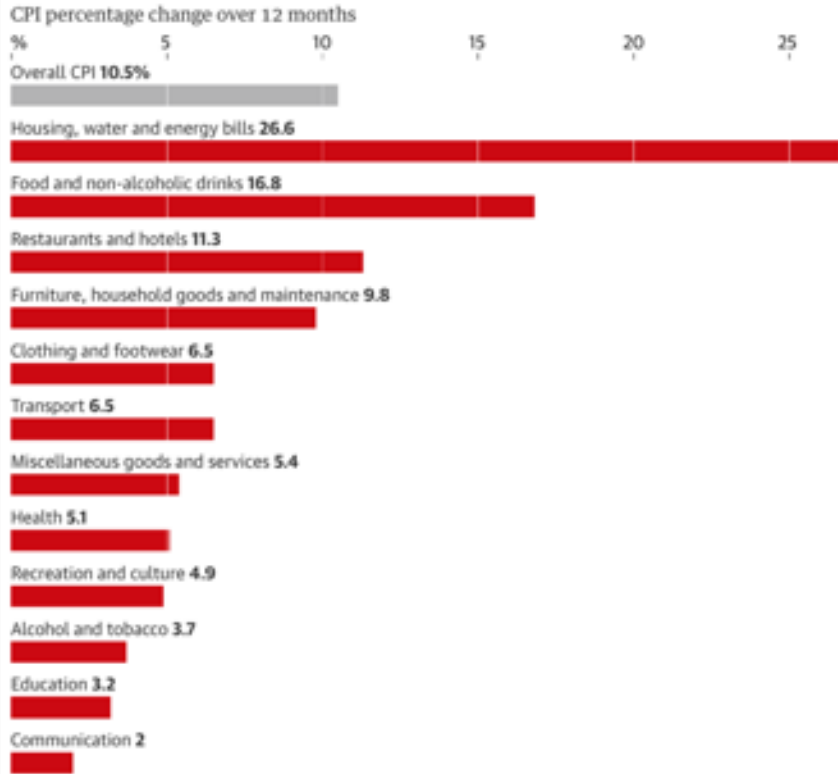


FOOD INSECURITY AS A PUBLIC HEALTH ISSUE

Kristin Bash MPH FFPH
Chair, Food SIG, FPH
Honorary Lecturer & PhD Candidate
SchARR, University of Sheffield

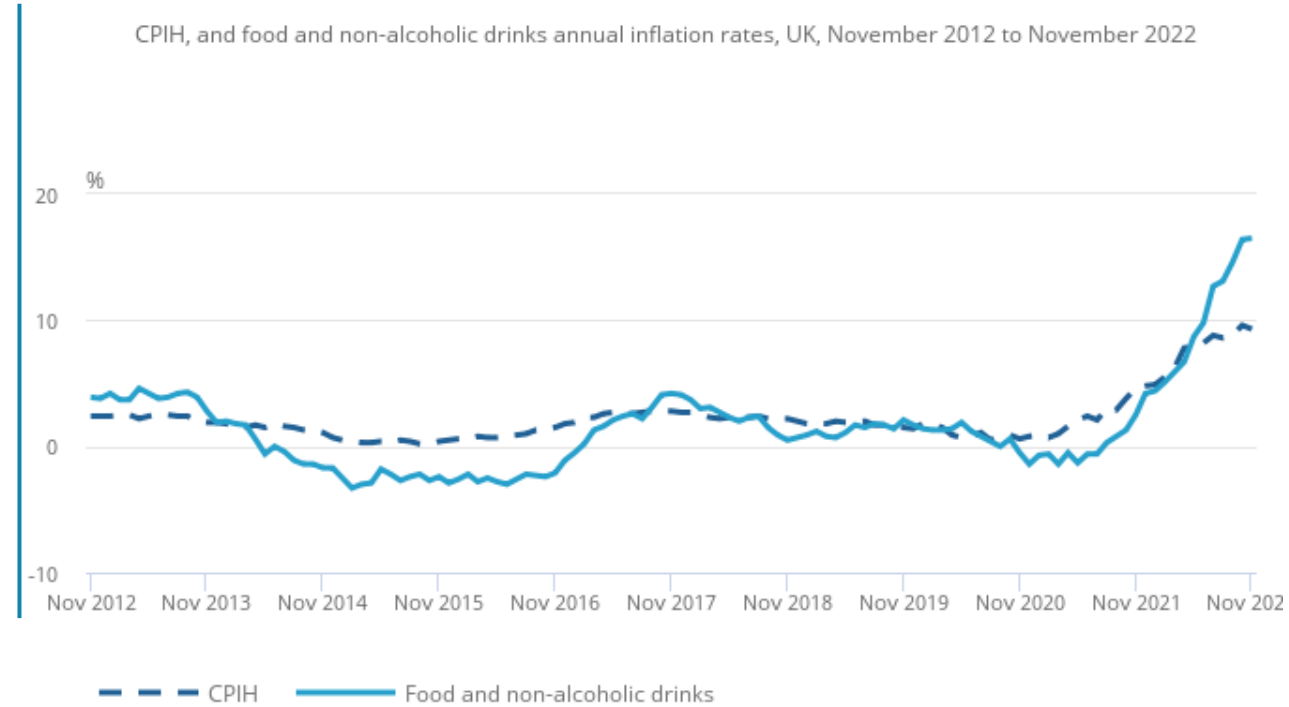
<https://tinyurl.com/mx2fsky6>

Annual inflation rates for housing, energy bills and food were above the overall rate in December



Guardian graphic. Source: ONS. Consumer price inflation, UK: December 2022

Food and non-alcoholic drinks annual inflation has risen for 16 consecutive months

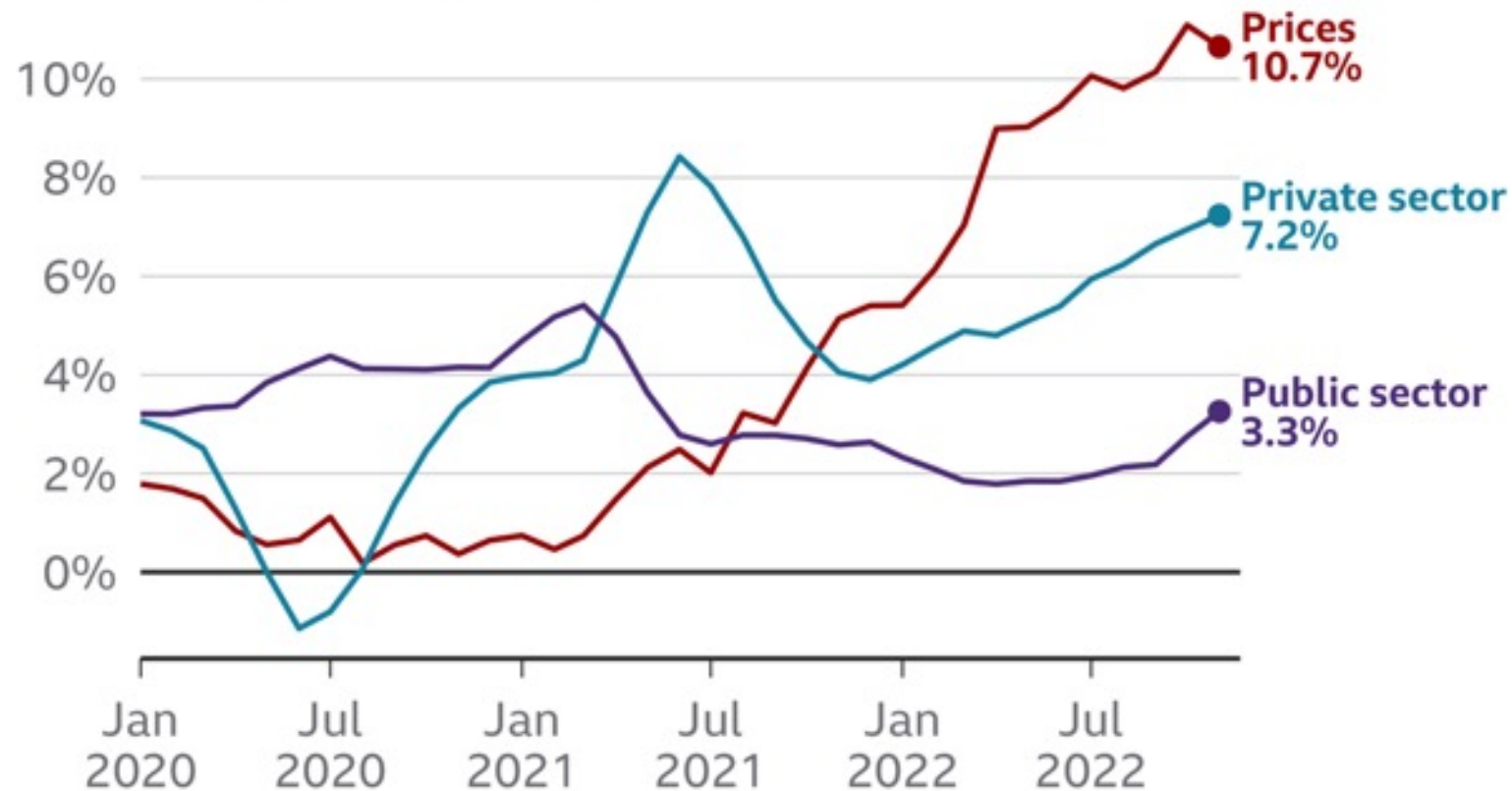


<https://www.ons.gov.uk/economy/inflationandpriceindices/articles/risingcostofpastabreadandothereverydayfoodsleavesmostvulnerabletheworstoff/2022-12-22>

