

**YELLOW FEVER VACCINE USAGE BY YELLOW FEVER
VACCINATION CENTRES IN ENGLAND, WALES, AND
NORTHERN IRELAND 2017**

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1 EXECUTIVE SUMMARY

IMPLEMENTATION

1. The total number of centres contacted for the 2017 Annual Returns Survey of Yellow Fever Vaccination Centres (YFVC) in England, Wales, and Northern Ireland (EWNI) online survey was 3,132.
2. The response rate was 86%.

YELLOW FEVER VACCINATION CENTRES

3. The most common organisation types were NHS GP practices (64%), followed by pharmacies (22%), travel clinics (6%), private GP practices (5%), and occupational health departments (3%).
4. The average number of staff giving yellow fever vaccines per centre was 2.38 (median: 2).
5. The average number of staff per centre, who had received NaTHNaC yellow fever training was 1.45 (median: 1).

YELLOW FEVER VACCINE DOSES

6. The average number of yellow fever vaccine doses given per centre in 2017 was 44.4 (median: 21).
7. The total number of doses given was 117,795. If non-responding centres had the same administration patterns as responding centres, the number would be 136,590.
8. 20-29-year olds accounted for the largest proportion of vaccinated individuals (24.4%).
9. The total number of booster doses was 4,208 (3.6% of total doses). The numbers for booster doses by reasons exceeded this number indicating that the actual number is likely to be higher.
10. The predominant reason given for administering boosters was compliance with the International Health Regulations (IHR) followed by continuation of protection and traveller insistence.

SERIOUS ADVERSE EVENTS

11. A total of six Serious Adverse Events (SAE) were reported.
12. The types of events were Yellow Fever Vaccine-Associated Neurological Disease (YEL-AND) (N=2) and other (not qualified) (N=4).

YELLOW FEVER VACCINE WASTAGE

13. The total number of wasted doses was 1,783 (1.5% of total doses). The most commonly reported reasons for wastage were: vaccine out of date (43.3%), cold chain breakdown (41.9%), procedure fault (8.5%), other (6.0%), and product fault (0.8%).

VACCINATION ERRORS

14. Yellow fever vaccine was erroneously administered in 43 instances; reasons given were given when contraindicated (17), diluent only administered (8), given when vaccine out of date (6) and other (12).

2 AIMS

This information request concerns the 2017 Annual Returns Survey of YFVC in EWNI.

3 METHODS

A questionnaire was created in SurveyMonkey online survey software (SurveyMonkey, San Mateo, California, US). A generic weblink was disseminated to centres via multiple channels: email to YFVC staff, News Items on the NaTHNaC website (TravelHealthPro), newsletter to subscribers of news on both NaTHNaC TraveHealthPro and the NaTHNaC Yellow Fever Zone websites, and social media posts (Facebook, Twitter). Operational leads at major travel clinic and pharmacy chains were contacted via email. Weekly progress reports with the number of responses and any technical issues arising were circulated to the Yellow Fever Strategic Review Group. The online questionnaire was open for responses between 15 January and 19 March 2018.

4 RESULTS

A total of 3,132 centres were contacted; the response rate was 86% (military centres were excluded from analyses for confidentiality reasons). In comparison, the response rates in the previous four years were 86%, 80%, 80%, and 71%.

The total number of responses collected was 3,093 with valid YFVC ID. Of these, 392 were either duplicates (N=307) or had IDs which indicated the centre was not currently designated (N=85). Only the latest response from a centre was kept for analysis where there were duplicates and responses from undesignated centres were discarded. Of the 3,132 centres with current designation status on 17 January 2018, a total of 2,701 centres responded (86% response rate).

