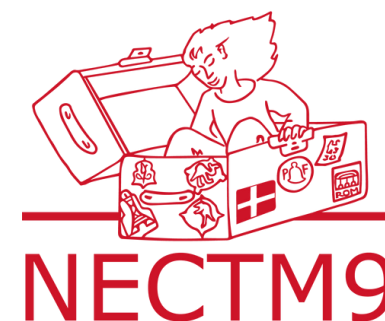




YELLOW FEVER VACCINATION HESITANCY AMONG PRECAUTIONARY GROUPS IN UK YELLOW FEVER CENTRES

NRodriguez-Valero, Rachael Fletcher,
Lisa Ford, Hilary Simons, Lynda
Branham, Mary Gawthrop, Alexandra
Stillwell, Rose Tucker, Vanessa Field,
Dipti Patel

-To travel is to live-



Background



The National Travel Health Network and Centre (NaTHNaC) conducts an annual survey of Yellow Fever Vaccination Centres (YFVCs) in England, Wales, and Northern Ireland to understand yellow fever (YF) vaccine use and practice. The 2022 survey incorporated questions on precautionary groups.

The screenshot shows the TravelHealthPro website. At the top, there is a navigation bar with 'NaTHNaC', 'About Us', and 'Contact'. Below this is the 'TRAVEL HEALTH PRO' logo and a menu with 'COUNTRY INFORMATION', 'LATEST NEWS', 'OUTBREAK SURVEILLANCE', 'TOPICS IN BRIEF', 'FACTSHEETS & RESOURCES', and 'WORLD OVERVIEW'. A blue banner below the menu contains the text 'Welcome to TravelHealthPro' and a search bar. The main content area features a large image of a soccer ball and a news article titled 'Travelling to Germany for Euro 2024?'. Below the news article are two tabs: 'Featured News and Factsheets' and 'Latest Outbreaks'. To the right, there is a section titled 'Check the recommendations for your destination' with a 'Select Country' dropdown menu and a 'View full index' button.

<https://travelhealthpro.org.uk>



Yellow Fever Vaccination Centres in England, Wales and Northern Ireland ★

[Este mapa se ha hecho con Google My Maps. Crear tu mapa](#)

Yellow Fever Vaccination Centres (YFVCs)



Google My Maps



PRECAUTIONARY GROUPS

Pregnant and breastfeeding

ONLY in cases where the risk of YF outweighs the benefit of not vaccinating.

NO! if breastfeeding in children < 9 months of age.

Children

Ages between 6-9 months old

People > 60 years

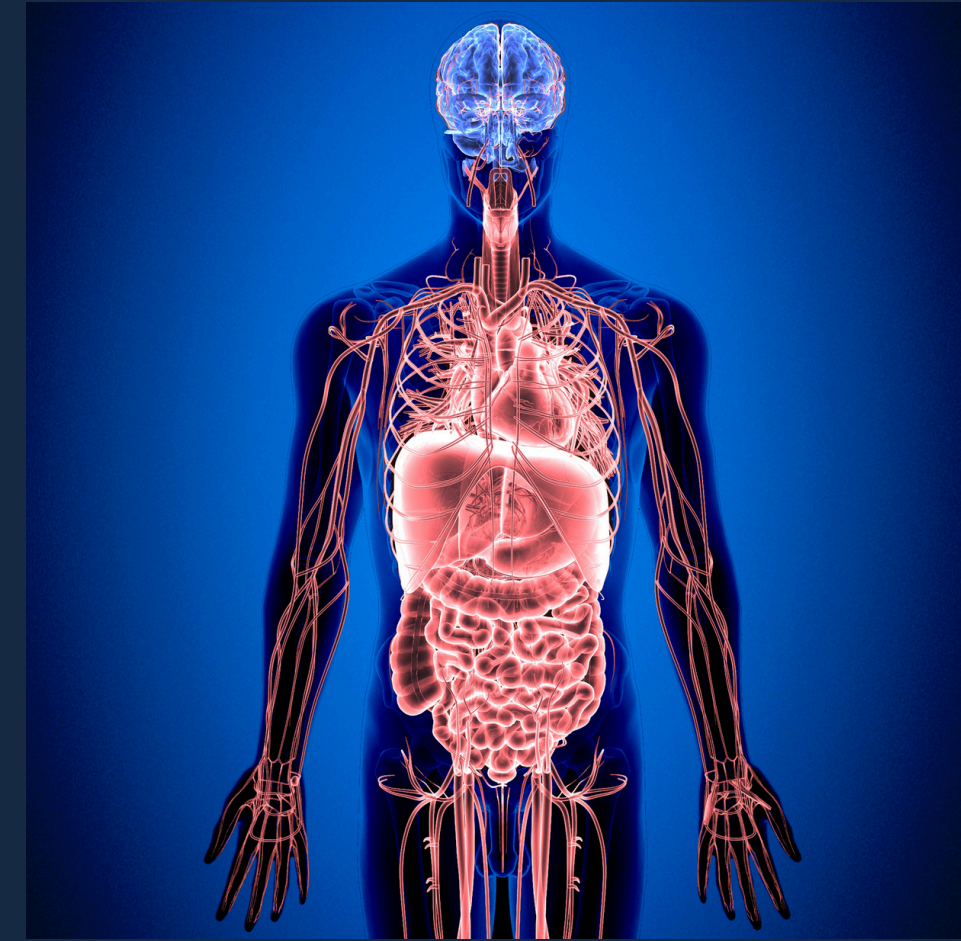
Assess the patient's context and **INDIVIDUALIZE** according to each case.

If you travel to areas (according to WHO) where the vaccine is not recommended, it may not be indicated.

Patients with a history of immunosuppressive or immunomodulatory treatments

Review the type of drug and how long to wait after stopping treatment to vaccinate against yellow fever or other live vaccines.