ONS DATA:
FOOD INFLATION TO NOV 2022

Pay is not keeping up with inflation

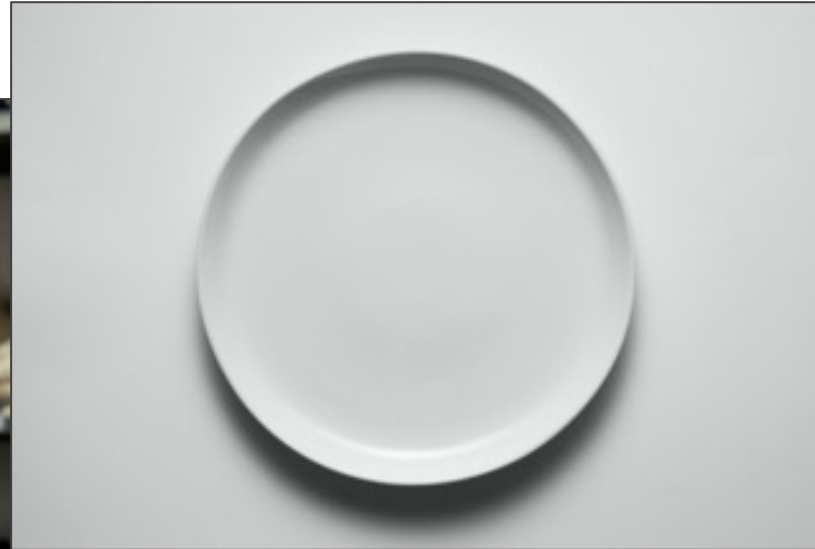
Annual wage and price growth, Jan 2020 to Nov 2022



Source: Office for National Statistics



WHAT IS FOOD INSECURITY?



HISTORY OF DEFINITION

Hot Springs Conference 1943 – 44

Governments met in Hot Springs, Virginia USA to consider goal of freedom from want regarding food & agriculture.

“Freedom from want” - a secure, adequate and suitable supply of food for every man, woman and child

“secure” - accessibility of the food

“adequate” - quantitative sufficiency of the food supply

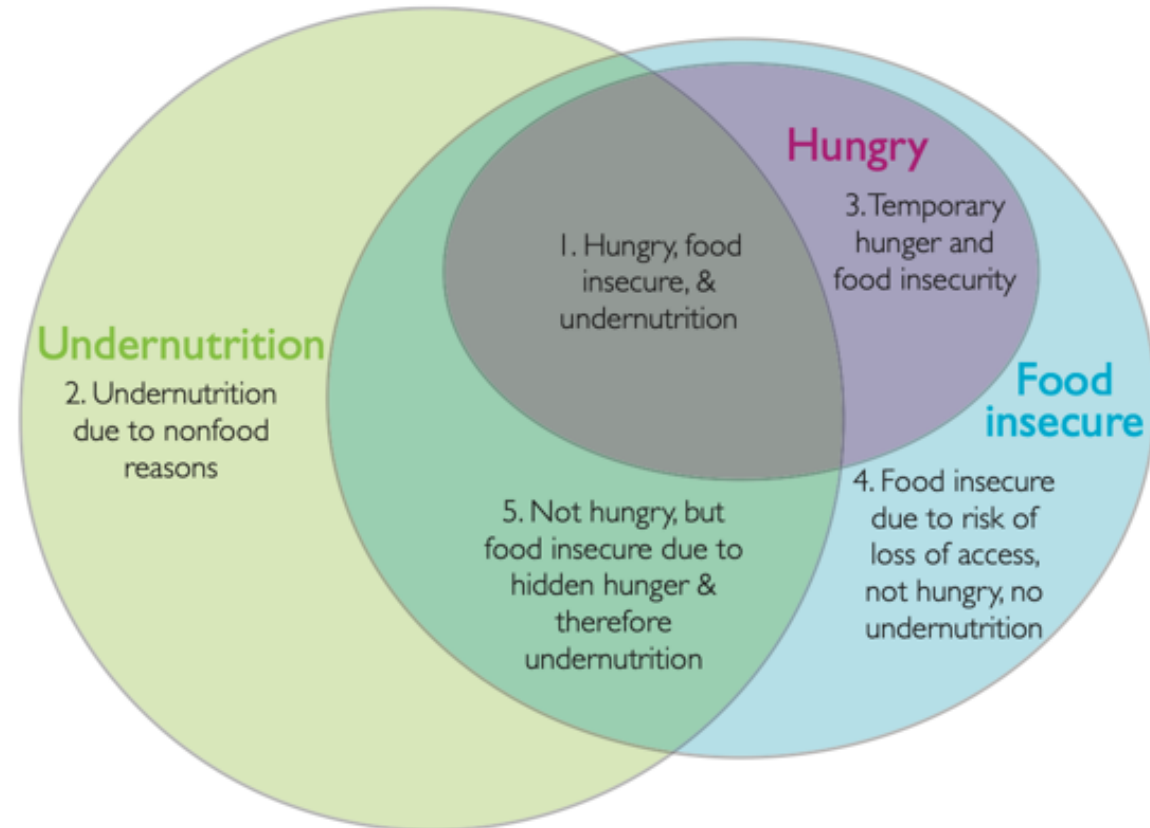
“suitable” - nutrient content of the food supply.

<http://www.fao.org/3/MD776E/MD776E.pdf>

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”

World Food Summit, 1996.

Figure 6.1: The overlapping concepts of hunger, food insecurity and undernutrition



Source: Haddad 2010

How do we measure Food Insecurity?

USDA - U.S. Adult Food Security Survey Module (10 questions)

HH1. Which of these statements best describes the food eaten in your household in the last 12 months:

1. Enough of the kinds of food we want to eat
2. Enough but not always the kinds of food we want
3. Sometimes not enough to eat
4. Often not enough to eat

HH2. is “(I/We) worried whether (my/our) food would run out before (I/we) got money to buy more.” Was that often true, sometimes true, or never true for (you/your household) in the last 12 months?

HH3. “The food that (I/we) bought just didn’t last, and (I/we) didn’t have money to get more.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

HH4. “(I/we) couldn’t afford to eat balanced meals.” Was that often, sometimes, or never true for (you/your household) in the last 12 months?

Screening questions – 1 or more Sometimes or Often responses – move to second set

Stage 2 Adult/Households questions (if one or more Stage 1 Adult/Household questions affirmed)

In the last 12 months...

4a	Did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?	Yes No
4b	If yes: How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?	Almost every month Some months but not every month Only 1 or 2 months
5	Did you ever eat less than you felt you should because there wasn't enough money for food?	Yes No
6	Were you every hungry but didn't eat because there wasn't enough money for food?	Yes No
7	Did you lose weight because there wasn't enough money for food?	Yes No

Stage 3 Adult/Households questions (if one or more Stage 2 Adult/Household questions affirmed)

In the last 12 months...

8a	Did (you/you or other adults in your household) ever not eat for a whole day because there wasn't enough money for food?	Yes No
8b	If yes: How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?	Almost every month Some months but not every month Only 1 or 2 months

Households that report 3+ conditions here are classified as "food insecure."

High Food Security

Households had no problems, or anxiety about, consistently accessing adequate food

Marginal Food Security

Households had problems or anxiety at times about accessing adequate food, but the quality, variety, and quantity of their food were not substantially reduced

Low Food Security

Households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted

Very Low Food Security

At times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money or other resources for food.

DEFINITION OF FOOD SECURITY (USDA)

FOOD INSECURITY IN THE UK: GOVERNMENT SOURCES

Food & You Survey – Food Standards Association

- England, Wales & Northern Ireland
- Survey questions based on the 10-item 'US Household Food Security Survey Module'.

