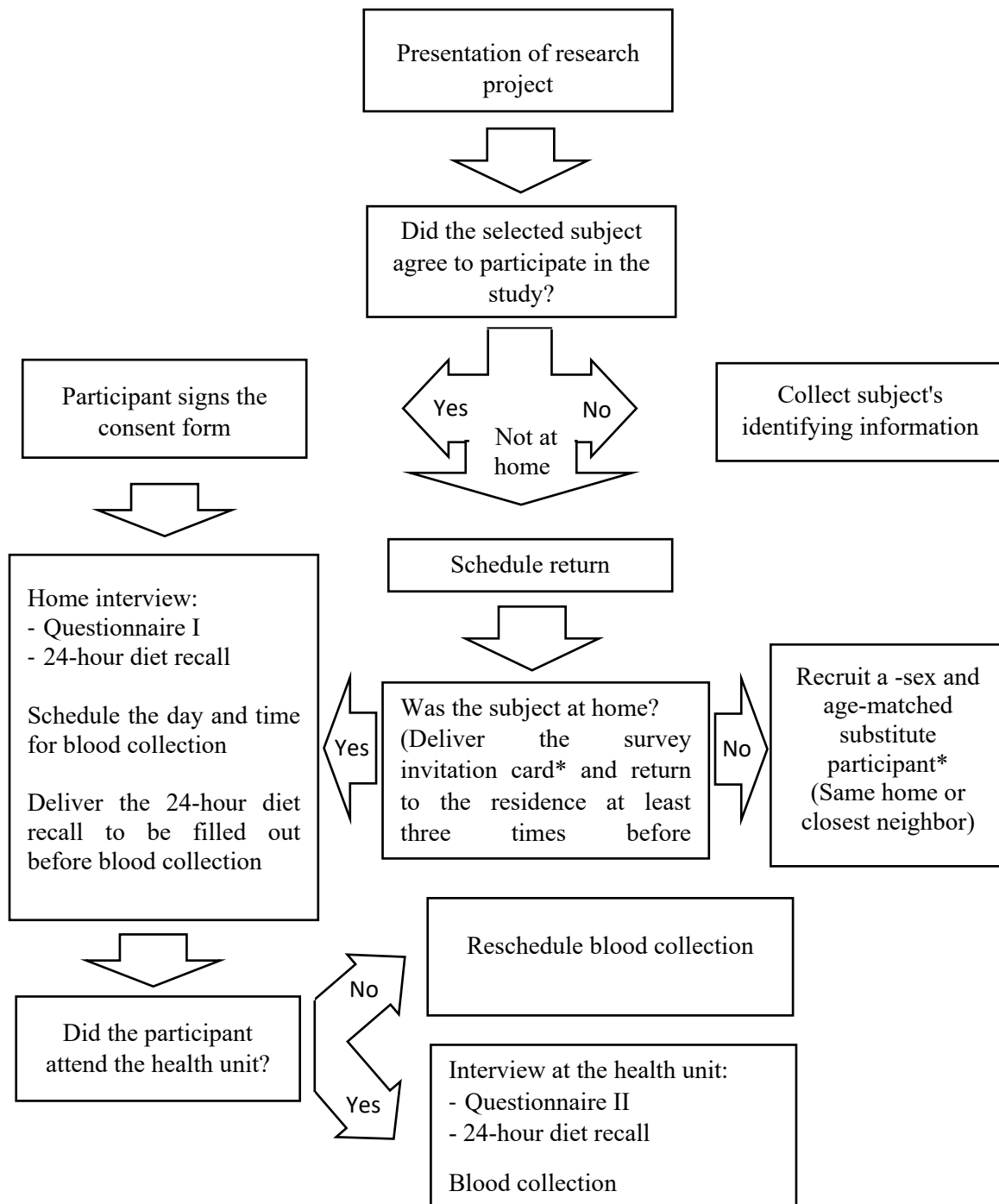