Yellow fever vaccine-
associated viscerotropic
disease (YEL-AVD)



Yellow fever vaccine-
associated neurotropic
disease (YEL-AND)



Pregnant and breastfeeding

ONLY in cases where the risk of YF outweighs the benefit of not vaccinating.

NO! if breastfeeding in children < 9 months of age.



BECOME
A YFVC

MANAGING
YOUR YFVC

CLINICAL
INFORMATION

ZONE
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Pre-conception, pregnant women and breastfeeding

Each situation should be evaluated on a case-by-case basis, a comprehensive risk assessment should be performed, and women should be encouraged to make as informed a decision as possible regarding YF vaccination



The safety of YF vaccination at the time of conception, during pregnancy and when breastfeeding, has not been systematically evaluated. Each situation should be evaluated on a case-by-case basis, a comprehensive risk assessment should be performed, and women should be encouraged to make as informed a decision as possible regarding YF vaccination in these circumstances.

Guidelines on clinical procedures

[International Certificate of Vaccination or Prophylaxis \(ICVP\)](#)

[Medical letter of exemption](#)

[Vaccine storage and disposal](#)

[Record keeping and consent](#)

[PGDs and PSDs](#)

Vaccination: special circumstances

[Pre-conception, pregnant women and breastfeeding](#)

[Off-site administration](#)

[Febrile illness](#)

[People living with HIV](#)

[Individuals aged 60 years and older](#)

[Infants under 9 months of age](#)

Vaccination: adverse events

<https://nathnacyfzone.org.uk/factsheet/55/pre-conception-pregnant-women-and-breastfeeding>

Children

Ages between 6-9
months old

CMAJ

RESEARCH

Case report: probable transmission of vaccine strain of yellow fever virus to an infant via breast milk

Susan Kuhn MD MSc, Loreto Twele-Montecinos MD, Judy MacDonald MD MCM, Patricia Webster RN, Barbara Law MD



Yellow fever vaccine and breastfeeding

The Committee reviewed recent data suggesting that 3 neonates (aged 10 days, 23 days and 5 weeks) developed encephalitis as a result of infection with yellow fever vaccine virus transmitted to them from their recently-vaccinated mothers. All 3 infants were being breastfed, but the mode of transmission has not been established. All 3 mothers had received the vaccine for the first time during the infant's first month of life. Further research is needed to quantify the potential risk of transmission of yellow fever vaccine virus from mothers to infants, including the possibility of transmission through breastmilk.

Mass vaccination campaigns being conducted in West Africa provide an opportunity to conduct studies that will clarify these issues. Such studies might test breastmilk from vaccinated mothers for the presence of vaccine virus, and test infants for evidence of seroconversion to the vaccine virus. The potential risk of transmission may vary depending on whether mothers are vaccinated for the first time or have been previously vaccinated.

In areas where yellow fever is endemic, or during outbreaks, the Committee believes that the benefits of vaccinating nursing mothers are likely to far outweigh the risk of potential transmission of vaccine virus to infants; the Committee also believes that the benefits of breastfeeding far outweigh the alternatives for infant feeding. Nursing mothers who are considering travel to endemic areas should be counselled regarding the benefits and potential risks of vaccination. Vaccination is recommended if vaccination is indicated for a breastfeeding woman and travel cannot be avoided or postponed. ■

CDC Home
CDC Centers for Disease Control and Prevention
CDC 24/7: Saving Lives. Protecting People.™

A-Z Index A B C D E F G H I J K L M N O P Q R S T U V W X Y Z #

Morbidity and Mortality Weekly Report (MMWR)

MMWR

Persons using assistive technology might not be able to fully access information in this file. For assistance, please send e-mail to: mmwrq@cdc.gov. Type 508 Accommodation and the title of the report in the subject line of e-mail.

Transmission of Yellow Fever Vaccine Virus Through Breast-Feeding --- Brazil, 2009

Weekly
February 12, 2010 / 59(05);130-132

People > 60 years

Assess the patient's context and INDIVIDUALIZE according to each case.

If you travel to areas (according to WHO) where the vaccine is not recommended, it may not be indicated.