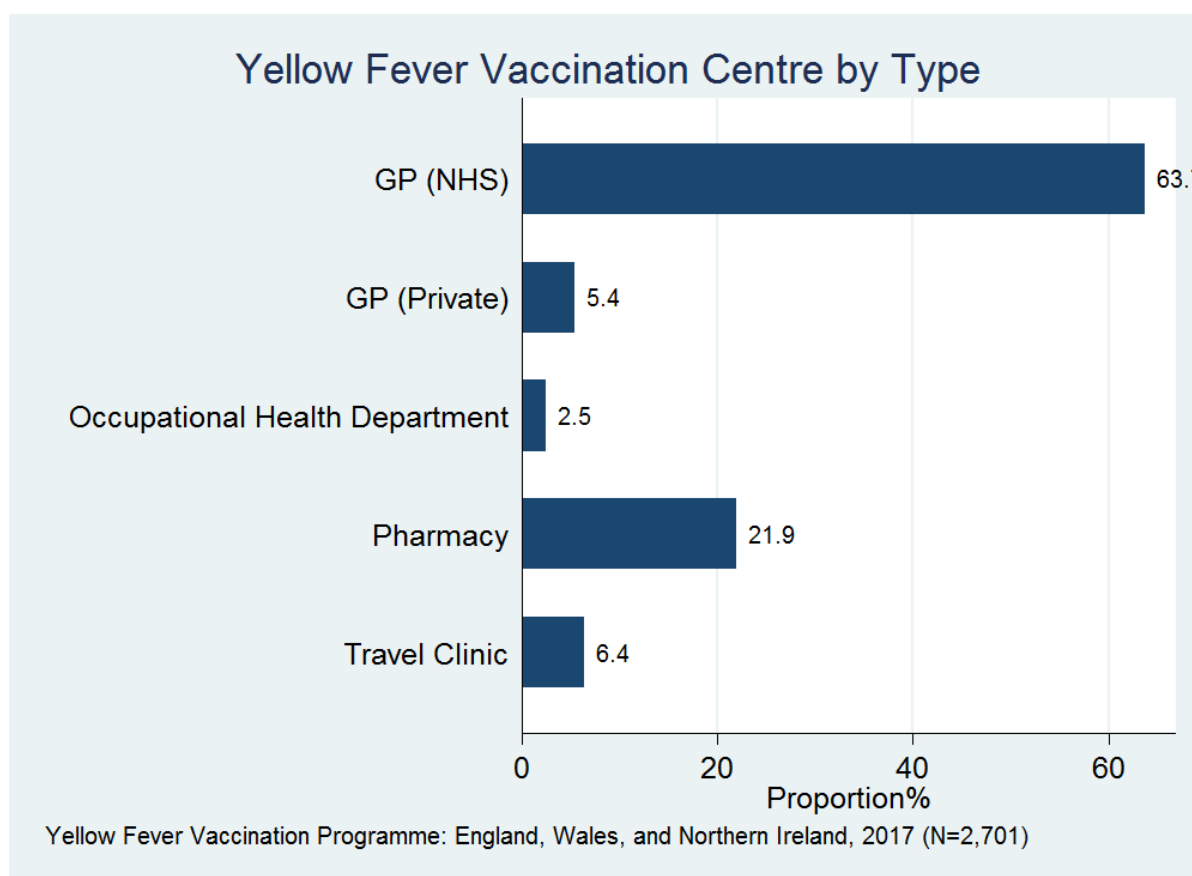


Figure 1. Yellow Fever Vaccination Centre organisation type.

The YFVCs were NHS GP practices (64%), pharmacies (22%), travel clinics (6%), private GP practices (5%), and occupational health departments (3%) (Figure 1). A small proportion of centres (6.1%) had been registered for less than a year (Figure 2).