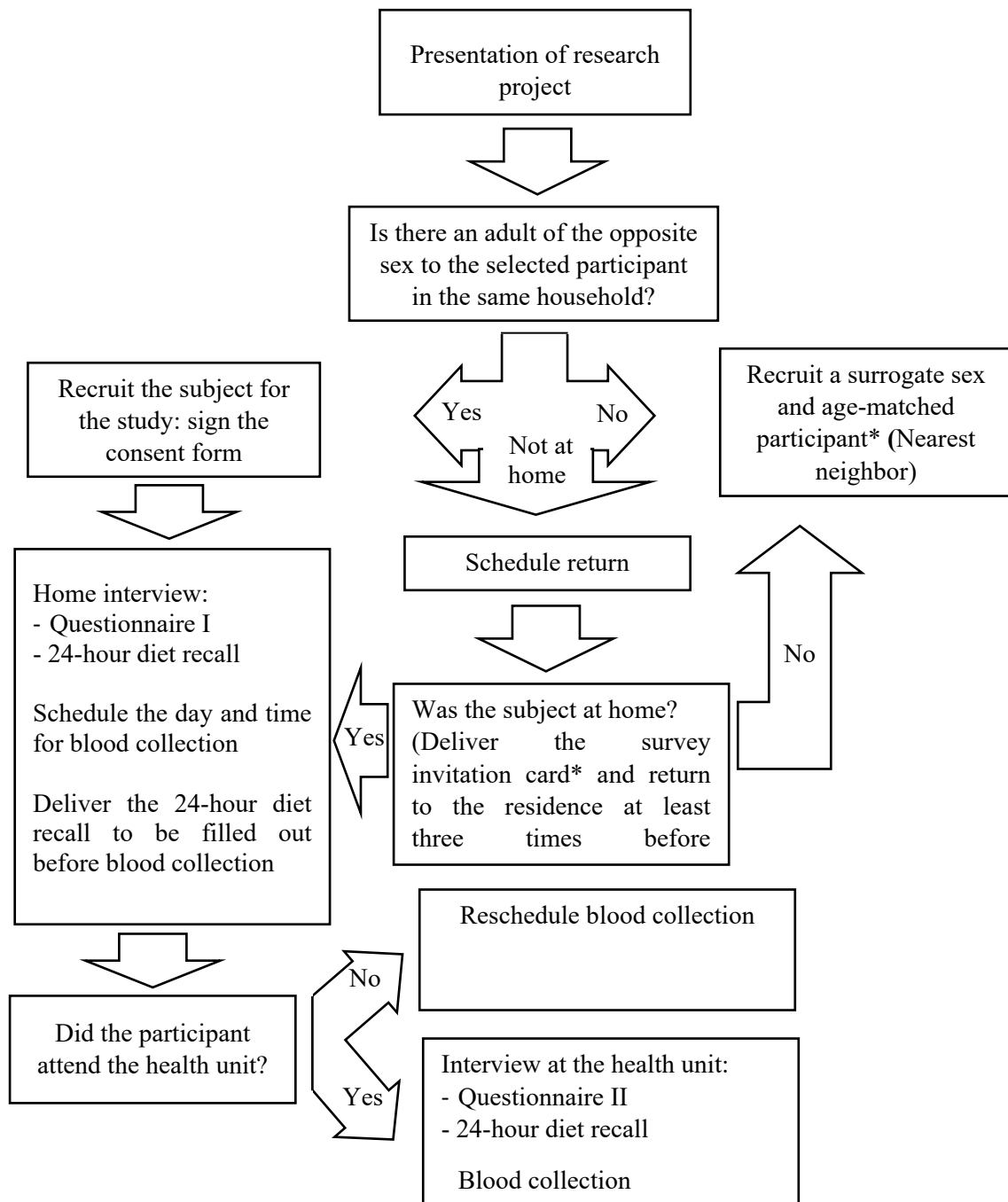