Family Resources Survey – Department of Work & Pensions – started reporting 2021

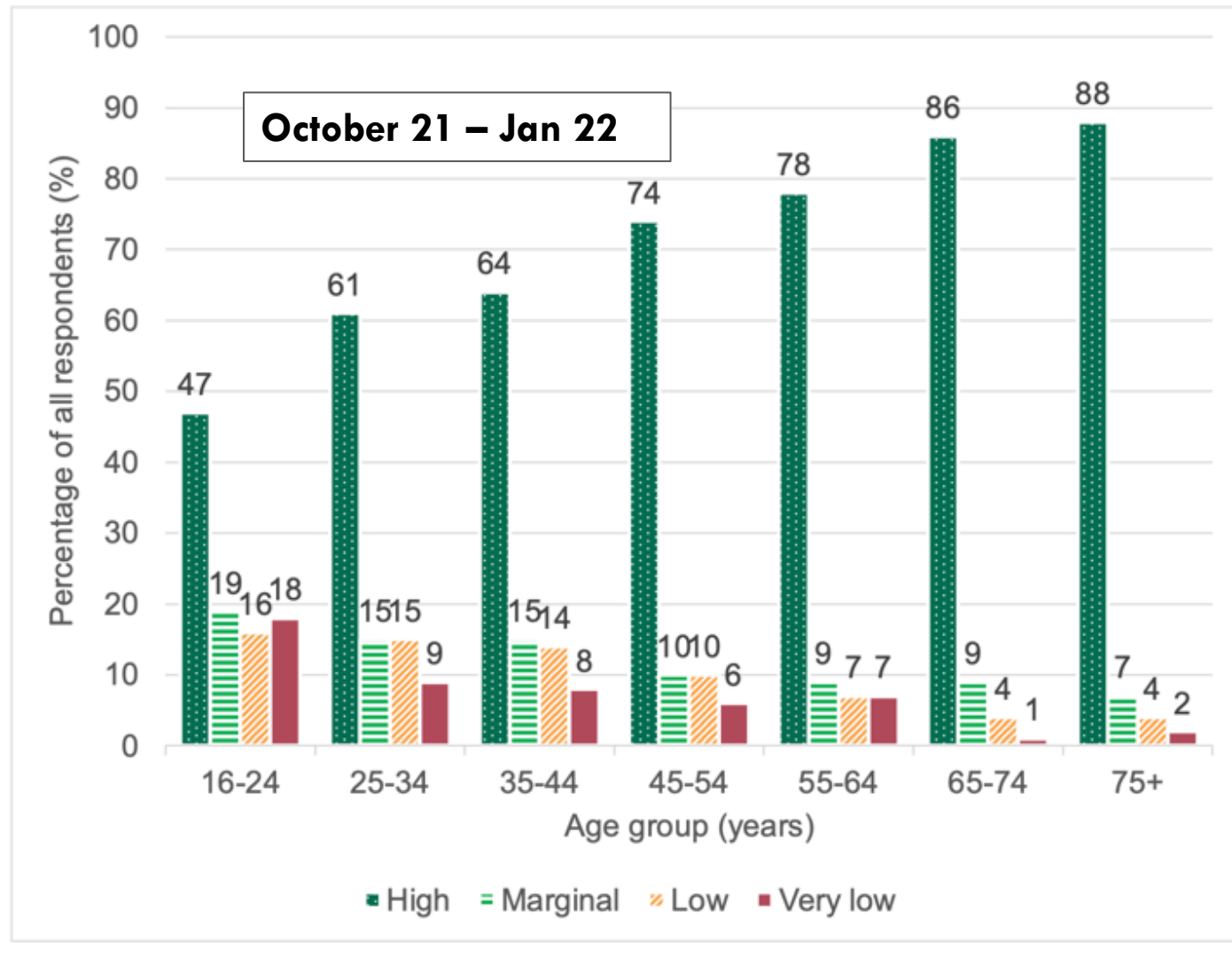
- Annual, continuous household survey
- Representative sample of private households across whole of UK (n=20K)
- uses USDA 10-question measurement (although without consideration of children separately)

Fingertips data – Public Health Profiles – new in May 2022

- Uses Family Resources Survey

The Food and You 2 Survey – Wave 4

Figure 7. Food security by age group.



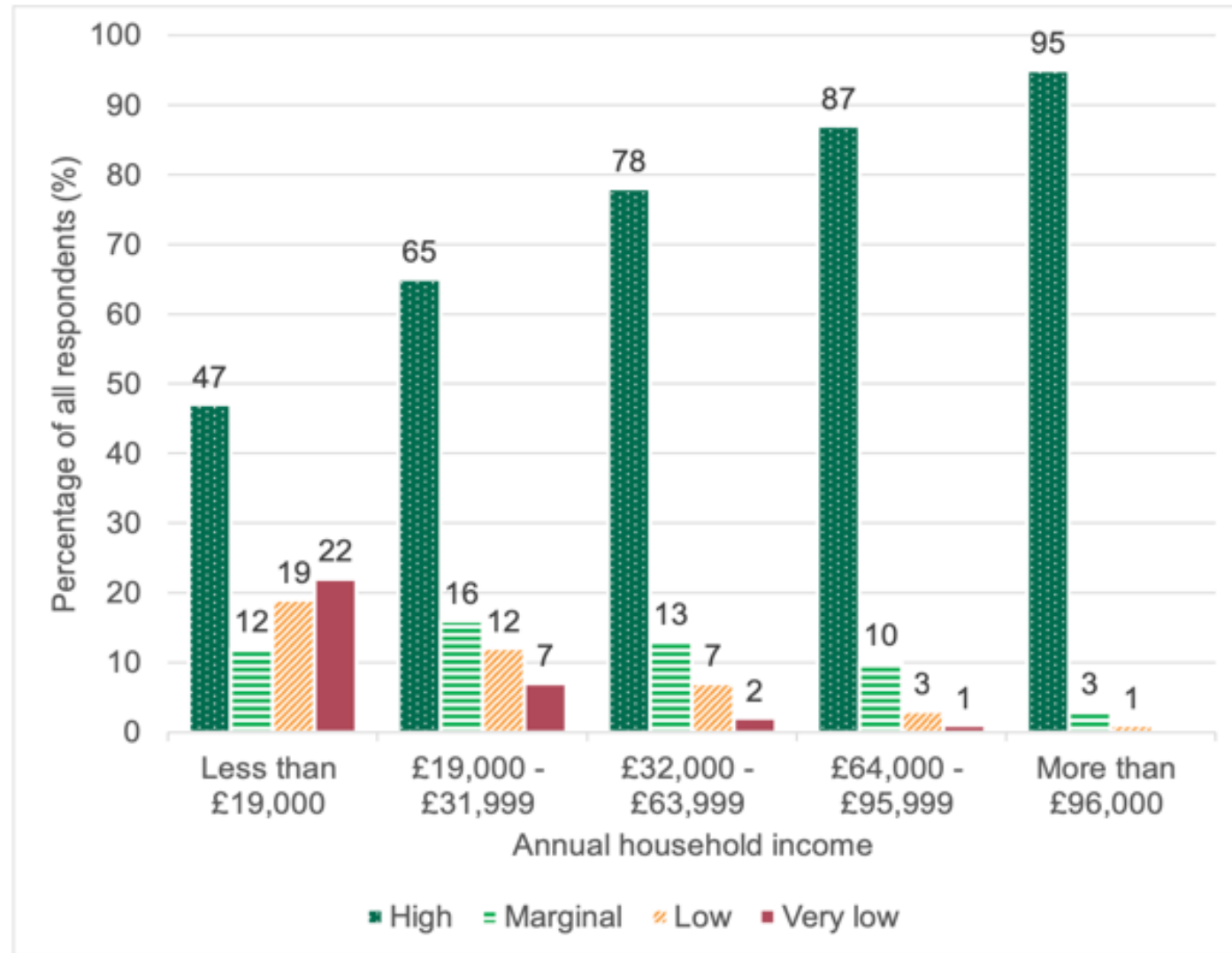
**Food Standards Agency
England, Wales & Northern Ireland
Use USDA 10-question survey tool
Every 6 months**

Latest report – August 2022

- 18th October 2021 and 10th January 2022
- 82% of respondents were classified as food secure (70% high, 12% marginal)
- 18% of respondents were classified as food insecure (10% low, 7% very low)

4% of respondents reported using a food bank or other emergency food provider in the last 12 months.

Figure 8. Food security by annual household income.



Source: Food and You 2: Wave 4

- 92% of respondents with an income over £96,000 reported high food security
- 46% of those with an income below £19,000

Over a third (36%) of those with an annual household income of less than £19,000 reported low or very low food security.

