

# Investigating and Improving Access to Reproductive Healthcare for Vulnerable Migrant Women in France: A Survey Protocol for a Mixed-Method Interventional Cohort Study

Lorraine Poncet<sup>1,2</sup>, Armelle Andro<sup>3</sup>, Mireille Eberhard<sup>4</sup>, Marion Fleury<sup>5</sup>, Maud Gelly<sup>6</sup>, Danielle Hassoun, Veronica Nosedà<sup>7</sup>, Françoise Riou<sup>5</sup>, Claire Scodellaro<sup>3</sup>, Alfred Spira<sup>2</sup>

<sup>1</sup>Université Paris Sud

<sup>2</sup>Inserm CESP U1018, France

<sup>3</sup>Institute of Demography, Université Paris 1 Pantheon Sorbonne, France

<sup>4</sup>URMIS, Université Paris 7, France

<sup>5</sup>Observatoire du Samusocial de Paris, France

<sup>6</sup>CRESSPA, Université Paris 8 Vincennes, France

<sup>7</sup>Plateforme ELSA, c/o Sidaction, France

## ABSTRACT

**Background:** Homelessness and housing instability in the host countries are central features of the experience of migration to the EU. Although migrant women across the EU encounter obstacles in accessing healthcare services, little is known on the health and access to healthcare services for unstably housed migrant women. The DSAFHIR project aims to better describe the risks faced by migrant women in situations of administrative and social vulnerability, to analyze the barriers to access healthcare and to test specific health interventions.

**Methods:** The DSAFHIR project consists of a two-wave mixed-method survey and the implementation of two tailored sexual health interventions. 474 migrant women aged 18 to 77 years housed in social hotels were surveyed at inclusion. After the implementation of sexual health interventions, respondents were contacted for the follow-up survey (n=284).

**Discussion:** The project provides needed data on migrant women's health and healthcare access, including non-French speakers. It allows to draw lessons on feasibility and acceptability of quantitative and qualitative surveys on this hard-to-reach population. A high response rate in both waves of the survey (84% and 85%) suggests good acceptability. The attrition is comparable to other migrant longitudinal surveys (60% of the original sample completed the follow-up survey, or 40% of attrition), suggesting that relying on cell phones is possible for follow-up even in contexts of housing instability.

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# 1. Background

## 1.1 Rationale

In 2016, 2.4 million people migrated to a European Union (EU) member state from outside the EU and 1.8 million migrated from another EU member state (Eurostat, 2016). The number of migrants to Europe has increased in recent years due to poverty, instability and the conflicts in the Middle East, Africa, Eastern Europe and other regions of the world. In 2016, 1,206,120 people applied for asylum in an EU member state. This number has more than doubled compared to 2014, when 563,345 people applied for asylum in the EU. In 2017, the number dropped to 649,855 people (Eurostat, 2018).

Of the 4.2 million migrants, 45% were women (Eurostat, 2016). While work migration to Europe has traditionally mostly consisted of men able to work - young and healthy, as theorized by the *healthy migrants effect* (Wallace & Kulu, 2014) -, refuge and forced migration involves women and families: couples, women migrating alone, women migrating with children, pregnant women, unaccompanied minors and older people. Migrant women are likely to experience long, dangerous, sometimes violent and traumatic migration journeys, and to encounter challenging conditions in host countries. Reports across several EU nations concur that their specific needs should be addressed (Freedman, 2017; Médecins du Monde, 2016; UNHCR, 2016). Difficulties for migrants to access healthcare services in EU countries have been documented: difficulties with reading or speaking the language, lack of familiarity with the healthcare systems in host countries, residential instability, and lack of documentation and healthcare coverage (Chauvin, Parizot, & Simonnot, 2009; Keygnaert et al., 2014; Woodward, Howard, & Wolffers, 2014). The situation is especially dire for sexual and reproductive healthcare services for migrant women (Council of Europe Commissioner for Human Rights, 2017; Keygnaert et al., 2014, 2016).