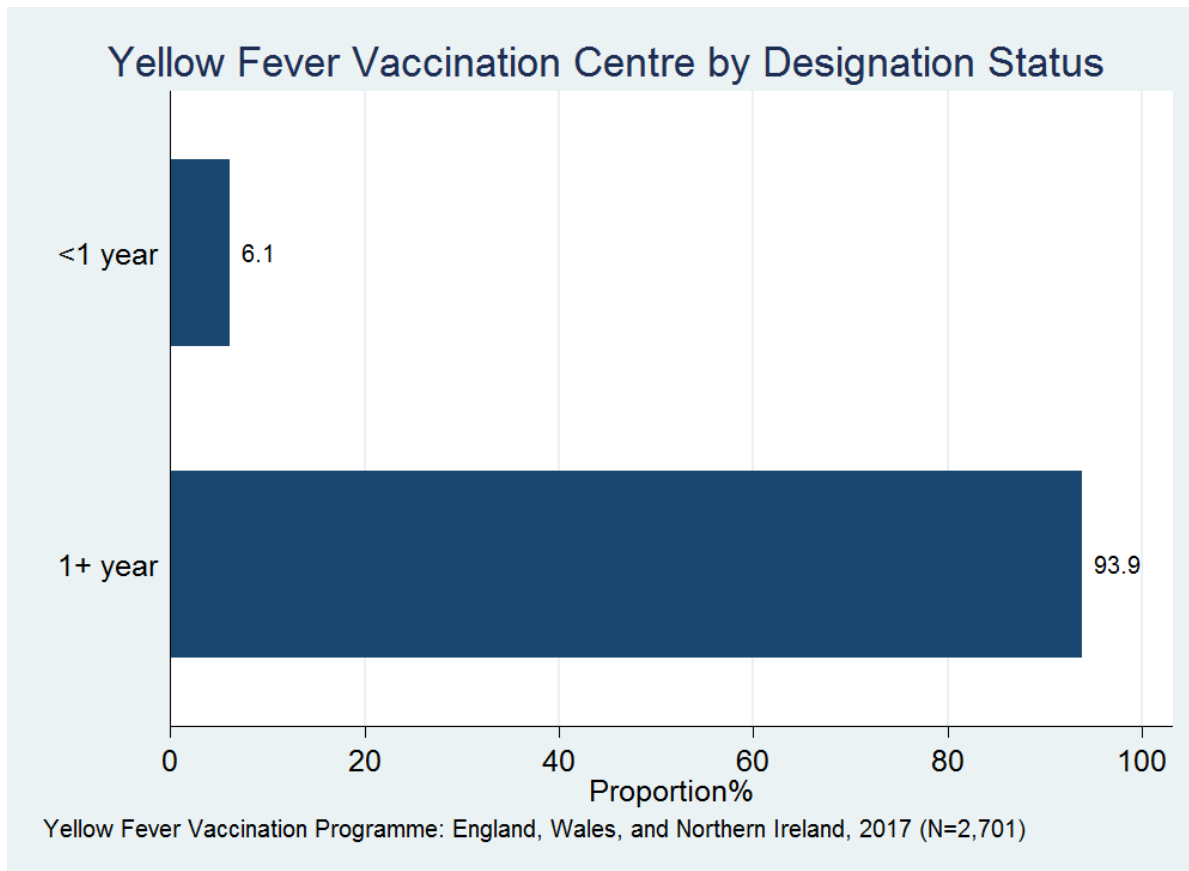


Figure 2. Yellow Fever Vaccination Centre designation status.

Vaccine administration

- The average number of staff giving yellow fever vaccines per centre was 2.38 (median: 2)
- The average number of staff per centre, who had received YF training was 1.45 (median: 1)