Other Factors:

- **Household size**
- **Households with children <16**
- **Employment status**
- **Occupational group**
- **Long-term health condition**

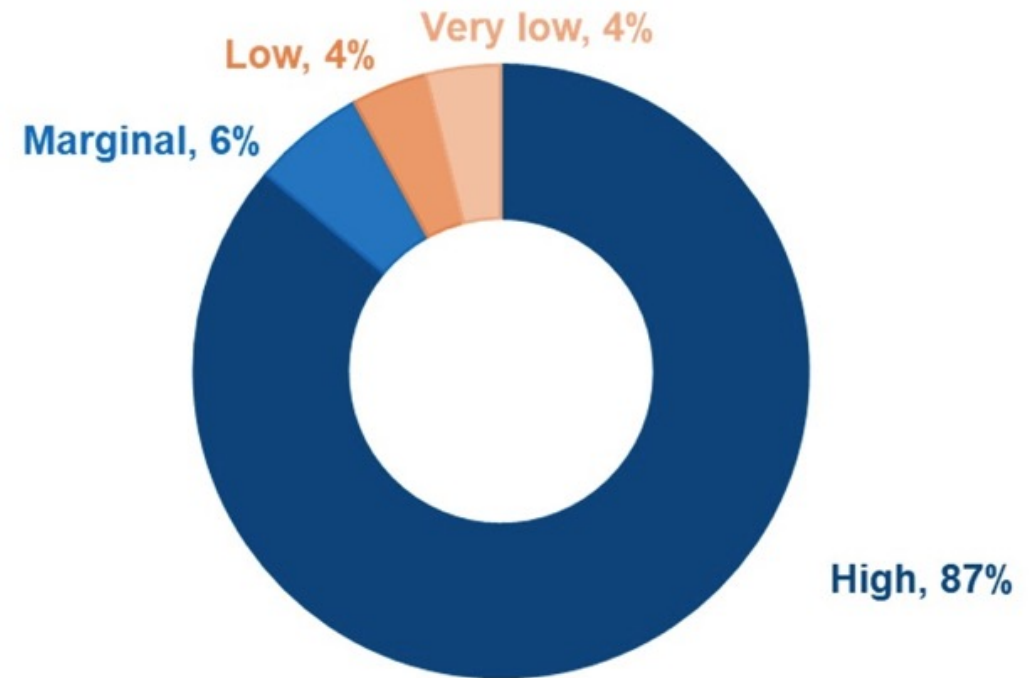
National statistics

Family Resources Survey: financial year 2020 to 2021

Published 31 March 2022

- Data published 31 March 2022
- 87% of people food secure
- 8% low or very low food secure = food insecure group
- Approximately 5 million households experiencing food insecurity
- 2.5 million households - high degree of food insecurity

Household Food Security



Most people lived in households with high household food security (87%) or marginal household food security (6%). A minority of households were food insecure, with low household food security (4%) or very low household food security (4%).



[Home](#)

Public health profiles

Data view

Compare areas

Geography

Region in England

Indicator search

Results for: food

Indicator

Food Insecurity - percentage of households experiencing food insecurity 2020/21 Proportion - %

[Show me the profiles these indicators are from](#)

[Legend](#) [Benchmark](#) [More options](#)

Areas **All in England** Display **Table** Table and chart

Area	Recent Trend	Count	Value	95% Lower CI	95% Upper CI
England	–	525	7.0	6.4	7.6
North East region	–	49	11.0	8.4	14.2
East Midlands region	–	65	9.0	7.1	11.3
North West region	–	78	8.0	6.5	9.9
Yorkshire and the Humber region	–	57	7.0	5.4	9.0
West Midlands region	–	50	7.0	5.3	9.1
London region	–	52	7.0	5.4	9.1
East of England region	–	63	7.0	5.5	8.8
South West region	–	37	4.0	2.9	5.5
South East region	–	51	4.0	3.1	5.2

Source: Household food security tables (table 9.1) available at: <https://www.gov.uk/government/statistics/family-resources-survey-financial-year-2020-to-2021>

MAPPING TOOLS

Priority Places for Food Index - Which? and University of Leeds

Composite index using proxy data

Aim: to identify neighbourhoods most vulnerable to increases in the cost of living and have lack of accessibility to cheap, healthy, and sustainable sources of food.

LSOA level - England and Wales; Data Zones in Scotland; Super Output Areas in Northern Ireland (2011 boundaries)

Additional focus on more on retail/food deserts

<https://priority-places-explorer.azurewebsites.net>

My Local Map – University of Southampton

Composite index using proxy data

Identifies neighbourhoods most at risk of food insecurity

Food bank, food pantry locations included in mapping

LSOA level – England and Wales

Currently used by several JSNAs

Update planned in January 2023 - new Census data and newer benefits data

mylocalmap.org.uk

FOOD INSECURITY IN THE UK: THIRD SECTOR ORGANISATIONS

Food Bank Data

- Trussel Trust (1200), Independent Food Banks (1100+)
- Measure number of parcels OR number of people OR number of households
- Most people experiencing food insecurity will not attend a food bank

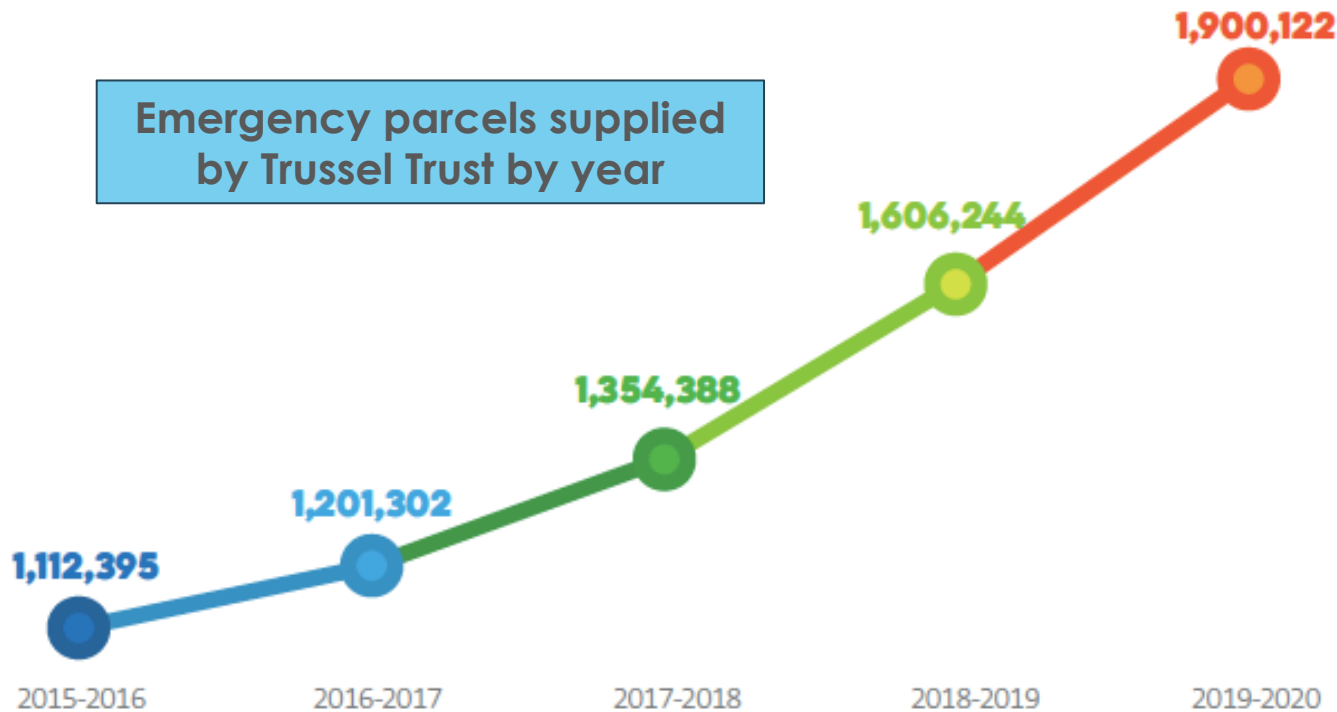
Food Foundation

- Survey data (YouGov)
- repeated at intervals since start of Covid pandemic – 10 in series to date
- nationally representative sample
- Use 3 questions - based on US Household Food Security Survey Module

The majority of food insecure households do not use emergency food provision.

(MacLeod et al. 2019; (Purdam et al., 2016; Purdam et al., 2019; Tarasuk et al 2020)

FOOD BANK RECIPIENTS – PRE-COVID-19



- Children are disproportionate recipients of charity food (Garrett 2017).
- Foodbank usage rose alongside cuts to social security benefit (Loopstra et al., 2015).
- Individuals and households impacted by recent welfare reforms are more likely to receive food bank parcels (MacLeod et al. 2019).
- In-work poverty, disability, and unemployment rates all associated with foodbank use (Loopstra et al. 2019).

STATE OF
HUNGER

**BUILDING THE
EVIDENCE ON POVERTY,
DESTITUTION, AND
FOOD INSECURITY IN
THE UK**

May 2021



95% OF PEOPLE REFERRED TO FOOD BANKS IN OUR NETWORK IN EARLY 2020 WERE DESTITUTE, MEANING THEY WERE UNABLE TO AFFORD TO EAT OR STAY WARM AND DRY.



62% OF WORKING AGE PEOPLE REFERRED TO FOOD BANKS IN OUR NETWORK IN EARLY 2020 WERE DISABLED - THREE TIMES THE RATE IN THE GENERAL WORKING AGE POPULATION.



