



# Food poverty A scale unimagined

When **Dan Clarkson** volunteered to help at a UK food bank, he discovered how statistics and data analysis can help organisations assess need, plan for demand, and better understand the extent of food poverty

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When I began volunteering at Morecambe Bay Foodbank in 2018, I hadn't realised the full scale of food poverty in the UK. I'd seen the food bank's collection points advertised in local shops and heard occasional mentions of food banks in the news. But, for all I knew, the food bank appeared to be a small, independent source of local support for people in emergency need. It was only when I began to assist with basic data tasks that the true extent of food poverty became clearer. What started as a simple request for a bar chart (alongside making food parcels) grew into a much closer look at the challenges faced by the local community and the impacts that poverty – as well as the pandemic – has had on different groups of people. Based on my experience of working with food poverty organisations and local councils, we look at the increasingly worrying picture of food poverty. In particular, what does food poverty look like in the UK in 2023? And what role do statistics and data analysis have in addressing the challenges presented by rising levels of poverty, particularly concerning food?

In 2020/21, an estimated 13.4 million people (20%) in the UK lived in poverty, including over a quarter (3.9 million; 27%) of all children.<sup>1</sup> These figures have been steadily increasing over the past decade, painting a bleak picture of one of the world's largest economies. The worsening state of affairs is perhaps best illustrated by the rise of food banks. A once relatively unheard of concept in the UK, food banks acted as an immediate response to the challenges presented by food poverty since the early 2000s. In 2023, the Trussell Trust – the largest food bank franchise in the UK – supports around 1,500 food bank centres, outnumbering McDonald's, Starbucks, and Aldi. This comes from a group that supported just two food banks in 2004, 20 in 2009, and only 148 in 2011 post-recession, not including the more than 1,100 independent food banks that operate outside of the Trussell Trust. Food banks don't act as a complete and direct measure of poverty, and this isn't to say there weren't challenges before the 2000s. However, it is notable that the severity of recent issues has prompted communities across the UK to take action

themselves to support those most in need by way of establishing food banks. Joining the Trussell Trust's network is a choice by the food banks that demonstrates the long-term views they have to hold with regard to their work. What may start as a small source of support for a handful of individuals can quickly expand into a critical source of basic necessities for a community, and with that comes the need for extra logistical and funding support.

My time working with food banks and food poverty organisations started from a more general interest in volunteering. Presented with a less crowded daily schedule while studying in Lancaster, Morecambe Bay Foodbank happened to be the first organisation that replied to my emails enquiring about volunteer roles. I didn't foresee any kind of technical or statistical work when signing up to volunteer, especially given the depth of the future work that was to come. I'd fallen into the role somewhat accidentally, only beginning work on the data set when a particularly mindful manager at the time realised (much to her delight) the subject of my PhD. This might go some

way to explain why there is such a need for data analysis and statistical work in the area, either by way of a lack of realisation of the demand for analysis or through a lack of funding for roles or work of this type. In any case, to better solve the problems posed by poverty, organisations like the Trussell Trust, local councils, and beyond are passionate about understanding those problems more thoroughly.

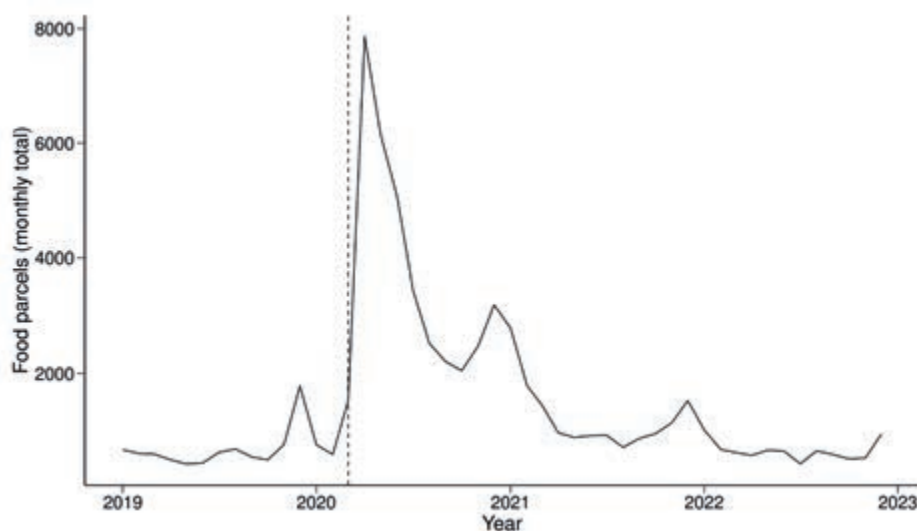
## A local perspective of poverty

After finishing some initial requests for figures, I was free to ask my own questions about the data set and see what was possible using the tools at our disposal. The system used by Trussell Trust food banks maintains a very thorough data set of each food bank's operations. Each person in need of emergency food support has to be referred to the food bank by one of many referral agents – Citizens Advice, the local city council, and schools being some of the most common. As part of the referral process, their details and information regarding how much food they require are

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**Dan Clarkson** is a recent PhD graduate who specialises in extreme value analysis, alongside research into food poverty and food banks.