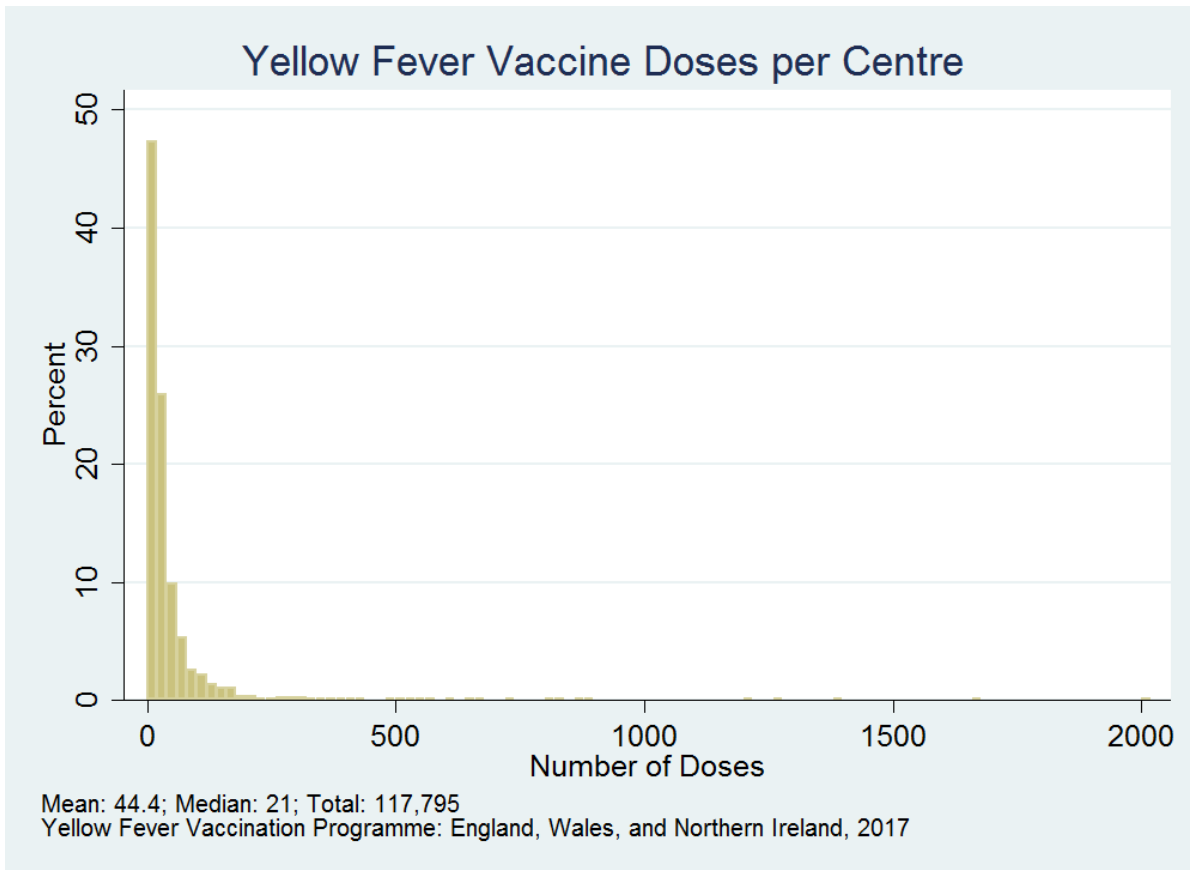


Figure 3. Yellow fever vaccination doses administered per centre.

The average number of yellow fever vaccine doses given per centre was 44.4 (median: 21) (Figure 3). The total number of doses given was 117,795. If non-responding centres had the same administration patterns as responding centres, the total number of doses would be 136,590.