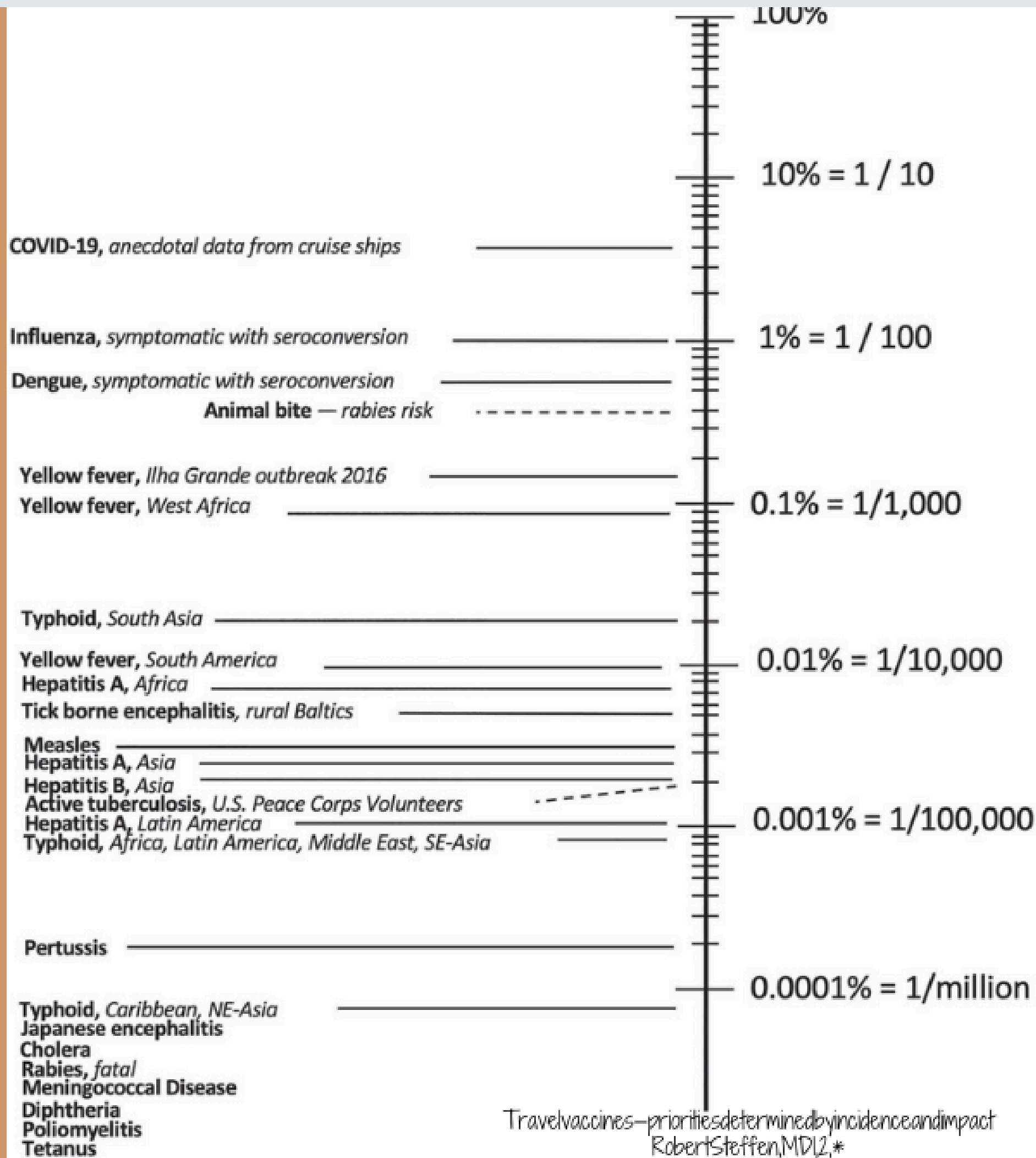
ENHANCED SAFETY SURVEILLANCE OF STAMARIL® YELLOW FEVER VACCINE PROVIDED UNDER THE EXPANDED ACCESS INVESTIGATIONAL NEW DRUG PROGRAM IN THE USA.



Andrey Rojas, MD, MSc1, Wayne Hachey, DO, MPH2, Gurpreet Kaur, MD2, Joanna Korejwo, MD3 and Riyadh Muhammad, MD, MPH2, *1Global Pharmacovigilance Department, Sanofi, Bogota, Colombia, 2Department of Scientific & Medical Affairs, Sanofi, Swiftwater, PA, USA and 3Global Pharmacovigilance Department, Sanofi, Lyon, France

Age group	Population	Total AEs (N)	AE per 100 000	Total SAE (N)	SAE per 100 000	YEL-AND cases	YEL-AND per 100 000	YEL-AVD cases	YEL-AVD per 100 000
<20 years	114 440	197	172.14	20	17.5	0	0	0	0
20–60 years	412 622	883	214.00	62	15.0	1	0.2	1	0.2
>60 years	96 223	227	235.91	40	41.6	6	6.2	2	2.1
Unknown	3794	1	NA	0	NA	0	0	0	0
Total	627 079	1308	208.59	122	19.5	7	1.1	3	0.5

DGarcia's modified slide



Travel vaccines—priorities determined by incidence and impact
Robert Steffen, MD, PhD, *

Patients with a history of immunosuppressive or immunomodulatory treatments

Review the type of drug and how long to wait after stopping treatment to vaccinate against yellow fever or other live vaccines.

Systematic Reviews

Yellow fever vaccine safety in immunocompromised individuals: a systematic review and meta-analysis

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²Instituto de Medicina Social, Universidade do Estado do Rio de Janeiro (UERJ), Rio de Janeiro, RJ, Brazil and ³Escola

Nacional de Saúde Pública Sérgio Arouca, Fundação Oswaldo Cruz (FIOCRUZ), Rio de Janeiro, RJ, Brazil

*To whom correspondence should be addressed. Letícia Wigg de Araújo Lagos, 374 Laranjeiras Street, Rio de Janeiro, RJ 22240-006, Brazil.

Email: letwigg@terra.com.br

Submitted 28 January 2022; Editorial Decision 2 August 2022; Accepted 2 August 2022

Abstract

Background: Yellow fever (YF) is an arbovirus with variable severity, including severe forms with high mortality. The vaccination is the most effective measure to protect against the disease. Non-serious and serious adverse events have been described in immunocompromised individuals, but previous studies have failed to demonstrate this association. This systematic review assessed the risk of adverse events after YF vaccination in immunocompromised individuals compared with its use in non-immunocompromised individuals.

Methods: A search was conducted in the MEDLINE, LILACS, EMBASE, SCOPUS, DARE, Toxiline, Web of Science and grey literature databases for publications until February 2021. Randomized and quasi-randomized clinical trials and observational studies that included immunocompromised participants (individuals with HIV infection, organ transplants, with cancer, who used immunosuppressive drugs for rheumatologic diseases and those on immunosuppressive therapy for other diseases) were selected. The methodological quality of observational or non-randomized studies was assessed by the ROBINS-I tool. Two meta-analyses were performed, proportion and risk factor analyses, to identify the summary measure of relative risk (RR) in the studies that had variables suitable for combination.

Results: Twenty-five studies were included, most with risk of bias classified as critical. Thirteen studies had enough data to carry out the proposed meta-analyses. Seven studies without a comparator group had their results aggregated in the proportion meta-analysis, identifying an 8.5% [95% confidence interval (CI) 0.07–21.8] risk of immunocompromised individuals presenting adverse events after vaccination. Six cohort studies were combined, with an RR of 1.00 (95% CI 0.78–1.29). Subgroup analysis was performed according to the aetiology of immunosuppression and was also unable to identify an increased risk of adverse events following vaccination.

