Exploring clinical and non-clinical waste from home nutritional care

PINNT Survey 2024

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Thanks go to all the respondents who shared their experiences. Without you this report would not have been possible.

First published on website 2025 by PINNT www.pinnt.com

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PINNT is a registered CIO No: 1157655

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What a Waste: What Patients Say About Home Nutrition and Sustainability

Background

The NHS aims to reduce its carbon footprint to net zero by 2045, but healthcare supply chains—including Home Nutrition Support (HNS)—generate significant waste [1]. To understand the impact on respondents, PINNT and BAPEN's Malnutrition Officer conducted a UK-wide survey in July–September 2024, asking people receiving HNS and their carers about their experiences with sustainability.

Home nutrition support (HNS) includes a range of treatment(s) used to reduce the risk of malnutrition (undernutrition) and improve nutritional state. These treatments often require prescribed products such as home parenteral support (HPS), home enteral tube feeding (HETF) and oral nutritional supplements (ONS). To administer these prescribed products, ancillaries are necessary. It is these treatments which will be considered in this survey. [2-9]

Who Took Part in the Survey?

A total of 443 people responded:

- 83% (345 people) were individuals receiving HNS.
- 17% (70 people) were carers, including parents of HNS respondents.
- 15% (64 people) required more than one form of HNS.

Age demographic: The ages of the respondents are outlined in figure one, which includes all treatment types. The largest are group for the use of HNS was 51-60 years, with 61-70years being second.

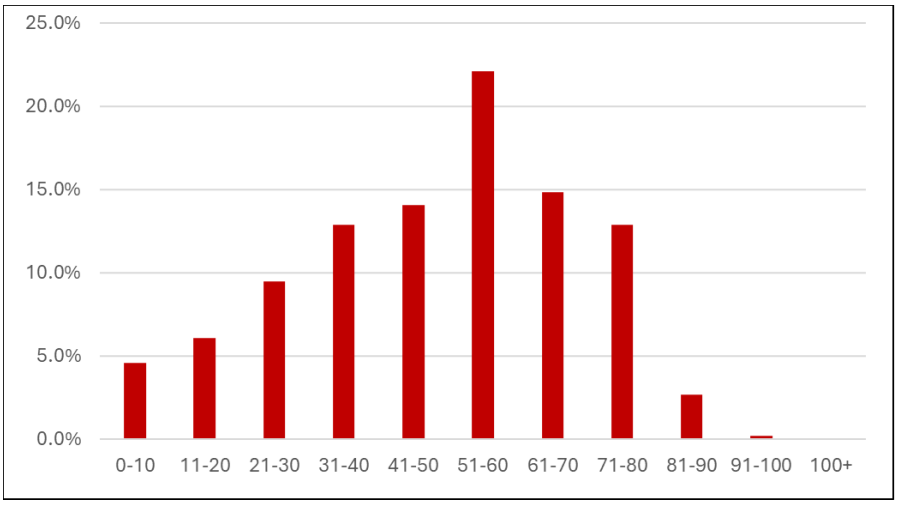

Figure 1 Percentage of individuals receiving HNS by age group.

Locality: Most respondents were from England (91%), with the distribution across England outlined in figure 2. Most respondents were found to live in the Southeast of England (77 people), with the Northwest of England being second with 63 people. Fewer respondents were living in the Greater London area (20 people)

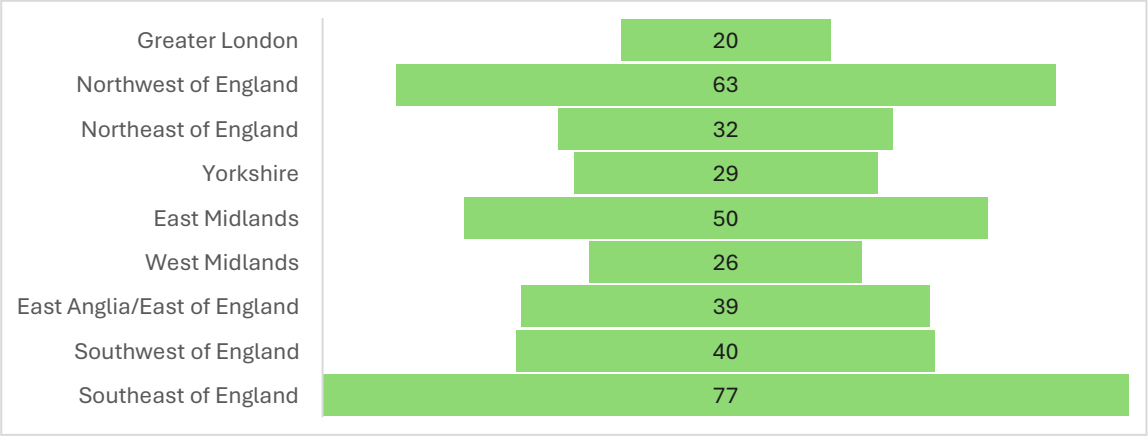

Figure 2: Number of individuals receiving HNS included in the survey by region within England.