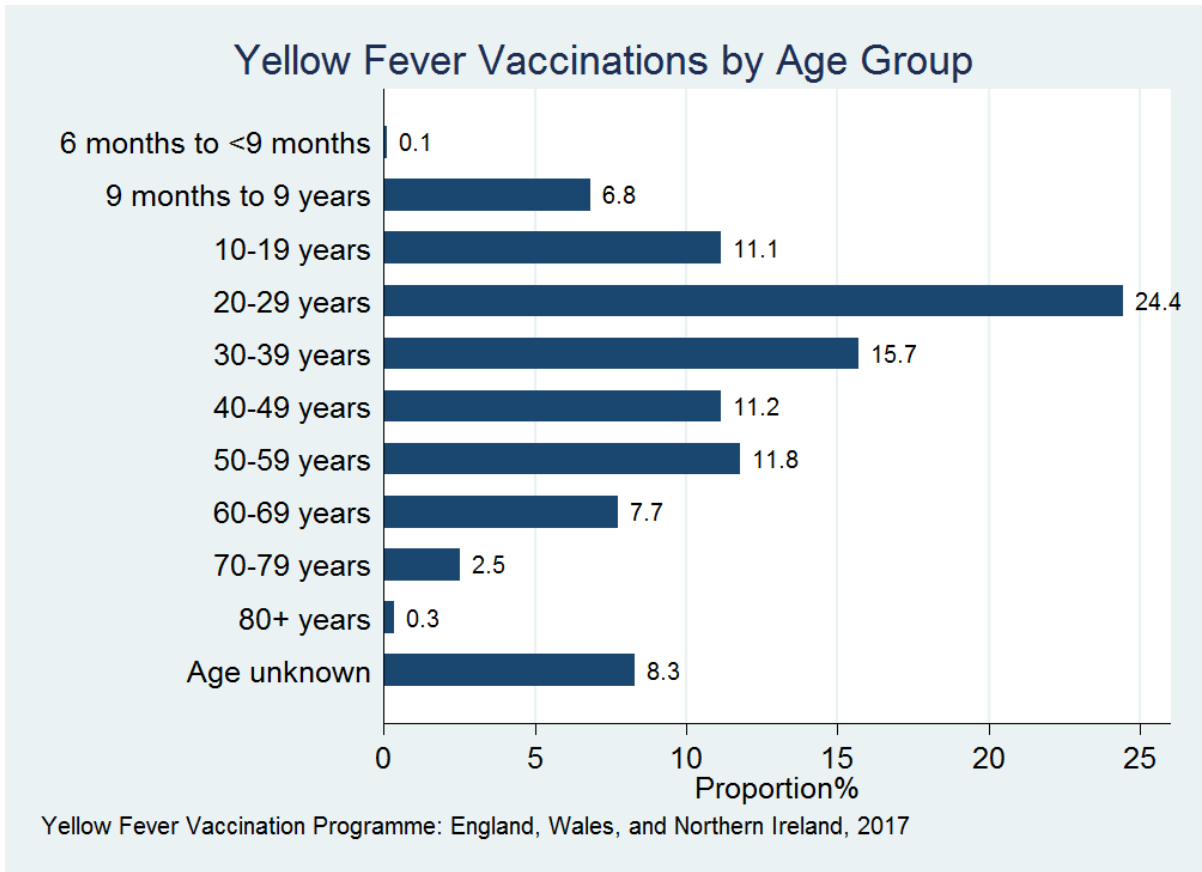


Figure 4. Yellow fever vaccinations by age group.

The age distribution of individuals given yellow fever vaccines was bell-shaped and skewed towards younger adults (Figure 4).

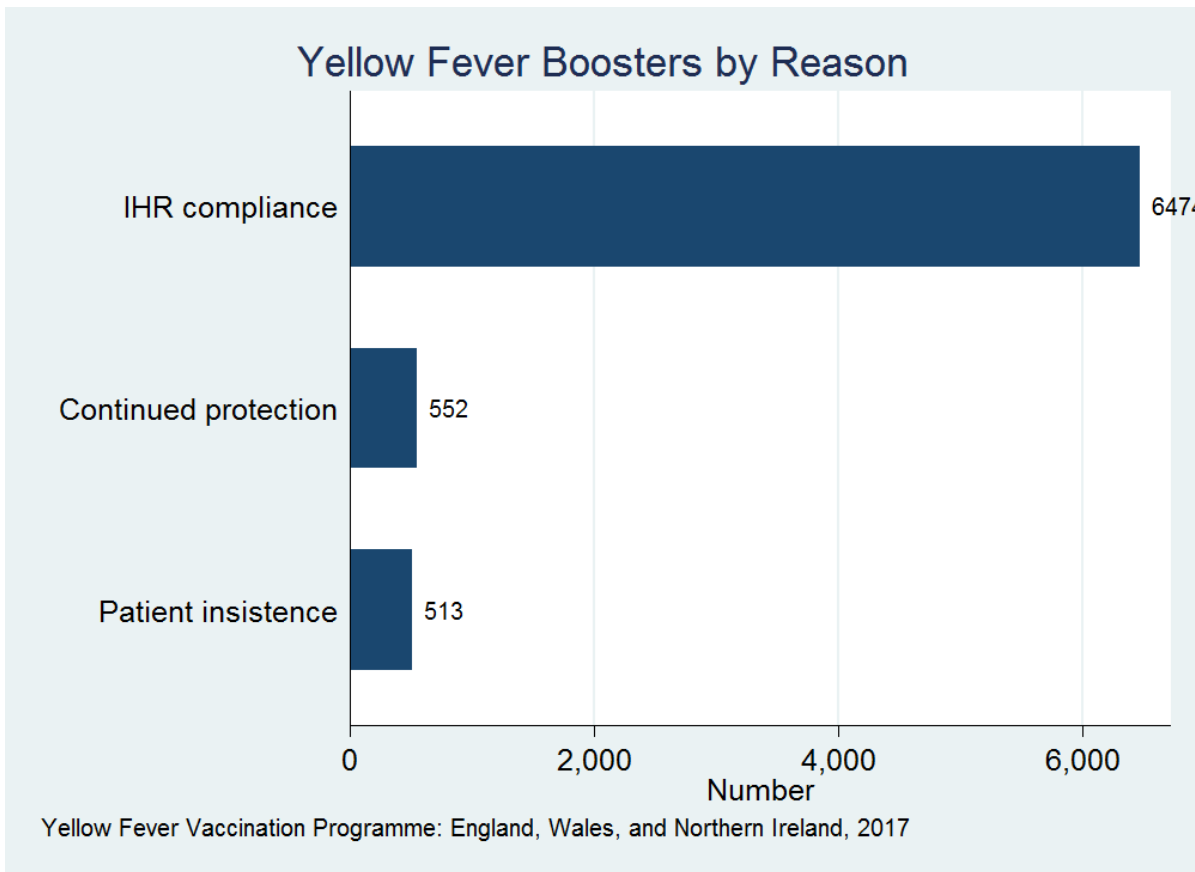


Figure 5. Proportion of yellow fever boosters by reason.