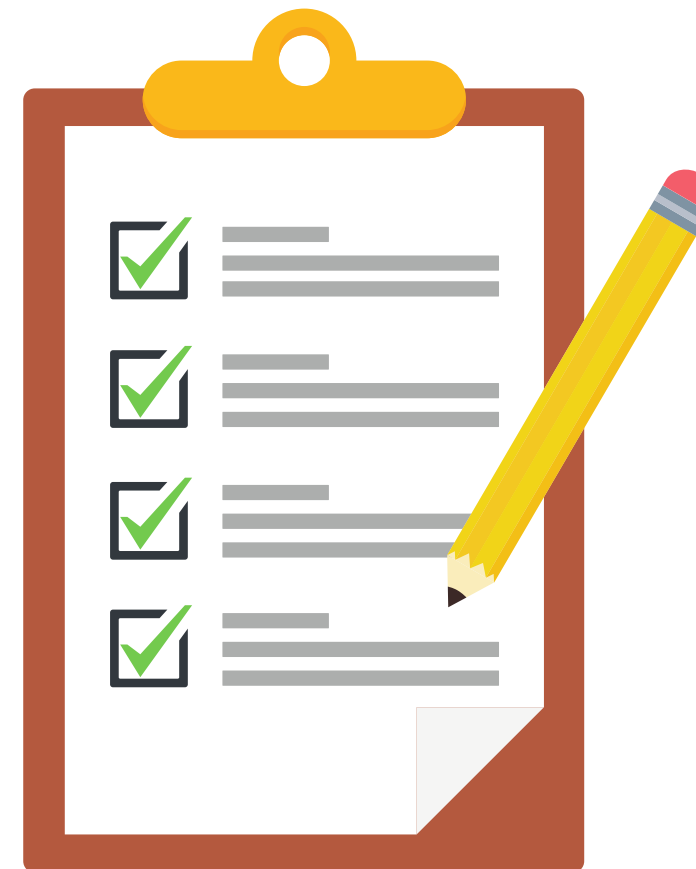
Conclusions: It is not possible to affirm that immunocompromised individuals, regardless of aetiology, have a higher risk of adverse events after receiving the YF vaccine.

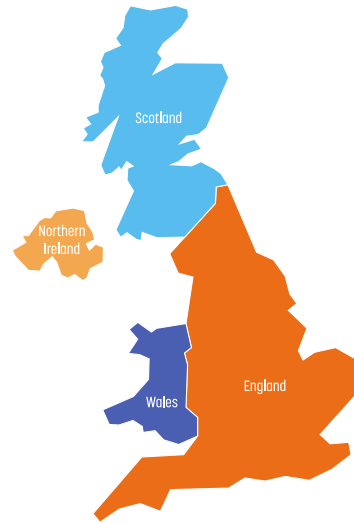
Key words: immunocompromised, systematic review, adverse events, yellow fever vaccine, Yellow fever

Methodology

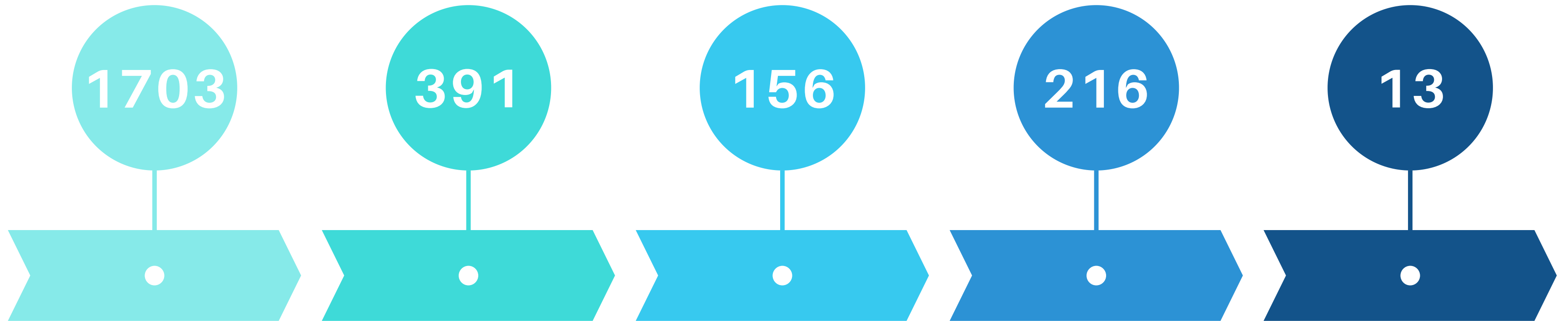


A questionnaire was distributed to YFVCs in 2022. Data were extracted from SurveyMonkey, processed using Python, Excel and STATA V.16.