**FIGURE 1:** Number of food parcels distributed by Morecambe Bay Foodbank per month. The dashed line marks the date (1 March 2020) at which operations shifted to a delivery service due to the pandemic.

recorded every time a food parcel is given out. This allows us to see how many food parcels have been distributed, how many people have been fed, and where people who need support are based, among other details. The data is most commonly used to check people's details and needs when they receive food, yet it has levels of detail that can be used to assist with many other aspects of the entire food poverty system.

For food banks, progress – and, to some extent, interest – in data analysis had previously been limited by a broad shortage of technical expertise rather than a lack of information. Most food banks don't have the resources to employ dedicated analysts, or in some cases don't realise the potential questions that can be answered using the data available. Outside of staff roles, unsurprisingly not many people volunteer at a food bank to do data analysis, due to lack of either advertisement, awareness of the need, or specific knowledge of data analysis or statistics. Statistical analysis is highly valued when available, but often

falls rightfully below the day-to-day operations of running a food bank in priority.

The first parts of the work that drew particular interest were based on testing long-held assumptions from both inside and outside of the food bank. Rather than estimations of the busiest time of year, we could examine demand with more precision from simple monthly and weekly totals. Trends such as the small increase in August before the start of the school year and huge spikes in demand in December for Christmas could be more effectively defined and planned for than in previous years. This extended to long-term trends too, such as confirming that demand had indeed increased every year since the food bank's inception in 2012 (up to the pandemic) and estimating further increases. Most broad statistics point to a similar bleak conclusion – demand for emergency food in Lancaster and Morecambe has been increasing consistently since 2012. The figures do at least provide managers with additional information from which to plan

their operations, and help greatly in conveying the severity of the situation to the public whose donations we rely on.

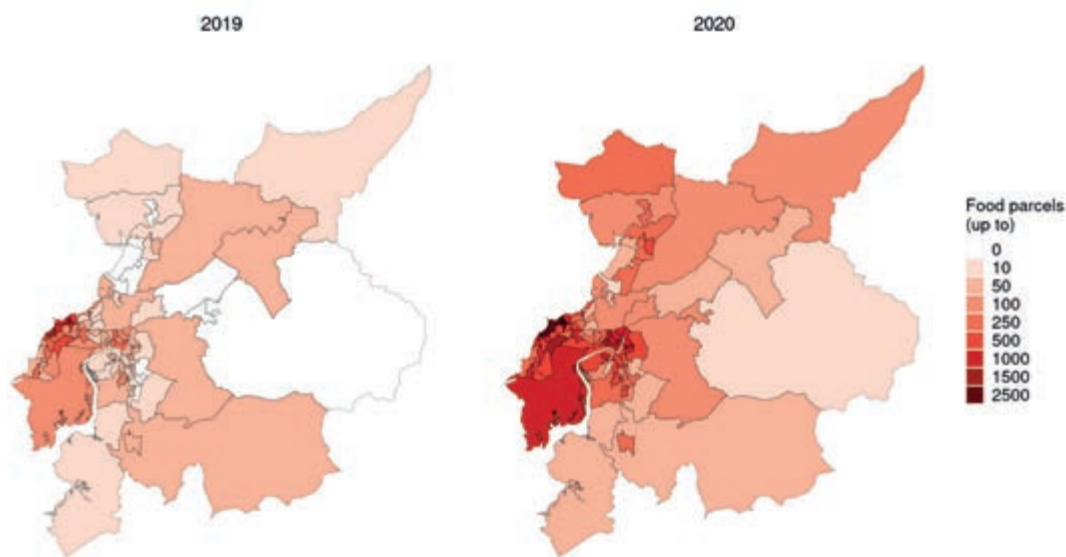
Often the work was also focused on dispelling false assumptions or even accusations against the food bank. For people and groups who are often less familiar with the work of food banks, there can be attempts to stigmatise the people receiving support. Claims of overdependence on our support were common to hear. These mainly came from people sceptical of how often people received food, suggesting that, for example, 1,000 food parcels distributed in a year could relate to only a small number of people receiving food many times. This is reasonably simple to disprove, as in 2019, on average, people only received food from the food bank twice, with the most common number of visits being just once. Some accusations were more politically motivated, one even going so far as to suggest we were trying to artificially inflate our figures by offering free bus tickets to people in Lancaster. Although the accusation was

halted by evidence that 96% of people receiving food were in Morecambe compared to just 4% in Lancaster, it demonstrates the sometimes severe misconceptions that exist around food poverty. The reality is that food banks are an absolute last resort for many people. Most people simply have no other options for food at the point of access, arriving feeling discouraged or even embarrassed by the stigma of food banks even at times of genuine emergency.