The highest share of female immigrants was reported in France (51%) (Eurostat, 2016) where 378,000 people migrated from another country in 2016, and only 106,282 residence permits were granted. Among all migrants in France, only asylum seekers benefit from a dedicated housing system, which housed only 50 to 60% of them in 2017. In 2016, 19,595 people were granted asylum, representing only 25.3% of asylum applications (Office Français de l'Immigration et de l'Intégration, n.d.).

Facing this gap, homeless migrants, half of them women, with various administrative status, have turned to the generic public housing system for homeless individuals and families that provides housing in emergency housing centers and, because of capacity shortage, subsidized low-end hotels. Thousands of families are housed every night in hotels scattered across the Paris metropolitan region (Guyavarch & Le Méner, 2014; Le Méner & Oppenchain, 2012; Yaouancq et al., 2013), which they access through the "Samusocial de Paris". Living conditions in these hotels are detrimental to health (Vandentorren et al., 2016), notably in terms of nutrition and mental health. As hotels are often in remote areas without regular public transportation, accessing commodities and service providers is challenging.

Interventions tailored to improve immigrants' health have been relatively scarce in European countries compared to the United States (Diaz et al., 2017). Many interventions focused on specific immigrant groups (Andersen, Høstmark, & Anderssen, 2012; Lee-Lin, Menon, Leo, & Pedhiwala, 2013) and many suffer from hospital setting biases (Thompson et al., 2012; Villadsen, Mortensen, & Andersen, 2016; Wang, Lin, Yang, Tsai, & Huang, 2012): recruiting participants in a hospital leaves out the people that are furthest from care and could benefit most from the intervention.

## **1.2 Objectives**

Our objective is to present here the methodology used in the DSAFHIR research project (Rights and Health of isolated migrant women housed in hotels). We aim to highlight the rationale and the design of study and discuss the obstacles and successes encountered. We hope to contribute to the discussion and knowledge concerning research and data collection in a hard-to-reach, culturally diverse, vulnerable and mobile population.

The DSAFHIR project analyzed the production of social and gender inequalities in terms of sexual and reproductive health risks and social protections in asylum and refugee situations. It aimed (1) to better identify the specific risks and institutional barriers faced by migrant and refugee women to access existing services through quantitative surveys and qualitative interviews conducted in the housing place to avoid biases of selectivity, and (2) to test the implementation of specific outreach health promotion methods through pilot interventions.

The inclusion quantitative and qualitative surveys sought to describe the health status, health care use and access for migrant women in precarious situations living in short-term low-end hotel accommodation, and the follow-up surveys (8 months after inclusion) aimed to evaluate the implementation of the interventions. These pilot interventions (lasting 6 weeks) sought to identify the elements for appropriate and effective outreach interventions that could positively impact their access to health care and sexual health status. Successful interventions and appropriate evaluation should serve to advocate for their funding and generalizing.

## **2. Methods**

### **2.1 Study design**

This study is a mixed-method interventional cohort study. Respondents participated first in a quantitative survey at inclusion. A sub-sample also participated in qualitative interviews. Directly after the inclusion survey, respondents were invited to participate in health interventions: a collective health intervention, an individual health intervention, and a control group receiving only written information. Eight months after inclusion, a follow-up survey took place, with the objective to evaluate the impact of the outreach interventions and observe changes in the respondents' administrative and socio-economic situation.

### **2.2 Engagement with peers, experts and stakeholders**

In the year leading up to data collection, the survey was prepared with the support of partners, peers, experts and stakeholders. A qualitative survey was conducted with 41 health and social workers in the three areas of the survey. A steering committee was convened to monitor and inform the work of the research team. It was composed of partners, experts - medical and social science researchers specialized in migrant women perinatal health and access to healthcare, social workers specialized in migrant housing and healthcare access - and stakeholders - regional heads of maternal and child protection and healthcare services. A peer committee was established, composed of migrant women who had been or were housed in a hotel accommodation. The role of the peer committee was to inform and give feedback to the research team, based on the members' experience of migration, homelessness and emergency housing. Regular meetings were organized with the Samusocial de Paris to brainstorm best survey implementation strategies. The latter coordinates most of the housing system for homeless individuals and families in the Paris region and granted access to the research team to disseminated facilities.