YFVC



YFVCs surveyed

YFVC advising precautionary groups

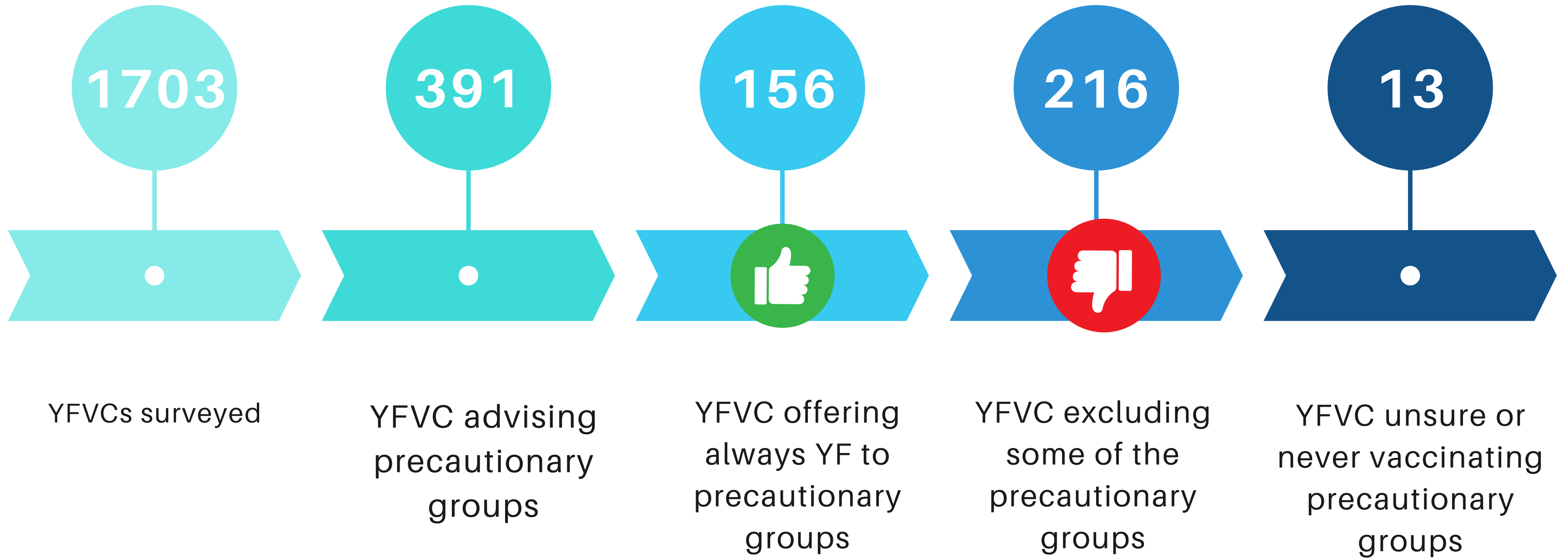
YFVC offering always YF to precautionary groups

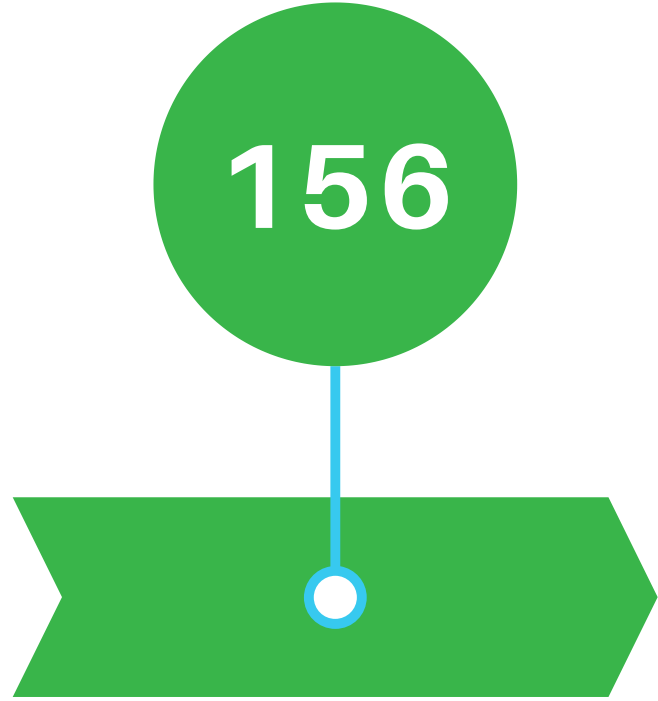
YFVC excluding some of the precautionary groups