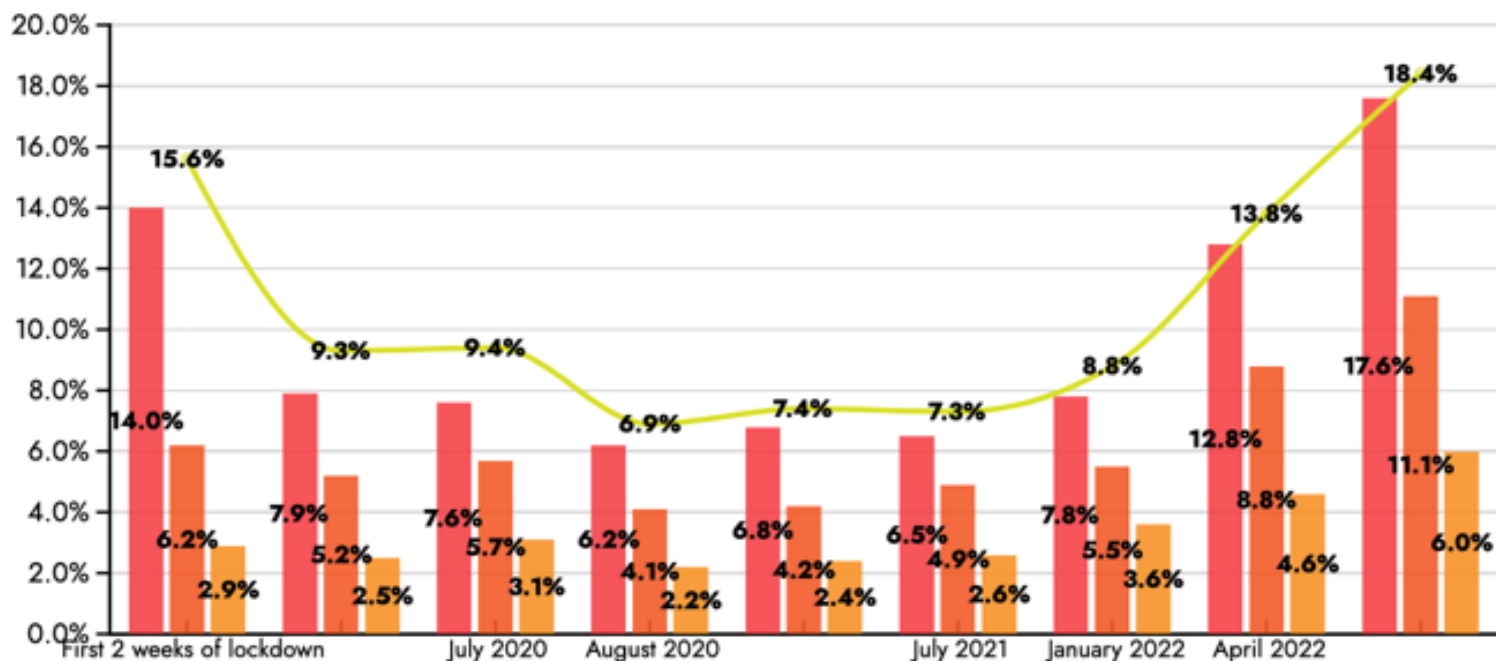
18% OF HOUSEHOLDS REFERRED TO FOOD BANKS IN OUR NETWORK DURING THE PANDEMIC WERE SINGLE PARENTS - MORE THAN TWICE THE RATE IN THE GENERAL POPULATION.



FOOD INSECURITY – FOOD FOUNDATION SURVEY ROUND 11 SEPTEMBER 2022

9.7 million adults (18.4% of households) have experienced food insecurity in the past month

Percentage of households experiencing food insecurity*:



■ Moderate or severe food insecurity
 ■ Had smaller meals/skipped meals
 ■ Been hungry but not eaten
 ■ Not eaten for a whole day

* 1-month recall period





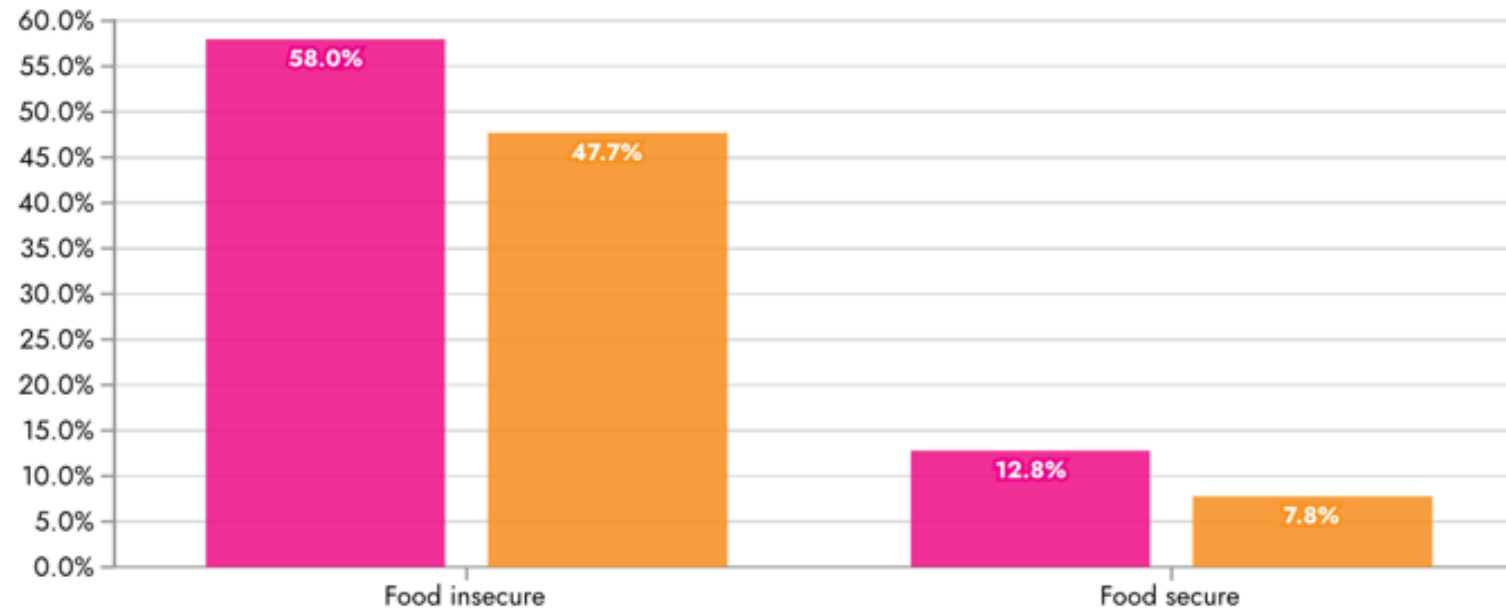
WHAT IS A PUBLIC HEALTH APPROACH TO FOOD INSECURITY?

- Health impacts across life course
- Health inequalities
- Wider determinants – points of intervention
- Prevention

Households who are food insecure* are cutting back on their purchases of healthy foods (fruit and vegetables) more than households who are food secure

Percentage of households who reported buying less in the past month

■ Fruit ■ Vegetables



*1-month recall period



Public Health Impacts of Food Insecurity

Pregnancy and neonatal health – Risk factor for depression and stress during pregnancy, neonatal mortality, newborn health problems and breastfeeding interruption (Agusto et al., 2020); associations with both inadequate and excessive gestational weight gain (Arzhang et al., 2022; Demetrio et al., 2020)

Working-age adults – Increased risk for a range of chronic diseases, including diabetes, hypertension, hyperlipidaemia, NFALD, CVD, obesity levels, poor sleep outcomes, stress, anxiety, depression, and poorer global cognition. (Arenas et al. 2019; Golovaty et al 2020; Gunderson and Ziliak 2015; McMichael et al 2022; Petrovic et al 2018; Pourmotabbed et al 2020; Wang et al. 2015; Weaver et al. 2018; Yau et al. 2020)

Older adults – Limitations to activities involved in daily living; depression and anxiety (Gunderson and Ziliak 2015)

Whole population – Increased risk of social and mental health; increased health care costs in infancy and adulthood; association with reduced general cognition, executive function, visuospatial abilities, and verbal memory (de Cuba et al. 2018; Dowler et al. 2011; Royer et al. 2021; Tarasuk et al. 2015)

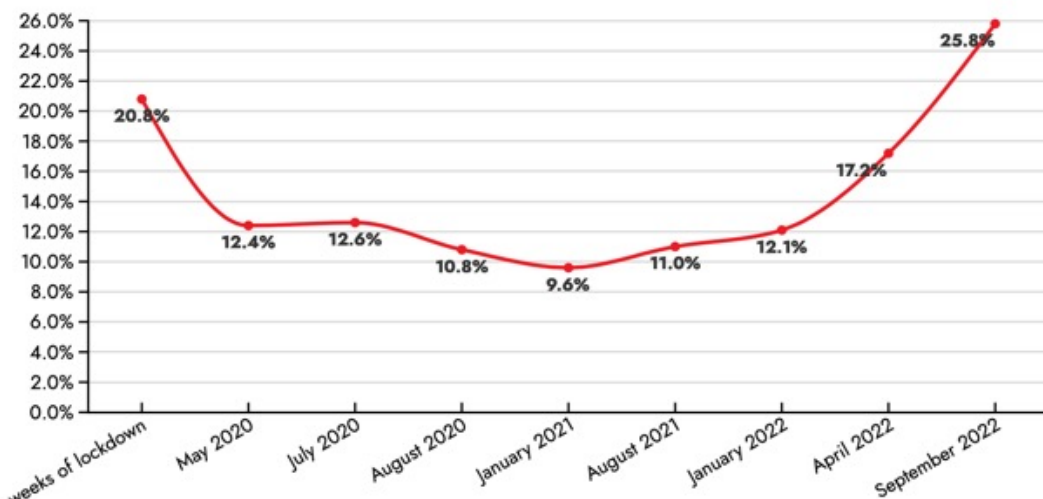
Children & Young People and Food Insecurity – systematic reviews