The total number of booster doses administered was 4,208, which equates to 3.6% of all doses given. However, a number of centres (N=131) gave numbers for boosters during the subsequent breakdown of reasons for giving the booster despite responding 'none' for the question about the number of boosters.

The most common reason for administering a booster dose was compliance with International Health Regulations (IHR). This is an unexpected finding, since booster doses are not indicated for most travellers either for personal protection, or to comply with International Health Regulations. The total number of boosters given for this reason was 6,474, alone, or 5.5% of all doses given. It therefore seems likely that the number of boosters is higher than 4,208 and this should be borne in mind when interpreting the results.

The subsequent analysis has been limited to the distribution of the different reasons for giving a booster. The reasons for giving boosters were compliance with the IHR (6,474 booster doses), continued protection (552), and at patient insistence (513) (Figure 5).

A total of six serious adverse events (SAE) were reported. The types of SAE reported were YEL-AND (2) and other (not qualified) (4).

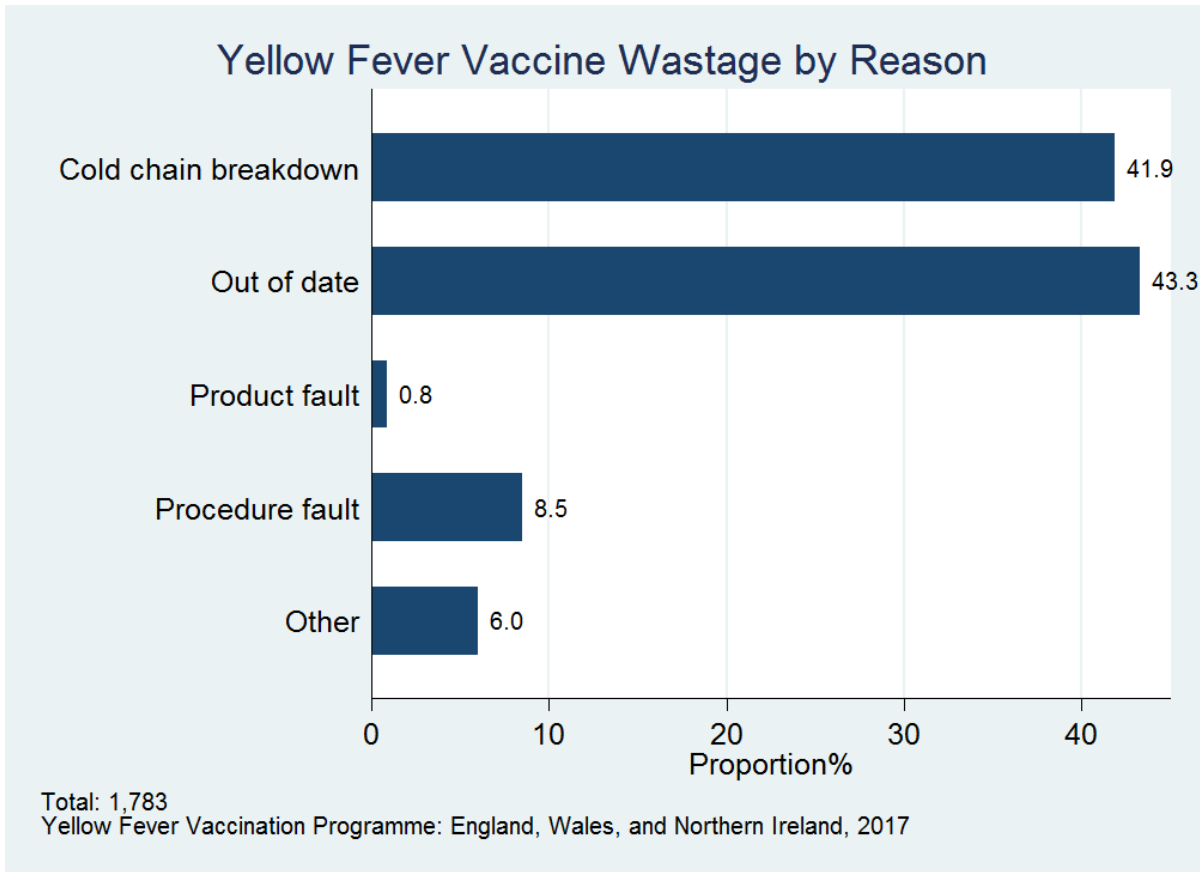


Figure 6. Yellow fever vaccine wastage by reason.