YFVC unsure or never vaccinating precautionary groups

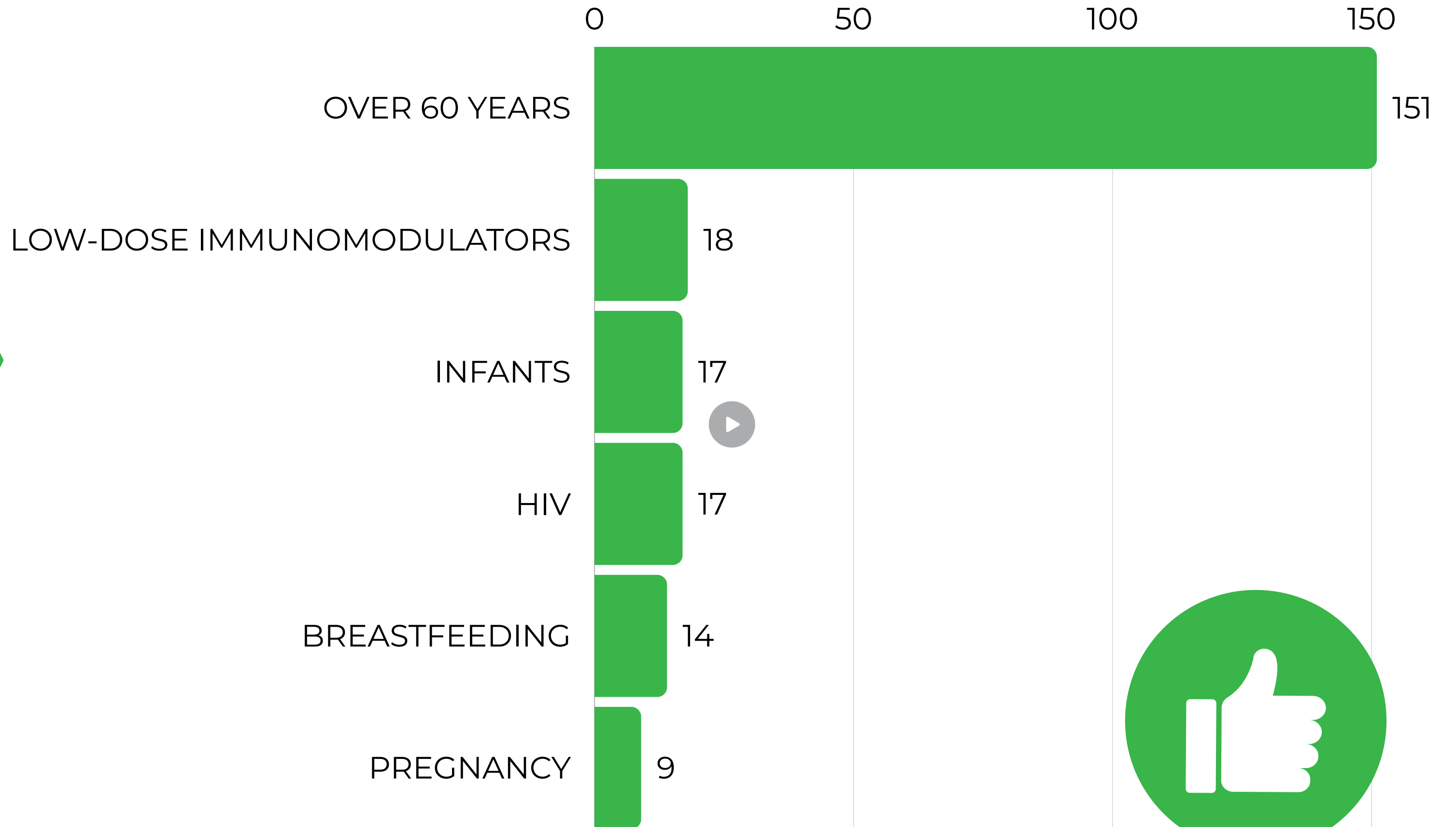


YFVC





YFVC offering
always YF to
precautionary
groups

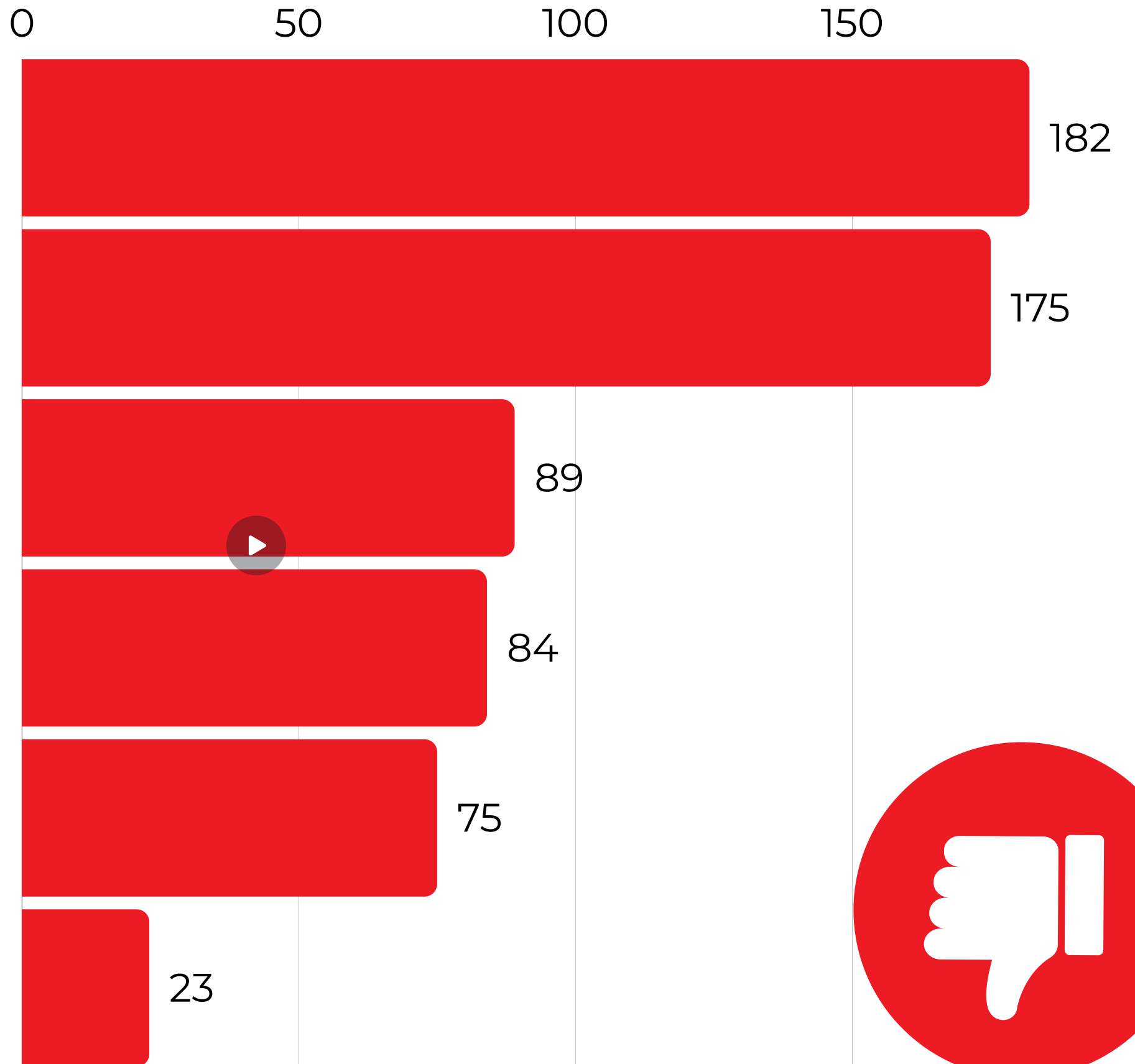


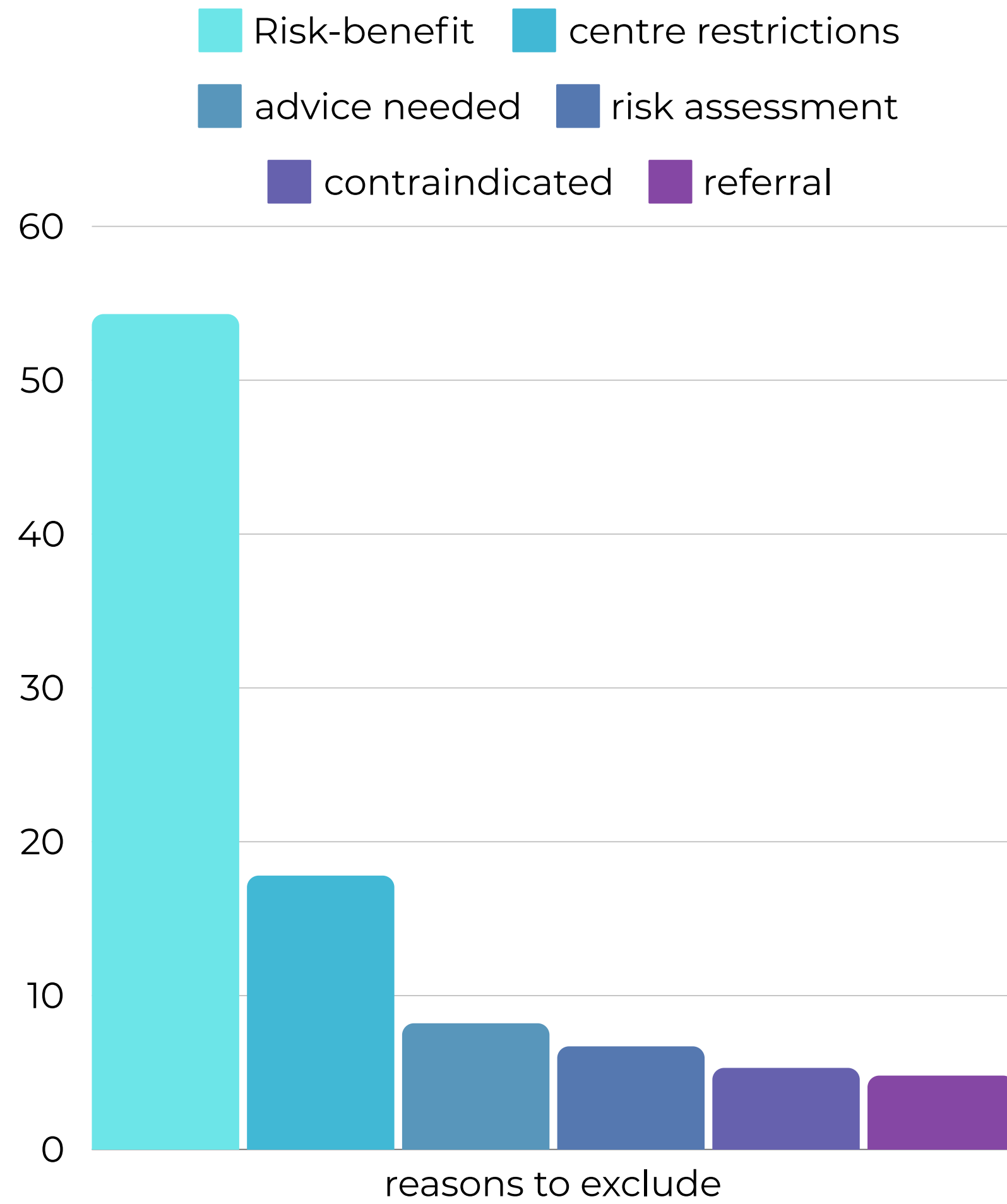
216

YFVC excluding
some of the
precautionary
groups