## **2.3 Quantitative survey sampling**

The sampling method was chosen to account for the diversity of the geographical contexts, and because of the necessity to include respondents with relative stability throughout the project, and location safety. A convenience sampling was decided, based on a three-stage non-random selection.

### **2.3.1 Zone selection**

Our area of interest was the Ile de France region around Paris that has a mostly integrated emergency housing system for the homeless, including hotels. The region is divided into eight zones (*départements*) of different size and density. The objective was to take into account diverse environments in terms of accessibility and resources when investigating the health outcomes of participants. We non-randomly selected three zones: an urban area (benefitting from the Paris metro system and a rich network of health service providers), a semi-urban area (further away from Paris with less access to public transportation) and a largely rural area, with very limited access to public transportation.

### **2.3.2 Hotel selection**

The Samusocial de Paris provided the research team with a list of all emergency housing hotels in the region. Three hotels were selected in each zone, and assigned to one health intervention. The hotel inclusion criteria were the presence of women, the residents' relative stability (hotels with relatively long-term residents were preferred in order to minimize the loss to follow up during the 8 months of the project), and a fairly functioning relationship between hotel owners and the Samusocial de Paris. In the urban zone and in the rural zone, three hotels were selected, with four additional hotels selected as a back-up pool. In the semi-urban zone, only three hotels matched the inclusion criteria, with no additional hotels to extend our target population.

Hotels were assigned to outreach health interventions: three hotels with an available common room guaranteeing the discretion of the exchanges during group discussions were assigned to the collective health intervention, while the others were randomly assigned to the individual outreach health intervention or the control intervention.

### **2.3.3 Participant eligibility and recruitment**

In the selected hotels, were included in the survey all women aged 18 years or older, who were born abroad and were present during the surveyors working hours.

### **2.3.4 Sample size**

We made the hypothesis of a 20% difference in rates of healthcare access and utilization between the groups receiving the health-promoting interventions (70%) and the control group (50%). To detect it in our analyses, with  $\alpha = 0.05$  and power = 0.80, we would need 73 participants in each group or 219 in total. However, it was likely that the healthcare access and utilization rates were lower than predicted, and as we anticipated a large attrition, we aimed to recruit at least 270 participants.

## **2.4 Qualitative survey: recruitment strategy**

Respondents to the inclusion quantitative survey who were willing to share their experience in more depth were offered to participate in the qualitative survey in addition to the quantitative survey. Attention was given to recruiting respondents who didn't speak

French. A similar recruitment strategy was implemented in the follow-up survey. For the follow-up qualitative survey, the objective was to recruit respondents who had participated in one of the health-promoting interventions in order to record their experience and their feedback. There was no intention to interview specifically the same respondents in the two waves of the qualitative survey. When respondents agreed to participate in the qualitative survey, surveyors would transmit their identification number, telephone number, hotel name and a few characteristics (language spoken, country of origin, age, administrative and marital status) to the qualitative survey team.

## **2.5 Building questionnaires and semi-structured interviews**

### **2.5.1 Quantitative survey questionnaires**

Exploratory individual open-ended interviews had been carried out with eleven migrant women living in hotels. It was used to inform the research questions during the questionnaire-building phase. Parts of the questionnaire were borrowed from existing validated French surveys. Several versions of the questionnaire were extensively reviewed by the steering committee and the peer committee: they gave feedback on appropriateness, relevance, language and pointed out overseen elements. The final questionnaire included eight sections: sociodemographic characteristics, migration and residential history, experience of completed and interrupted pregnancies, health, sexuality, contraception, healthcare services access and utilization, and experience of violence. The questionnaire was translated in four languages: English, Arabic, Russian, and Romanian. The questionnaire and recruiting design were tested during a pilot survey, questions were assessed for acceptability, clarity, redundancy and adaptability to very diverse circumstances, and they were modified accordingly. Twenty migrant women participated in the pilot survey.