**Figure S1:** Recruitment protocol of the selected participants.



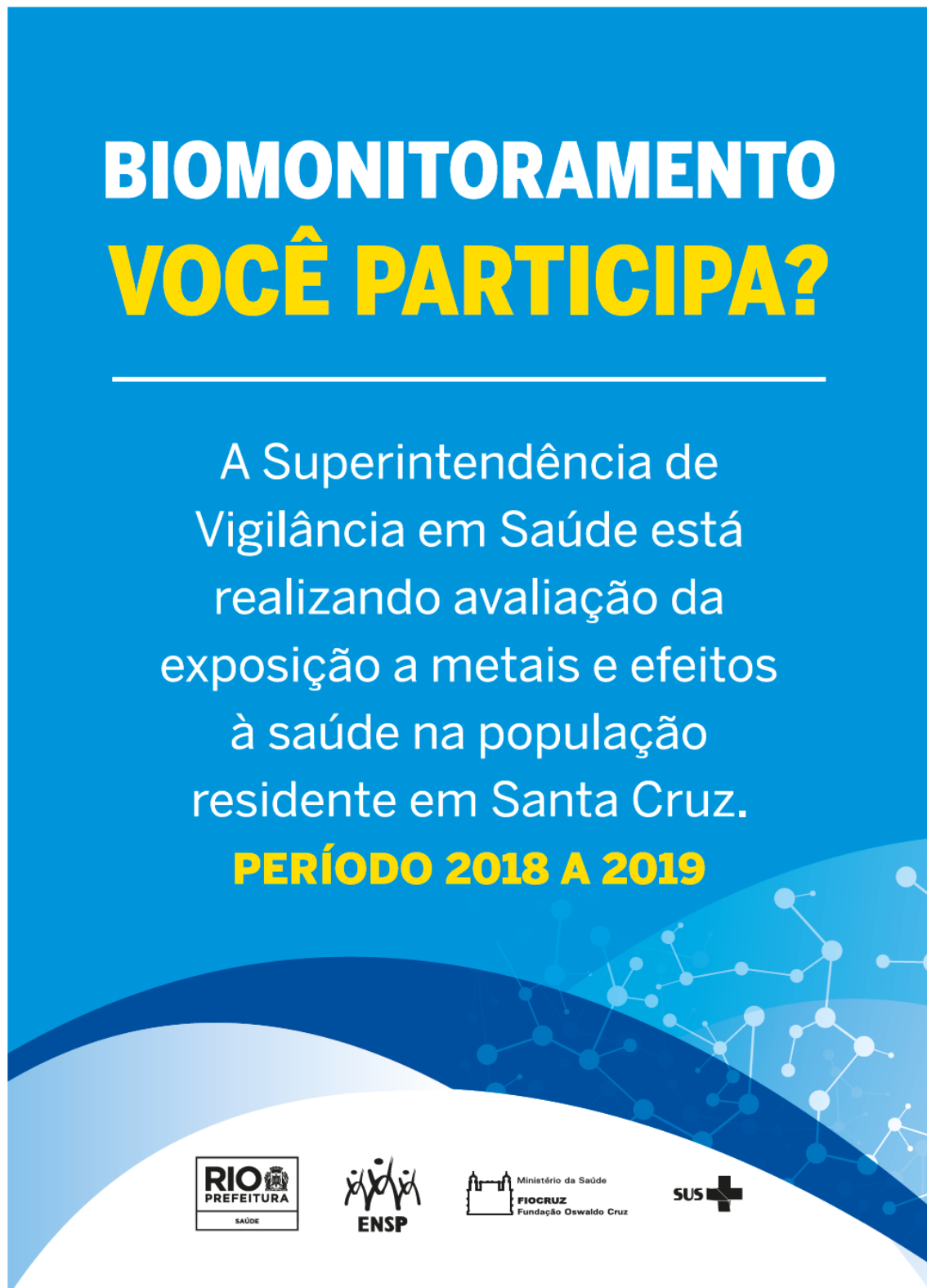
\*Age matching and delivery of the research invitation card were strategies established during the pilot study.

**Figure S2:** Recruitment protocol of the sex-matched participant.



\*Age matching and delivery of the research invitation card were strategies established during the pilot study.

**Figure S3:** Survey dissemination material.



[Content translation: Biomonitoring - Do you participate?

The Health Surveillance Department is investigating exposure to metals and health effects in the population residing in Santa Cruz. Period 2018 to 2019]

**Figure S4:** Survey participation invitation card.



[Content translation: Invitation Card  
Biomonitoring - Do you participate?  
Health Surveillance Department]

A Superintendência de Vigilância em Saúde está realizando  
avaliação da exposição a metais e efeitos à saúde  
na população residente em Santa Cruz.