- Dose-response relationship between **food insecurity, diet quality and health-related Quality of Life** in children and adolescents (Wu et al., 2020)
- Review of 108 studies, assessing 250,553 parents and 203,822 children in total, in the United States. Found a significant association between food insecurity and parental depression, anxiety, and stress, and between food insecurity and **child depression, externalizing/internalizing behaviors, child depression, externalizing/internalizing behaviors, and hyperactivity** (Cain et al., 2022)
- Household **food insecurity associated with poor early childhood development**, specifically in high-income countries associated with developmental risk, poor math and vocabulary skills (de Olivera et al., 2019)
- Across developed countries, even marginal levels of **household food insecurity associated with behavioural, academic and emotional problems in children**, beginning as early as infancy (Shankar et al., 2017)
- Substantial evidence supports **link between childhood food insecurity and attention deficit hyperactivity disorder (ADHD)**, with impacts on pediatric ADHD symptoms and possible lasting effects into adulthood (Lu et al., 2019)
- The **ability to afford, access and acquire nutritionally adequate and culturally appropriate foods is associated with IGT and T2D in children and adolescents**. More longitudinal cohort studies on a larger, more representative sample needed to determine extent of this relationship. (Blackburn et al., 2021)
- **Links between obesity and food insecurity in children is not a clear picture**. Some groups more at risk than others, and some evidence suggests the number of food insecure episodes is a mitigating factor (St. Pierre et al. 2022)

Health Inequalities & Food Insecurity - Households with Children

One in four households with children (4 million children) have experienced food insecurity in the past month

Percentage of households with children that are experiencing food insecurity*:

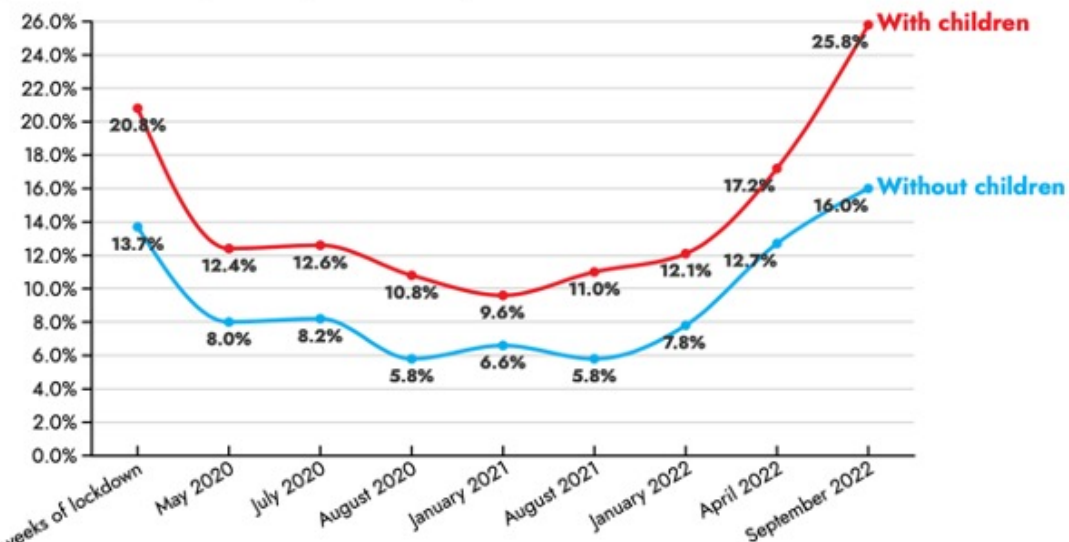


* 1-month recall period



Food insecurity has increased more in households with children

Percentage of households experiencing food insecurity*:



* 1-month recall period

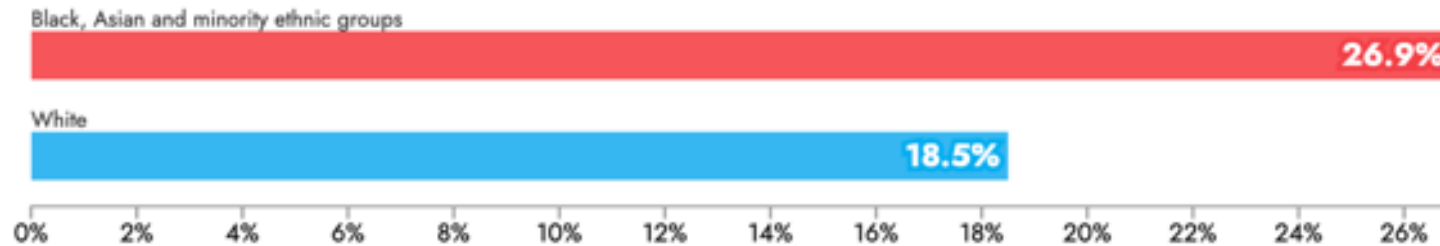


Health Inequalities - Populations at increased risk of Food Insecurity:

- People with minority ethnicity
- Geographic variance in prevalence

Non-White ethnic groups are more likely to be food insecure than White ethnic groups

Percentage of households experiencing food insecurity*:



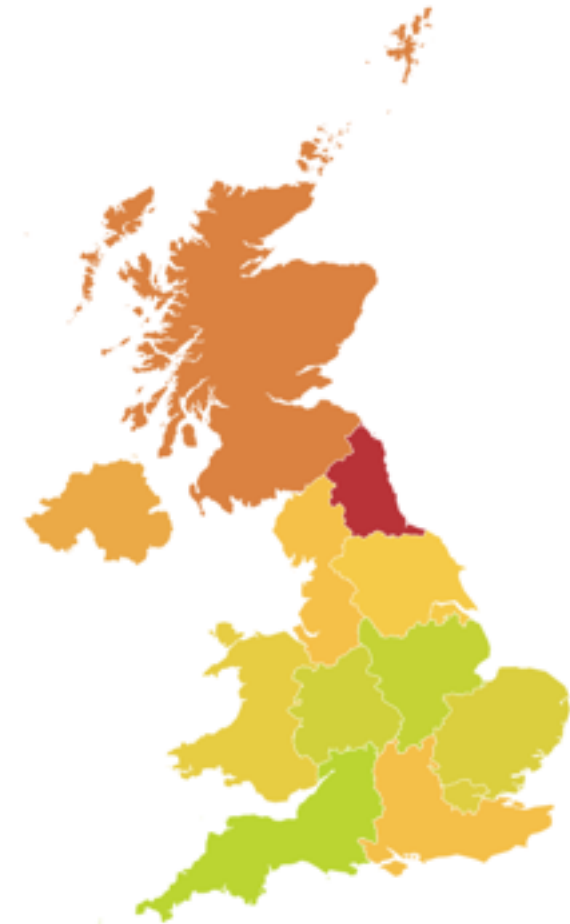
*1-month recall period



Significant regional inequalities in food insecurity continue to exist across the UK

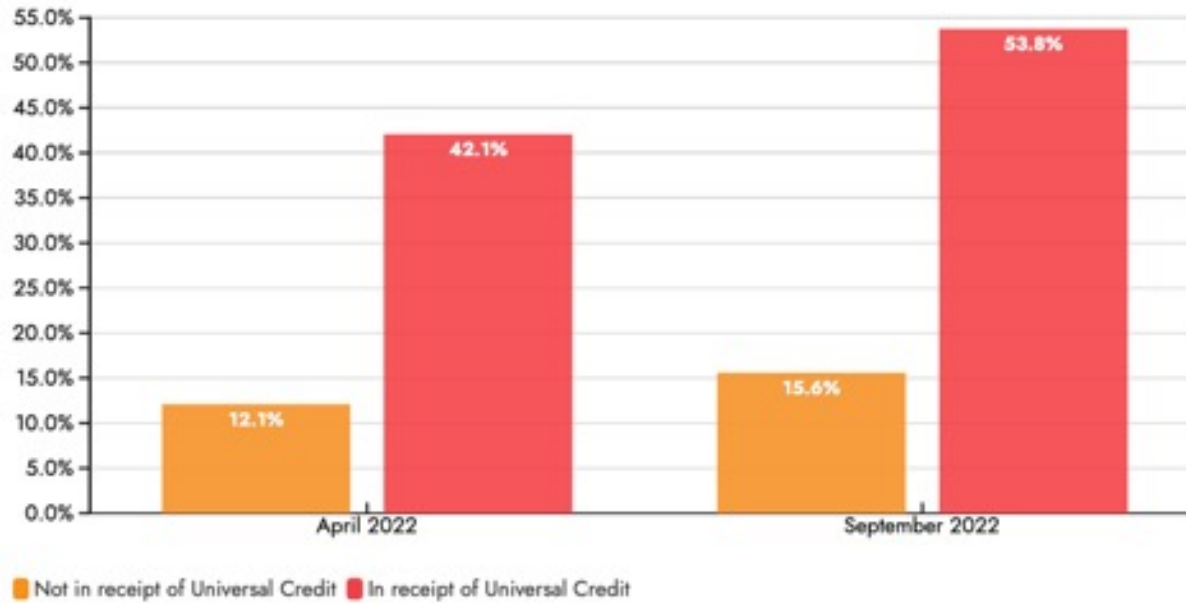
Percentage of households experiencing food insecurity in by UK region*

