important, and a largely unanticipated lesson we drew from these projects, involved how best to manage relationships with the communities we served. In the East Africa countries in which we work, GiveDirectly has developed carefully scripted approaches to entering new communities. Typically this involves obtaining official permission to operate in a region, followed by a series of informal conversations with successively more junior local officials to obtain their informal buy-in, and finally a village meeting in which front line staff explains the program and the (predetermined) targeting criteria to recipients.

In Houston and Puerto Rico, we found that obtaining local buy-in required a more collaborative approach. In particular, community leaders and members were far more sensitive to the risk of “exclusion errors” (not giving benefits to people who needed them most) relative to “inclusion errors” (giving benefits to people who did not need the most). This presented us with a challenging trade-off given there was non-trivial variation in vulnerability levels, both with respect to pre-existing poverty and severity of the damage. Moreover, this variation could present itself even within fairly small geographic areas.

Ultimately, we had to strike a balance between targeting those most in need, and avoiding decisions that would generate unrest at a time when communities were already fragile and traumatized. We found, at least anecdotally, that poverty targeting was more divisive than damage targeting (potentially because people viewed the latter as more objective while proxies like welfare eligibility were met with greater suspicion; it’s also worth noting that no disaster organization we know of conducts poverty screening). We experimented with proxy means targeting in a single pilot in Puerto Rico and faced meaningful pushback from community members and local leaders (ending up, at one point, concerned for the safety of our staff). Eventually, we erred toward identifying areas with high percentages of the population below the poverty line, so as to avoid the need for household-level poverty targeting.<sup>4</sup> We then made case-by-case decisions on whether household level damage assessments were necessary.<sup>5</sup> By and large, the data validated our approach, with only 1% of recipients reporting community conflict as a result of the transfers.

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<sup>4</sup> The two exceptions were the Puerto Rico pilot mentioned and ~100 households in our final neighborhood in Houston.

<sup>5</sup> We ended up conducting them throughout Houston, but selectively in Puerto Rico

## Conclusion

With billions of dollars spent annually on disaster relief and [calls for greater accountability](#) being issued, the question remains: how best can we meet our obligation to both donors who have channeled their generosity, as well as families impacted by crisis?

We undertook this work to deepen our understanding of what a large-scale cash program could achieve in a domestic post-disaster context. From the outset, this project was neither designed to address the comprehensive needs of communities in areas where we worked, nor to deliver an exhaustive research agenda. However, in transferring nearly \$10M, we were able to generate material benefits for families in need and expose several valuable insights:

- **The needs of recipients vary.** Communities impacted by disasters are far from monolithic. We saw meaningful diversity in spending, as well as gaps in how well in-kind aid organizations could forecast individual needs. Not surprisingly, recipients cited a range of benefits, from debt avoidance to stress relief to health maintenance.
- **Recipients themselves prefer cash.** Recipients valued the choice and flexibility afforded by cash, with a large majority (84%), expressing a preference for direct transfers over in-kind alternatives.
- **Cash is cost-effective.** We were able to deliver approximately 94 cents on the dollar, directly to families in need. While detailed cost data are rarely made available, existing benchmarks suggest this to be a highly competitive operational efficiency.

We do not conclude from these results that cash is a panacea in this or any other context. However, the fact that cash is strongly preferred by recipients and is also lower cost begs the question of why in-kind options remain the default. Specifically, what are the structural, operational, and in some cases, ideological, barriers to making a shift, and what would be required to lift them? We hope the findings presented here, and continued work in this space, motivate donors and implementing organizations to rigorously examine these questions.

In parallel, we are excited to expand our own role in this conversation. We see a greater need for public dialog around disaster response effectiveness, and aim to facilitate that through this and future project work. We also perceive a number of unanswered operational questions with respect to cash delivery and program design. Specifically: Will we observe similar benefits, preferences, and operational performance when cash is delivered on day 7 versus day 60? Will the multiplier effect that we see directional evidence of bear out when examined more thoroughly? What are the returns on smaller or larger transfers sizes? We view ourselves as having begun to scratch the surface on these important questions, and look forward to continued exploration.