**PERÍODO 2018 A 2019**



Ministério da Saúde  
**FIOCRUZ**  
Fundação Oswaldo Cruz



Prezado(a) Sr(a) \_\_\_\_\_

Você foi selecionado para avaliação da exposição a metais e efeitos à saúde.

Compareça à \_\_\_\_\_

(clínica da família ou CMS)

a partir do dia \_\_\_\_/\_\_\_\_, de 2ª a 6ª feira, até as 9h e  
leve esse documento com você.

Obrigado e até lá!

Rio de Janeiro, \_\_\_\_ / \_\_\_\_ / \_\_\_\_

\_\_\_\_\_  
Agente de Vigilância em Saúde

[Content translation: The Health Surveillance Department is investigating exposure to metals and health effects in the population residing in Santa Cruz. Period 2018 to 2019. Dear Mr./Mrs. (*participant name*). You have been selected to participate in the metal exposure and health effects assessment study. Attend the (*health unit name*) from day (*date of appearance*) from Monday to Friday, until 9 am and take this document with you. Thanks, and see you there!]

**Table S1:** Methods and reference values of hematological and biochemical parameters.

Parameter	Method	Reference value
Blood count	Automation	
Red blood cells		men= 4.4-5.9; woman= 4.0-5.4 $10^6/\mu\text{L}$
Hemoglobin		men= 13.0-18.0; woman=12.0-16.0 g/dL
Hematocrit		men= 40-52; woman= 35-47%
MCV		80-100 fL
MCH		27-32 pg
CMCH		32-37 g/dL
RDW		$\leq 15\%$
White blood cells		100% or 3.5-11 $10^3/\mu\text{L}$
Neutrophils		50-70% or 2.5-7 $10^3/\mu\text{L}$
Eosinophils		1-6% or 0.1-0.6 $10^3/\mu\text{L}$
Basophils		0-2% or 0-0.2 $10^3/\mu\text{L}$
Lymphocytes		20-30% or 1-3 $10^3/\mu\text{L}$
Monocytes		2-12% or 0.1-0.8 $10^3/\mu\text{L}$
Platelets		150-450 $10^3/\mu\text{L}$
Total cholesterol	Automation by CHOD- POD	18-19 years: desirable $\leq 169$ ; borderline= 170-199; high $>199$ >19 years: desirable $\leq 199$ ; borderline= 200-239; high >239 mg/dL
Triglycerides	Automation by GPO- POD	18-19 years: desirable $\leq 130$ >19 years: normal $\leq 149$ ; borderline= 150-199; high= 199-499; very high $>499$ mg/dL
Creatinine	Automation by kinetic alkaline picrate (Jaffe) reaction	men= 0.7-1.3; woman= 0.5-1.1 mg/dL
Urea	Automation - UV enzymatic - urease/glutamate	15-50 mg/dL
AST	Automation - UV optimized by IFCC	men= 15-40; woman= 13-35 U/L
ALT	Automation - UV optimized by IFCC	men= 10-40; woman= 7-35 U/L
Alkaline phosphatase	Automation - Kinetic optimized by IFCC	18-19 years: men $\leq 155$ ; woman $\leq 150$ >19 years= 25-100 U/L
TSH	Chemiluminescence	18-60 years= 0.4-4.3 $\mu\text{Uml/mL}$ 61-79 years= 0.4-5.8 $\mu\text{Uml/mL}$ >79 years= 0.4-6.7 $\mu\text{Uml/mL}$
FT4	Chemiluminescence	0.70-1.80 ng/dL
TT3	Chemiluminescence	70-220 ng/dL

MCV: mean cell volume; MCH: mean cell hemoglobin; CMCH: concentration of mean cell hemoglobin; RDW: red cell distribution width; AST: aspartate aminotransferase; ALT: alanine aminotransferase; TSH: thyroid-stimulating hormone; TT3: total triiodothyronine; FT4: serum levels of free thyroxine. UV: ultraviolet. IFCC: International Federation of Clinical Chemistry. CHOD-POD: cholesterol oxidase and peroxidase. GPO-POD: glycerol phosphate oxidase-peroxidase.