## Mapping out a city's support

As more and more food clubs and sources of support open up, coordinating between organisations is vital to ensure that support is available to everyone. This is primarily because the vast majority of food banks and food clubs rely on the same limited amount of donations. Most operate independently, set up by individuals with a passion for helping people in their local area. This can make coordination complicated, and in the absence of consistent data sets it can be difficult to assess how much food is available and whether any areas are being missed. Mapping where support is available posed more of a challenge of coordination than of statistics. However, getting an overall spatial view of the levels of food poverty in the district was even more of a challenge. Maps produced using only the food bank's data were used more widely for planning new food clubs and assessing need, but they only represented part of a bigger picture.

The pandemic offered a new perspective on food poverty. On 1 March 2020, Morecambe Bay Foodbank shifted operations from in-person support to a delivery service in collaboration with Lancaster City Council. The food bank acted as the main vehicle for the council's pandemic support



**Figure 2:** Number of food parcels distributed in each lower layer Super Output Area in the Lancaster district in 2019 and 2020.

package to provide food when accessibility was at its lowest. The change in operations allowed a much broader view of food poverty in the district since the distance to the food bank no longer acted as a barrier to support. Many food clubs weren't able to operate and many more people were suddenly in emergency need of food, leading to a huge spike in demand for the food bank's services. In April 2020 alone 7,856 food parcels were distributed, more than in the entirety of 2018 (see Figure 1). This – from an estimated 2,870 unique claimants of support – equates to more than 1 in 50 people in the district needing emergency support from Morecambe Bay Foodbank alone. Mapping where people needed support gained even greater importance than it had previously, becoming more representative as a view of food poverty rather than just of food bank use.

The changes were dramatic. Whereas in previous years around 78% of people supported were within 2 km of the food bank itself, in 2020 every ward in the district had received food parcels.

It was evident that food poverty and the impacts of the pandemic were affecting all areas of the district (Figure 2), not just those that had seen frequent support with the previous in-person service. Not only was support needed more widely than before, but it was also needed by groups of people who hadn't previously relied upon the food bank's support. Before the pandemic, there were on average around 10 over-65s supported with emergency food per month. Once the pandemic took effect, 1,224 over-65s were provided with emergency food in a single month, over half of whom were living alone. Children were also severely impacted, with over 2,429 referrals from local schools in 2020, second only to Lancaster City Council and more than Citizens Advice.

### Is the situation getting any better?

When Morecambe Bay Foodbank was first set up, its intended role was as a temporary source of support that wasn't anticipated to last more than 5 years.

Demand was never anticipated to increase for eight straight years, never mind having to support the entirety of Lancaster and Morecambe through a pandemic. Now over 10 years into operations, there is no longer an end date for the project. It forms part of a now much larger group of organisations, its role shifting more specifically to emergency food provision in light of new food initiatives and food clubs that provide an extra step up the food insecurity ladder. Even so, 2022 still saw 3,294 referrals for emergency food support – higher than pre-pandemic levels in 2019 – provided to 7,826 people. Demand for basic necessities remains dishearteningly high.

Despite this, the amount of support available has also increased over the years. Nationally, the Trussell Trust's Pathfinder Programme has been exploring new ideas in food banks. It aims to remove the need for food banks in the future by trialling new ideas in a small number of food banks, part of which includes applying the statistical work from Morecambe

much more broadly to other food banks in the franchise. There is also hope locally in the form of the Lancaster District Food Justice Partnership, which brings together food banks, food clubs, Lancaster City Council, Citizens Advice, and others to take a collective approach to tackling poverty. This also includes further statistical work, particularly by combining data from various organisations for the most representative view of poverty possible.

With my PhD now completed, and potentially with it my time with Morecambe Bay Foodbank and the Trussell Trust, the outlook for the future remains unclear. For as much willpower as there is in the local community to solve the challenges faced by its people, the need for poverty support is not yet decreasing. From a personal perspective, seeing the change in willingness to engage between all involved parties does provide some hope. Statistics and data analysis have moved from something of a novelty to a core part of future planning. Food clubs that had no interest in even collecting data are now actively contributing to collective work to examine the state of poverty in as much detail as possible. The need for support may not be decreasing, but we understand better than ever before who needs support and how to get them the support they need. The day when food banks are no longer needed will hopefully soon arrive. ■

#### Declaration of interest

The author is a volunteer and previous placement student at Morecambe Bay Foodbank.

#### Reference

1. Joseph Rowntree Foundation (2022) *UK Poverty 2022: The Essential Guide to Understanding Poverty in the UK*. York: Joseph Rowntree Foundation. [bit.ly/3YdBiNW](https://bit.ly/3YdBiNW)