Value 14.1% 27.8%



Over half of households on Universal Credit have experienced food insecurity in the past month

Percentage of households experiencing food insecurity*:



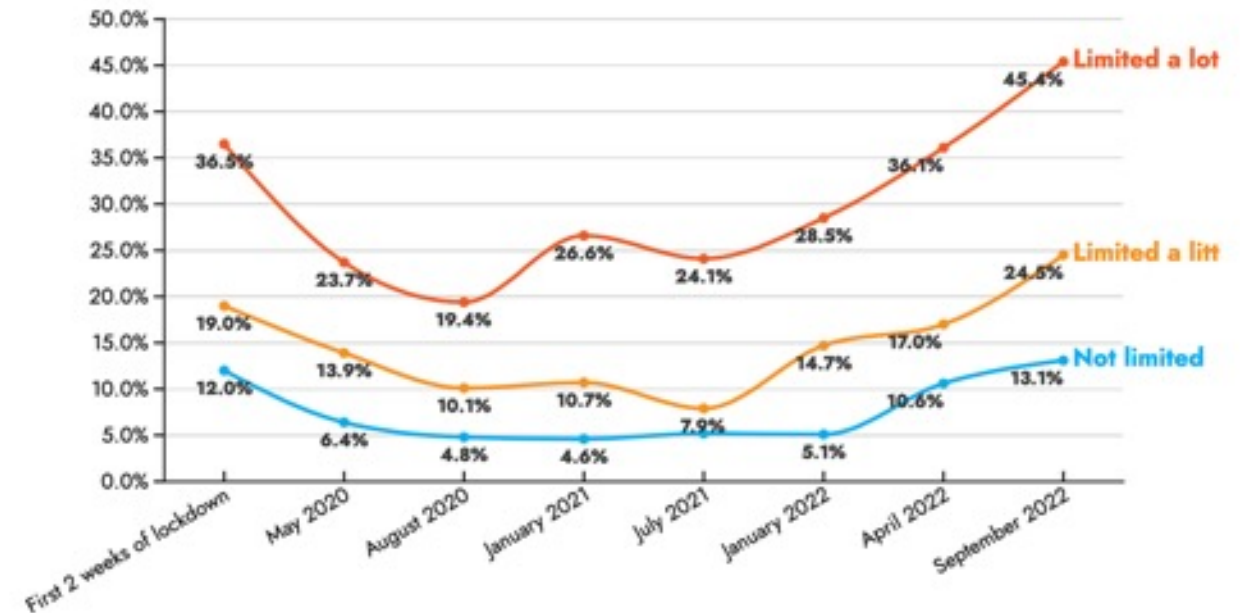
* 1-month recall period

Health Inequalities - Populations at increased risk:

- People on Universal Credit
- People with limiting disability

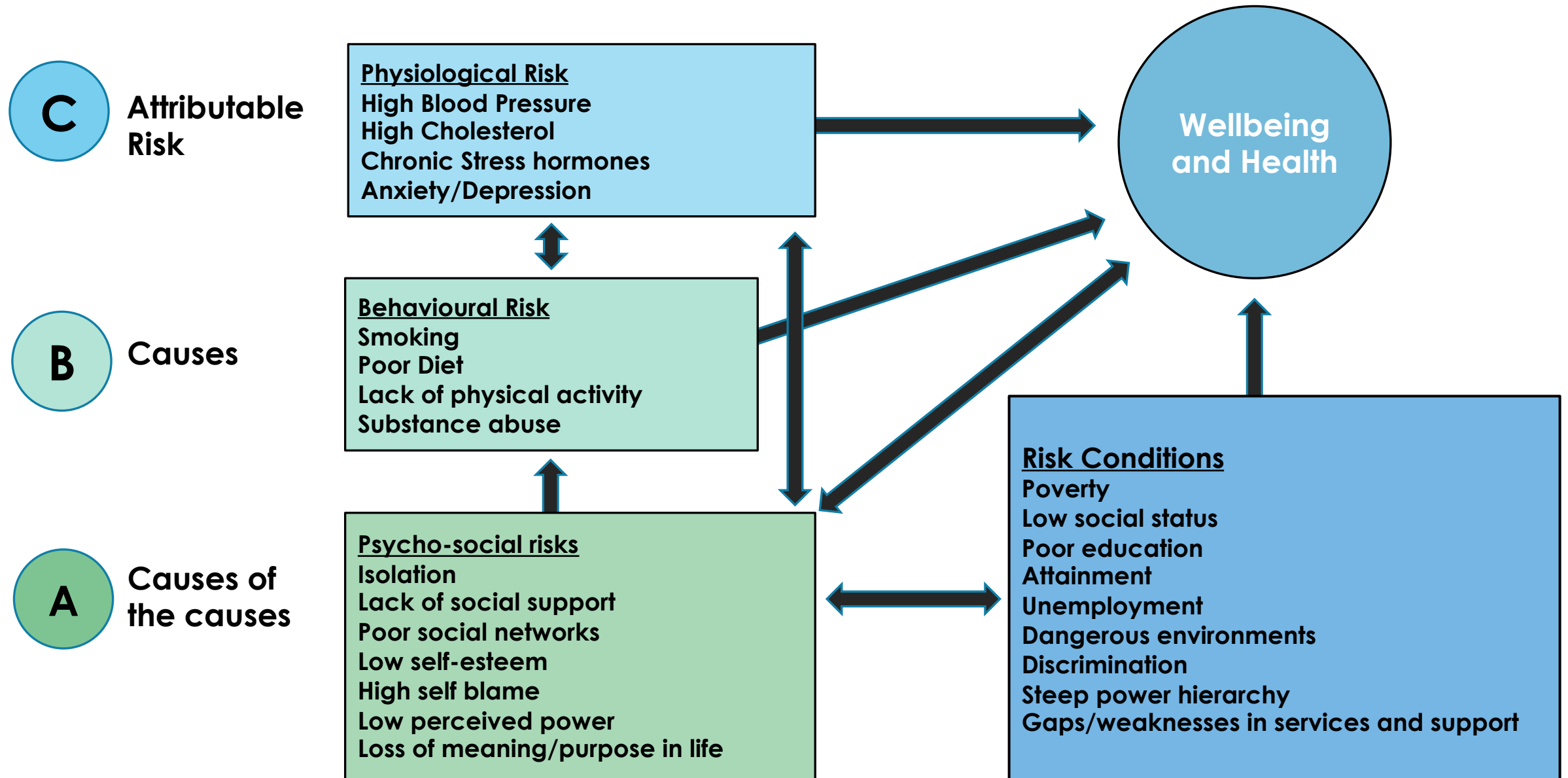
There has been a widening of inequalities experienced by people with disabilities

Percentage of households experiencing food insecurity* according to level of disability:



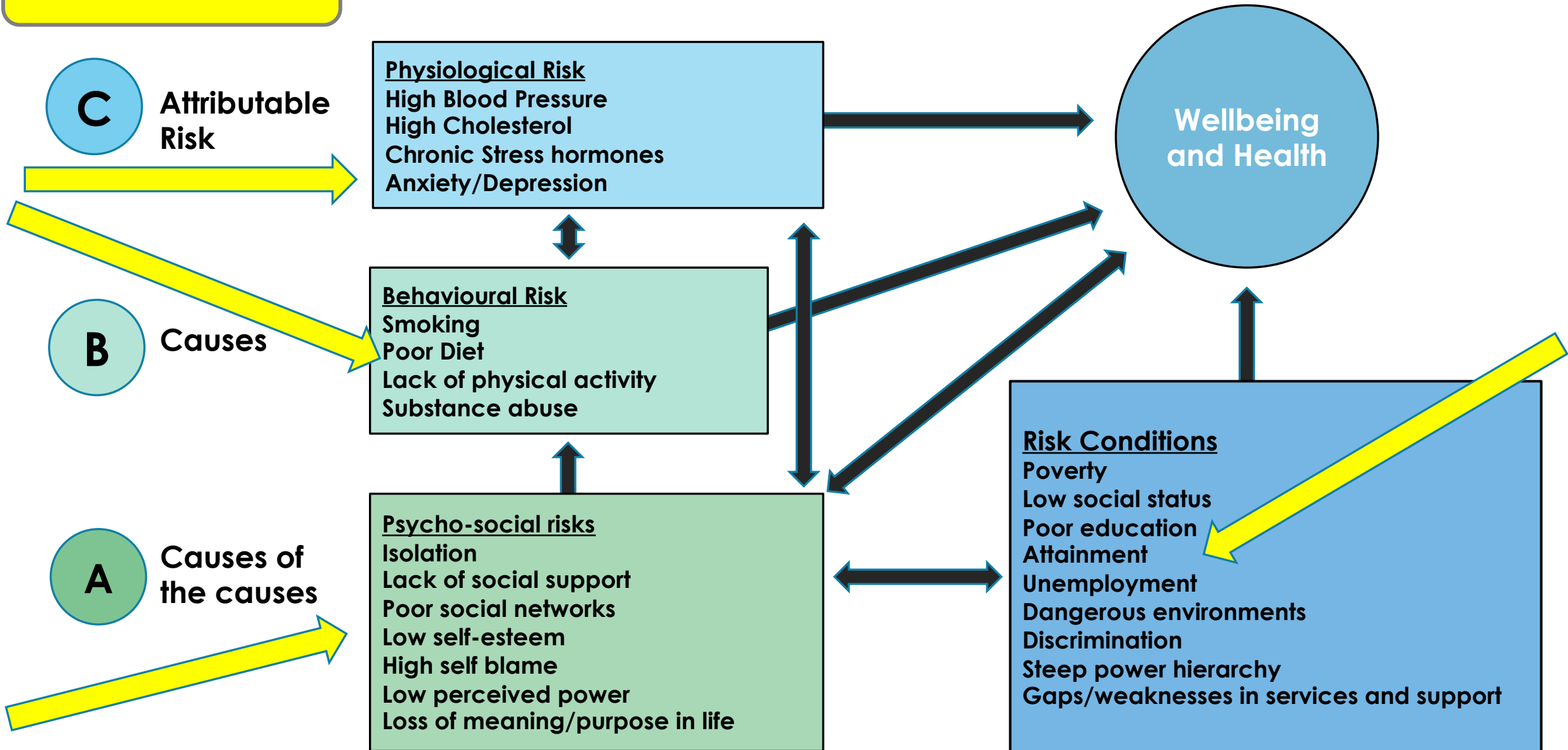
* 1-month recall period

Intervening at different levels of risk

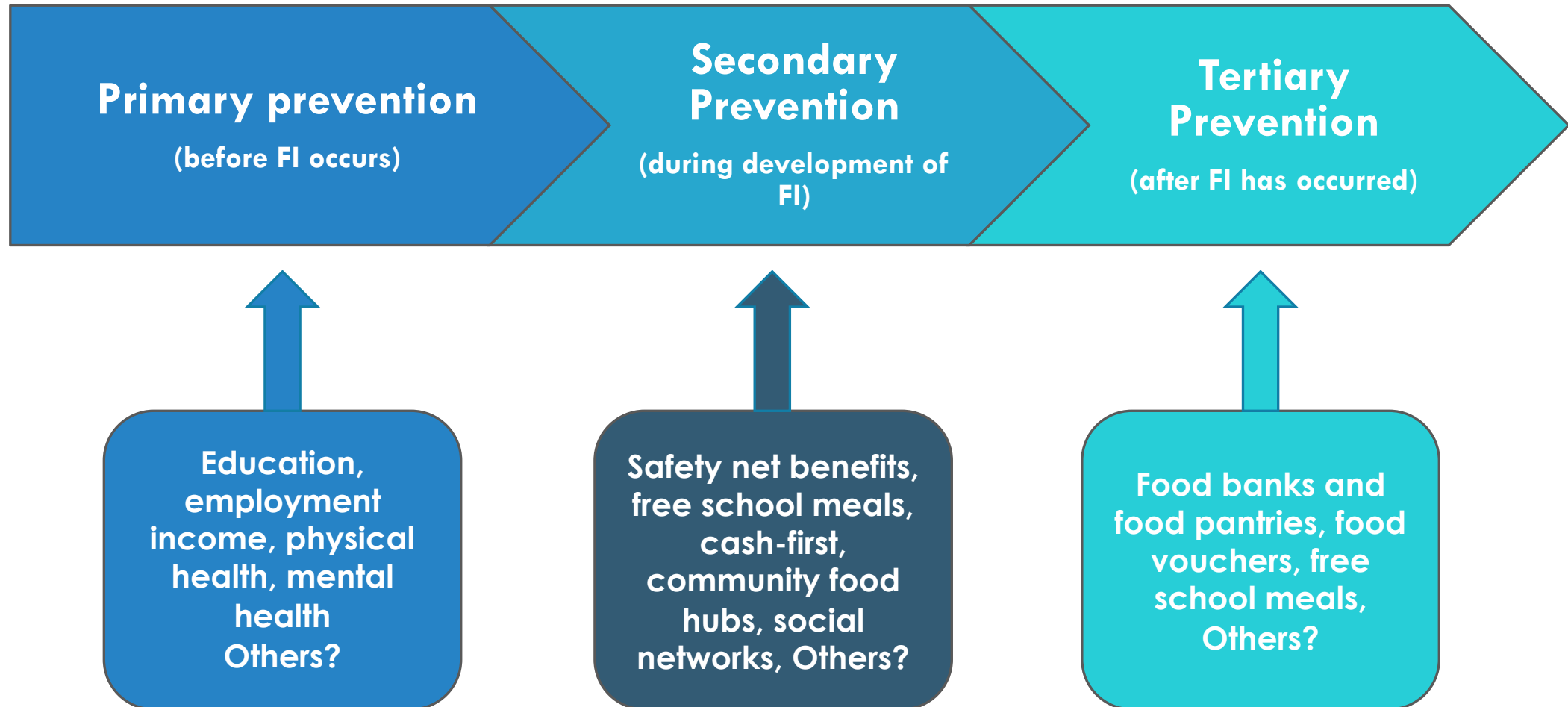


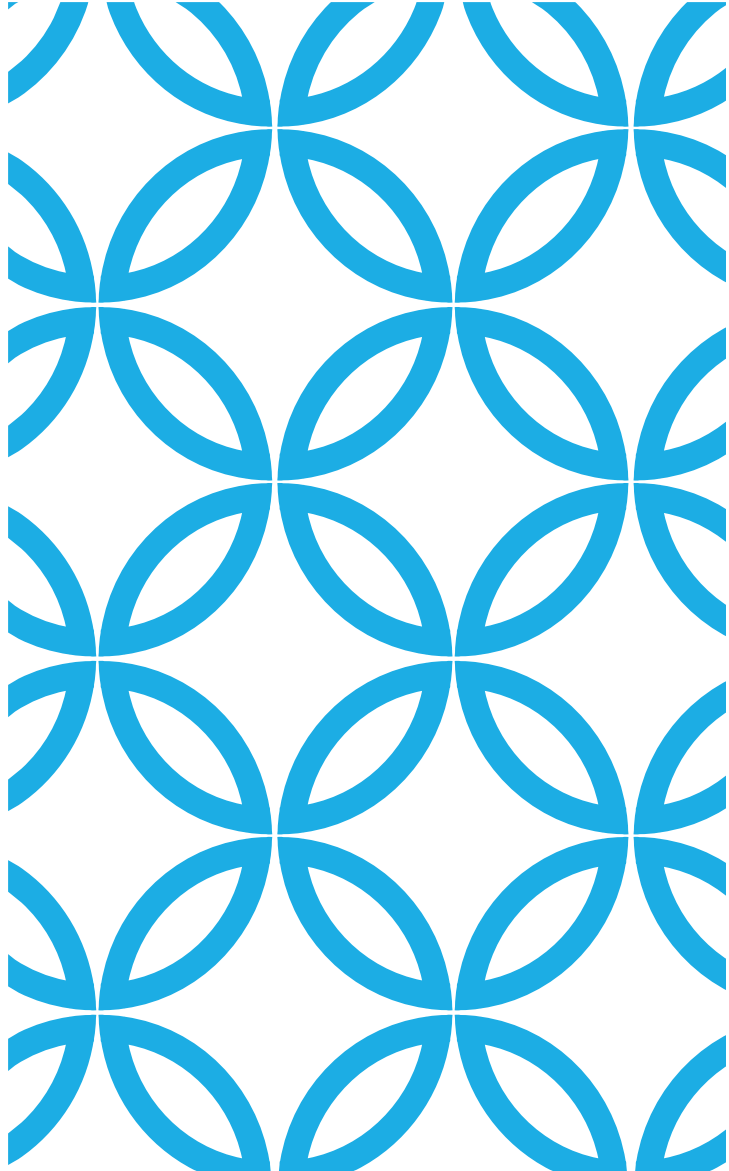
Food Insecurity?

Intervening at different levels of risk



Public health approach to food insecurity: What are we trying to do?





THANK YOU

Kristin Bash

k.bash@sheffield.ac.uk

[@kristinbash](https://www.instagram.com/kristinbash)

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