HNS type

- 56% (233 people) received Home Parenteral Support (HPS) exclusively or as part of their HNS.
- 50% (208 people) used Home Enteral Tube Feeding (HETF), exclusively or as part of their HNS.
- 10.6% (44 people) used Oral Nutritional Supplements (ONS), exclusively or as part of their HNS.

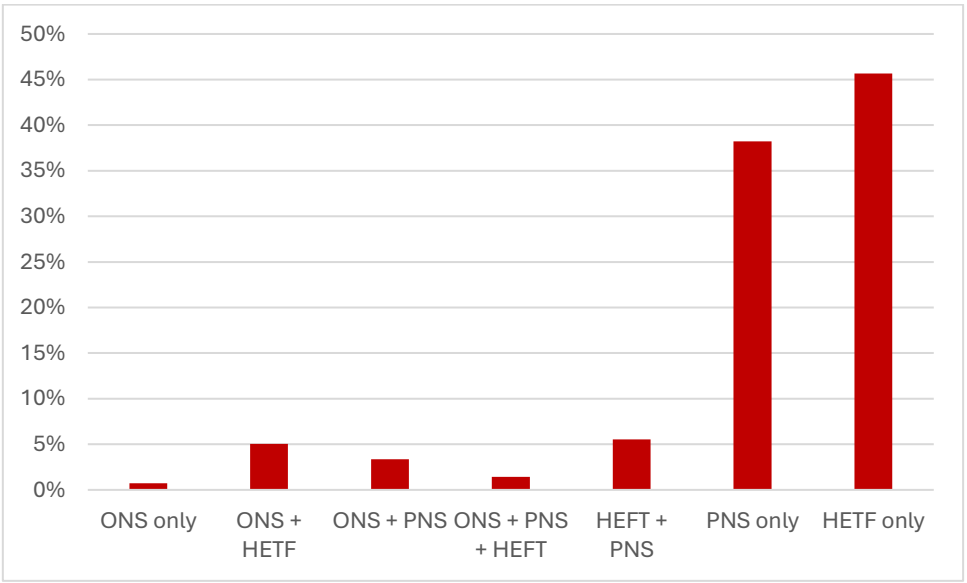

Figure 3 Percentage of individuals requiring HNS by treatment type.

How Respondents Received Their Prescribed Products and Ancillaries

Most respondents obtained their prescribed nutrition and supplies through homecare companies, but there were variations across treatments:

HETF (Tube Feeding) Deliveries

- 94.3% (182 people) received their enteral nutrition directly from a homecare provider.
- 3.1% (6 people) had deliveries from a local pharmacy.
- 2.6% (5 people) collected their supplies in person at a pharmacy.

HPS (Parenteral Support) Deliveries

- 100% (313 people) of those receiving parenteral nutrition obtained their prescribed products from a homecare company.
- 4.8% (15 people) initially said they did not receive their supplies from a homecare provider—but upon further clarification, their products were still delivered by homecare companies.

ONS (Oral Nutritional Supplements) Distribution

- 56.8% (25 people) received ONS from a homecare provider.
- 18.2% (8 people) had their ONS delivered from a local pharmacy.
- 25% (11 people) collected their ONS from a pharmacy in person.

How Respondents Received Their Ancillary Items

Ancillary items (tubes, syringes, dressings, gloves, etc.) were mainly delivered by homecare companies, but some respondents received mixed information about their source:

- 99.5% (204 people) on HETF received ancillaries from homecare companies, while 0.5% (1 person) received them from a local pharmacy.
- 100% (233 people) on HPS received all their ancillaries from a homecare provider.

Some respondents weren't sure where their supplies came from:

"I wasn't sure if my dressings should count as clinical waste or just normal household waste." (HETF respondent)

"I thought my syringes came from the pharmacy, but apparently they are sent by the homecare company." (HPS respondent)

Problems with Delivery Errors

Many respondents received incorrect deliveries at least once during the survey period, leading to frustration, wasted supplies, and disruption:

- 54% of HPS respondents had at least one incorrect delivery of parenteral nutrition or IV fluids.
- Only 46% of HPS, 49% of HETF, and 50% of ONS respondents received the correct products every time.
- 16% of HETF respondents experienced supply shortages, leading to changes in treatment plans.
- 10% of ONS respondents received the wrong flavour supplement, making them less likely to comply with their treatment.
- 37% of respondents required extra deliveries due to errors, keeping them homebound waiting for new shipments.