The total number of wasted doses was 1,783. The most commonly mentioned reasons for wastage were 'out of date' (43.3%), cold chain breakdown (41.9%), procedure fault (8.5%), other (6.0%), and product fault (0.8%) (Figure 6).

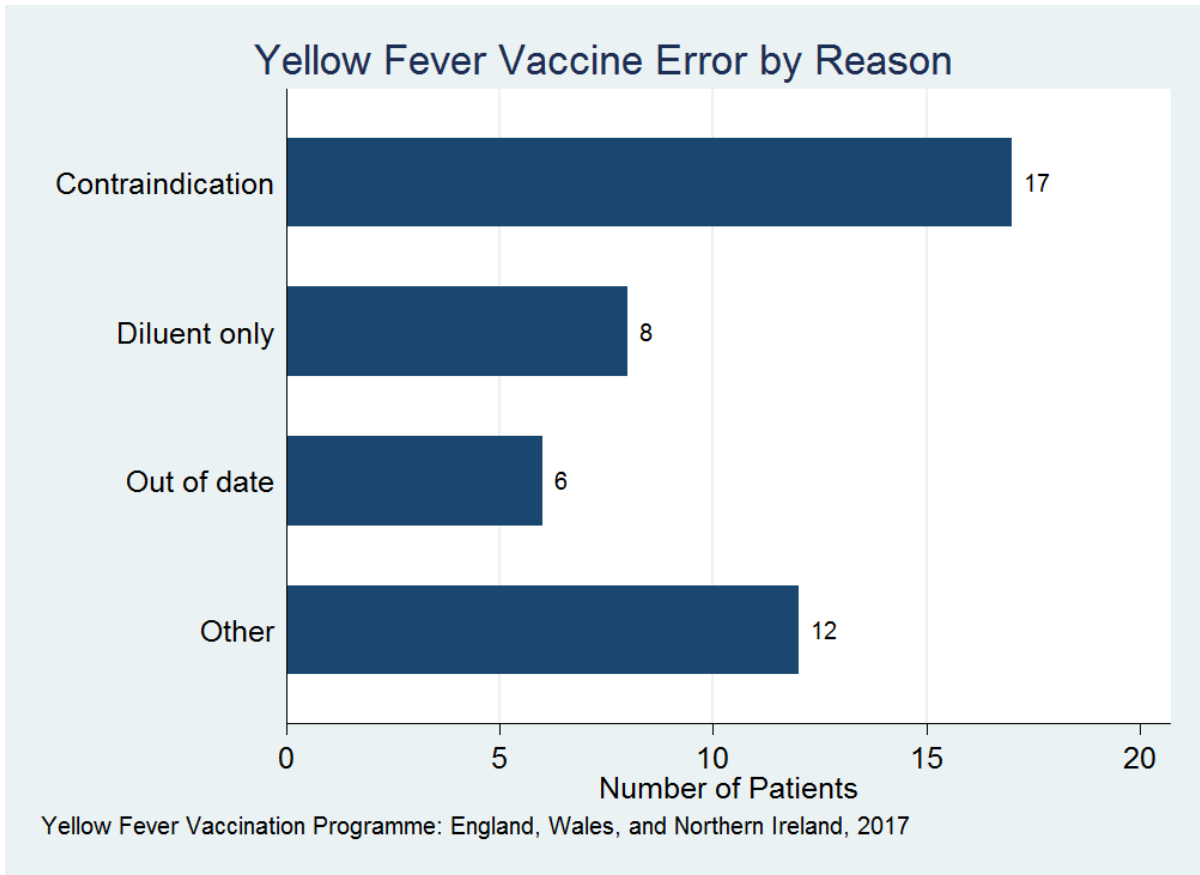


Figure 7. Yellow fever vaccine error by reason.

YF vaccine was given in error (N=43); Errors reported were: 'contraindication' (17), 'other' (12), 'diluent only' (8) and 'vaccine out of date' (6) (Figure 7).

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