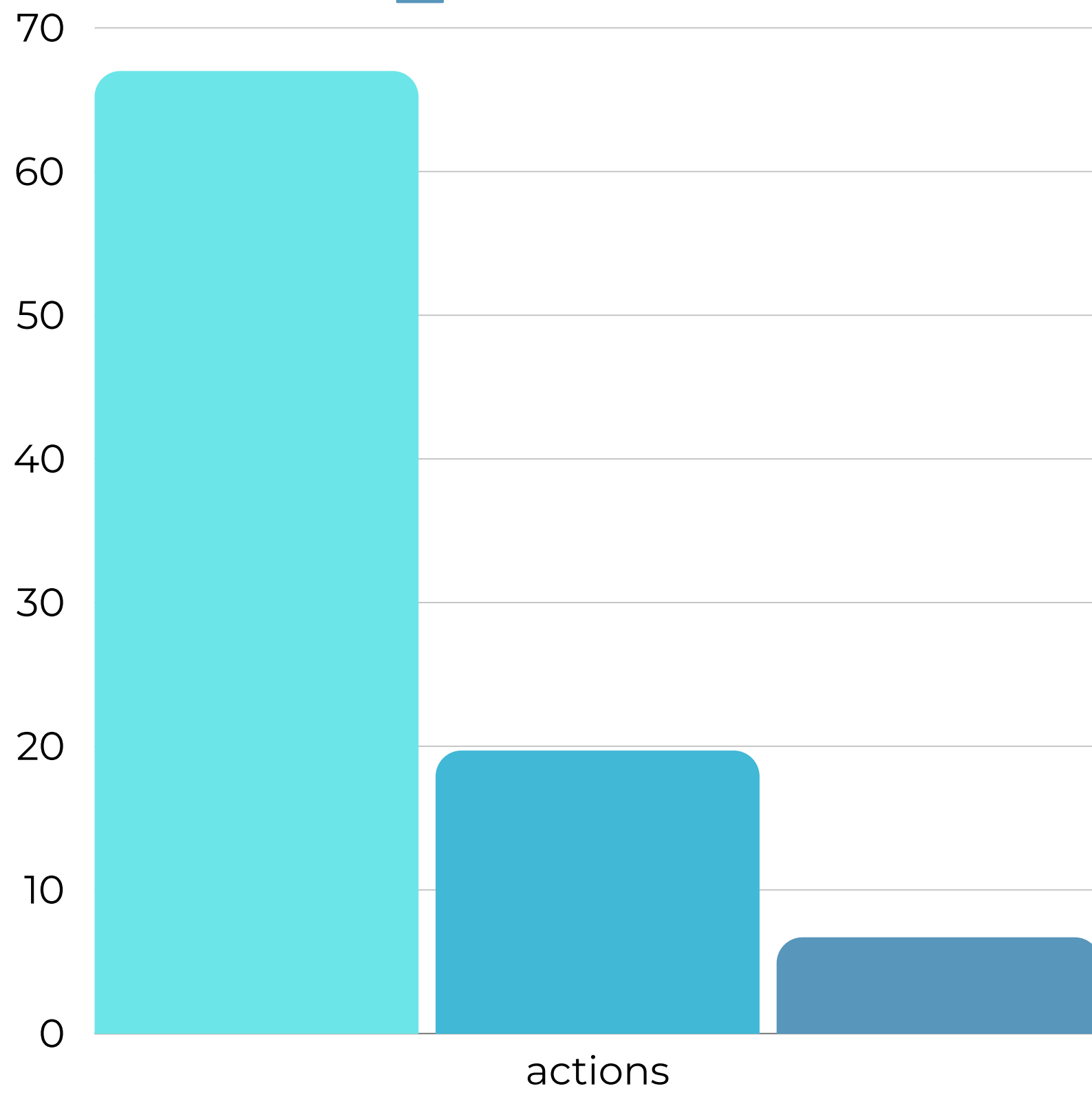
Low-dose immunomodulators

Over 60 years

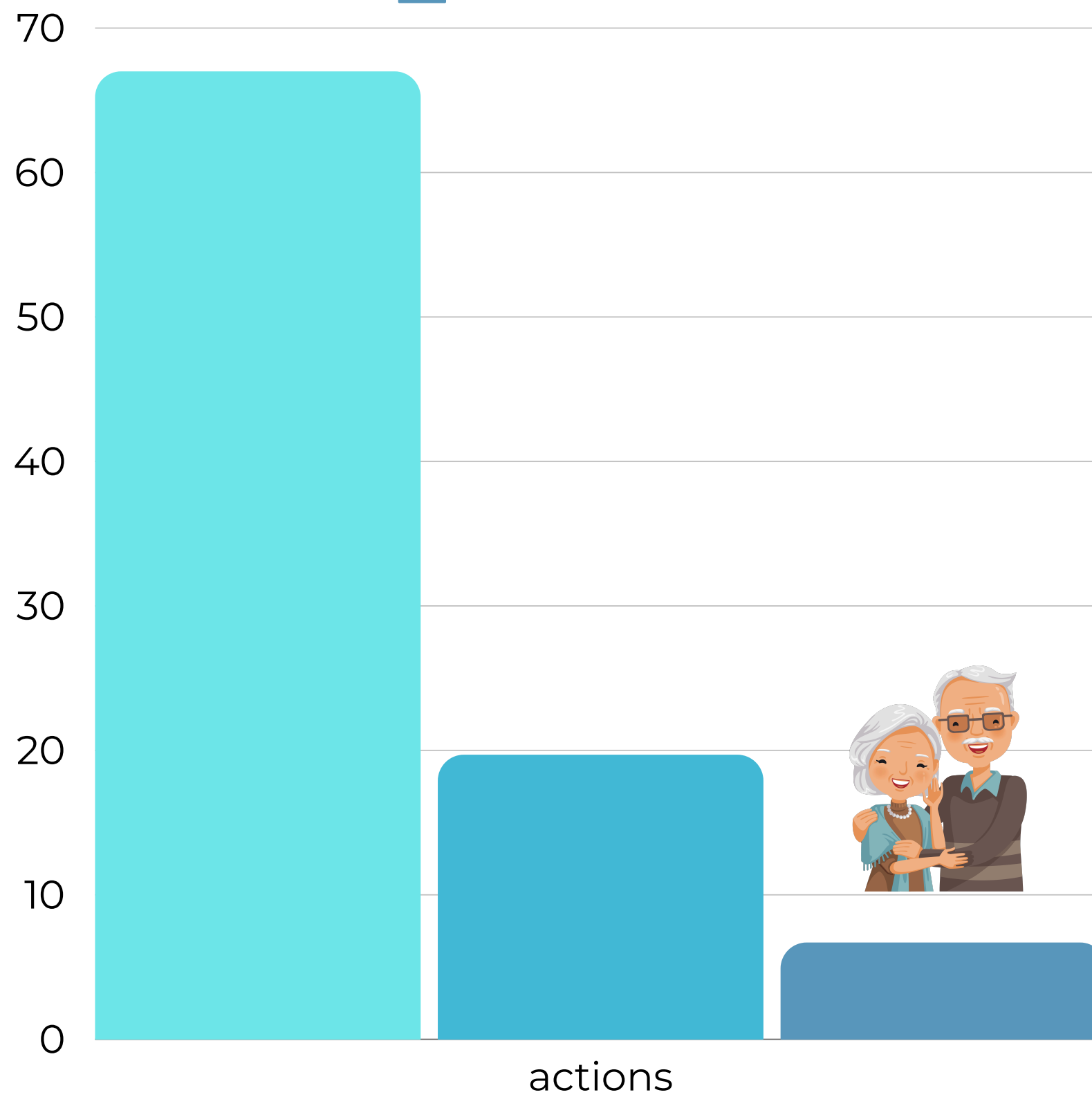




Referral Seeking further advice
Exemption letter



Referral Seeking further advice
Exemption letter





NaTHNaC

**NaTHNaC was the preferred
resource for advice (96%)**

Conclusions



Some YFVCs are reluctant to vaccinate travellers with precautions to YF vaccine due to perceived risks. Referral for specialist advice and provision of an exemption letter was common action, especially among elderly travellers.



Thank

You



for your attention



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