Table 1 Supply of prescribed product - HPS (May-July 2024)

Frequency of correct product delivered	HPS (Total response 245)
Every delivery correct	46% (n112)
Most deliveries correct	36% (n87)
Some deliveries correct	17% (n41)
None of the deliveries correct	2% (n5)

Table 2 Supply of prescribed products – HETF and ONS (May – July 2024)

Issue identified	HETF (Total response 187)	ONS (Total response 115)
Correct product	49% (n87)	50% (n57)
Damaged product	9% (n17)	4% (n5)
Incorrect flavour	n/a	10% (n11)
Incorrect product sent	3% (n6)	3% (n3)
Incorrect size	9% (n16)	n/a
Supply problem of product	16% (n29)	10% (n11)
Other	11.8% (n22)	18% (n21)

Frustrated respondents shared their experiences:

"Wrong feeds, wrong delivery, left in the wrong place—so had to be replaced as they were left on the doorstep. Not using that!" (HETF respondent)

"The delivery company never tells me if something is out of stock—I only find out when my order arrives missing items." (HETF respondent)

"I've run out of stock completely before, and had to go four days without essential nutrition—which I rely on to survive." (HETF respondent)

Confusion About Waste Management

Many respondents struggled with unclear instructions on how to dispose of clinical waste, leading to mixed practices:

- 47% of HPS respondents and 28% of HETF respondents said they had clinical waste—but many weren't sure how to dispose of it properly.
- 19.9% of respondents reported never receiving guidance on clinical waste disposal.
- 41.5% were told to put everything in household waste, even though some of it was classified as clinical waste.

Table 3: Methods of disposal of clinical waste by respondents

What have you been told to do with your clinical waste? (select all the apply)	Response (Total responses 496)
No advice about clinical waste disposal	19.9% (n77)
Place into a bag and put into my household waste	41.5% (n161)
I use the council's clinical waste bags which they collect	7.5% (n29)
I use clinical waste bags from homecare company, who then collect	12.1% (n47)
Put needles and sharps in a 'sharps bin'	36.6% (n142)
Other - Please tell us more	10.3% (n40)

For HETF & PNS, 28.1% and 47.4% stated they had clinical waste respectively. There was also confusion over non-clinical waste and recycling, with many respondents across the treatment types stating that they received no advice on recycling of non-clinical waste.

Table 4 Percentage of respondents by treatment type regarding whether they received advice on recycling of non-clinical waste.

Received advice	Treatment type	Percentage of respondents (Total responses 454)
Yes	Enteral	7.7% (n35)
	Parenteral	6.4% (n29)
	ONS	0.7% (n3)
No	Enteral	33.0% (n150)
	Parenteral	44.1% (n200)
	ONS	8.1% (n37)

Respondents highlighted this confusion:

"No one has ever explained what is and isn't clinical waste. So, I just put everything in general waste." (HPS respondent)

"I was told different things by my hospital team and my delivery company—who do I believe?" (HETF respondent)

"I asked my local council for advice on waste disposal. They said they couldn't help!" (HETF respondent)

Repurposing Supplies to Reduce Waste

Despite receiving little guidance on recycling, many respondents repurposed their supplies:

- 50.4% (119 people) reused packaging and supplies for gardening and household tasks.
- 31.4% (74 people) used medical materials for arts and crafts, donating items to schools and community groups.
- 18.2% (43 people) found uses for personal care, such as stoma care and makeup removal.

Some examples from respondents:

"Wash out empty feeding bags and use them for watering my plants." (HETF respondent)

"I give spare gauze from dressing packs to my children's nursery for crafts and painting." (HPS respondent)

"Used syringes are great for refilling windscreen washers in my car!" (HETF respondent)

Recommendations for Improvement

To improve patient experiences and sustainability, the report recommends:

1. **Clear Definitions & Education** – Define clinical vs. general waste and improve patient education.

2. **Better Communication with Supply Companies** – Ensure respondents receive correct deliveries without unnecessary waste.
3. **Waste Audit** – Investigate how much waste comes from incorrect deliveries.
4. **Handling Mistakes More Efficiently** – Require supply companies to collect incorrect/damaged items quickly.
5. **Improved Stock Check Processes** – Help respondents manage supplies better and provide substitutions when items are unavailable.

What Happens Next?

These findings show that respondents want to help make HNS more sustainable, but they need clearer guidance and more reliable supply chains.

- Improving communication, waste disposal education, and stock management could dramatically reduce unnecessary waste.
- More research is needed to understand how incorrect deliveries impact costs and sustainability for the NHS.
- A better relationship between respondents, suppliers, and healthcare teams is essential to make home nutrition support more efficient and environmentally friendly.

Acknowledgement

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References

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