## Appendix

### Targeting detail

Our core targeting process involved two main steps:

- (1) *Selecting communities*: We first constructed a poverty dataset using the most granular administrative data we could access (median household income and distribution data, where available). In parallel, we aggregated a mix of FEMA data, aerial imagery, and word of mouth information to create a damage heat map. We reconciled these data sources to shortlist communities at the intersection of damage and poverty. In Puerto Rico, where possible, we selected *comunidades especiales* (government-designated impoverished areas). Ultimately, we ended up in 24 *barrios* in Puerto Rico, one town outside of Texas where we conducted a pilot (Rose City), and three super neighborhoods within Houston. Below we show a sample damage map for our pilot community in Puerto Rico, Vietnam.



- (2) *Selecting households*: Upon entering selected communities, we had to choose between a targeted or “saturation” approach. In areas where the variance in damage was low, we erred towards the latter (e.g., in Puerto Rico, if 75% of households during a neighborhood inspection visit passed our visible damage test). Where a more differentiated approach was necessary, targeting took the form of door-to-door visits conducted by GiveDirectly field officers. We primarily assessed visible damage to the interior and exterior of the home (and in some cases bills showing evidence of home repairs were used as a proxy). In a minority of neighborhoods, where median income was low but income variance was higher, we enrolled households participating in government welfare programs (e.g., SNAP).

### Enrollment model detail

Our objective was to enroll and pay recipients in a rapid and secure manner. Our process had five main steps:

- (1) *Community sensitization*: We informed communities about our mission and core program parameters before initiating any enrollment. Channels for disseminating information included flyering and/or public town halls.
- (2) *Enrollment*: Our first point of contact with families was either at their home or a centralized enrollment center. We would ask for documents to prove two things: identification of the applicant and proof of

residence. We accepted a number of document types, recognizing that many had lost possessions in the storms (e.g., government-issued IDs, utility bills, and mortgage statements). In neighborhoods where we screened door-to-door, we would also ask to see damaged areas of the home. We collected this information digitally on a smartphone app that pushed the data to our Salesforce back-end. All documents and applicants were also photographed to provide identity triangulation in borderline cases.

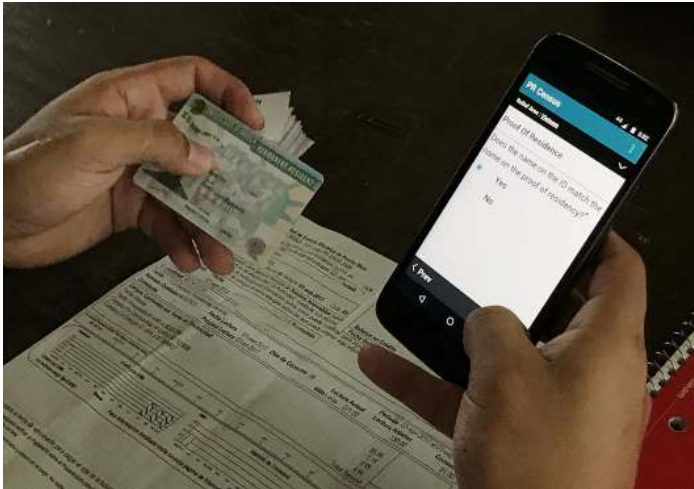


Photo: Field officer entering information from an ID and a utility bill into the app.



Photo: Field officer assessing damage of an applicant's home during a house visit

- (3) *Vetting*: Once data on a full neighborhood had been collected, a field director would conduct multiple checks: (i) an automated duplicate check to ensure that the address was unique in our database, and (ii) a boundary check to ensure that every applicant lived within the bounds of the target neighborhood. If any of these factors did not line up, the applicant would be flagged for an audit. An audit involved either a request for additional documents proving residency, or in some cases, an additional home visit.
- (4) *Payment*: Once our team had completed the screening phase for a neighborhood (or portion of a neighborhood), we organized a payment event to distribute cards. At each event, we would typically have

ten staff, two or more security guards, and a safe to store cards. Payment events ranged in sizes, but were capped at 300 recipients on a given day. Our team would provide every recipient with an individual card (upon verification of identity documents), issue a short set of instructions on using the card, and capture a signature and photograph of the recipient holding the card.



Photo: Recipients in Puerto Rico waiting to receive cash cards from our staff.

- (5) *Follow Up:* As discussed above, we attempted to contact (largely by phone, but in some cases in person) every household to administer a follow-up survey. Bilingual staff was on hand to communicate with Spanish speakers. We were successful in 76% of cases.