Follow-up survey questionnaire: The same process took place to build the questionnaire of the follow-up survey. It included questions on the sexual health interventions where respondents could give feedback, as well as questions on health status and healthcare access and utilization, contraception use and violence. This questionnaire featured an original tool to record longitudinal data: relevant events that took place between the inclusion and follow-up surveys could be recorded using a calendar-like document, for each month and for each topic.

### **2.5.2 Qualitative survey interviews**

After a pilot qualitative survey with eleven women in hotels outside of the three areas of the survey, an interview guide was built for the inclusion survey, including the same themes as the quantitative questionnaire, and reviewed with a surveyor of the qualitative team with personal experience of migration and emergency housing. The same process took place to build the interview guide for the follow-up qualitative survey.

## **2.6 Training and supporting surveyors**

A team of nine female surveyors were recruited for the quantitative surveys, each fluent in one or several of the languages frequently spoken in the hotels: French, Russian, English, Romanian, Arabic, Bambara, Diola, Soninke, Kabyle, Armenian, Georgian, Pidgin English. Another team of five female surveyors were recruited for the qualitative surveys, each fluent in one or several languages: French, Russian, English, Romanian, Arabic, Kabyle, Bambara, Soussou, Pular. Because of the content of the survey - sexual life, history of violence, etc - and because of the survey setting - alone in the hotel room with the respondent - only female surveyors were recruited. A three-day training was organized, where surveyors became familiar with the research project, the homeless housing system, the questionnaire, and

participants recruitment. Surveyors administered the questionnaires (quantitative survey) or semi-structured interviews (qualitative survey) one-on-one with the respondents, but were never, or as little as possible, alone in a hotel, for security reasons. A research team coordinator was always present and aware of the room numbers where interviews were ongoing, and surveyors could signal for help using their cellphone. The coordinator was available to debrief or discuss after each interview. As the questionnaire and interview dealt with intimate, sometimes violent and traumatic experience in the respondents' life, the surveyors were not expected to administer more than two questionnaires per day as interviews could be very mentally demanding. Every two weeks an optional meeting with surveyors was convened with a psychologist present to talk things through. The psychologist was also available on the phone at all times.

## **2.7 Data collection implementation**

### **2.7.1 Settings**

In most cases, interviews took place in the participant's bedroom in surveyed hotels. In some cases (if a child, a partner or a relative couldn't leave the room) and when possible, interviews took place in an empty office or room in the hotel. Appointments could be made for the next day or later in the day, according to the availability of the participant and the surveyors fluent in that language. Groups of surveyors occasionally stayed longer in the evening to meet the residents that were working or were away during the day. In the follow-up survey, interviews took place at the respondent's current housing location.

### **2.7.2 Inclusion quantitative survey implementation**

The inclusion quantitative survey took place from April to May 2017. In total, 474 participants responded to the questionnaire, in 15 different hotels. We could compute the response rate in two different ways: as a percentage of the total number of potential respondents who were offered to participate, or as a percentage of the total number of potential respondents housed in the surveyed places: the computed numbers are different because not all women housed in the surveyed hotels were present while surveyors were there, therefore we were not able to meet all the women who met the eligibility criteria. 84.1% of the women who were offered to participate completed the questionnaire. Alternatively, 72.5% of all women housed in the surveyed hotels completed the questionnaire. Completing the questionnaire generally took forty minutes to one hour.

### **2.7.3 Second-wave quantitative survey implementation**

The follow-up quantitative survey took place from January to March 2018. Shortly before implementation of the follow-up survey, respondents' contact information were retrieved: of the 474 respondents to the first-wave survey, 438 (92.4%) provided their contact details and agreed to be contacted again. Survey implementation started with a first round of telephone calls by the surveyors to all respondents who provided contact details. Respondents were reminded about the survey, were asked if they were still willing to participate in the follow-up survey, and their current location was collected. Surveyors scheduled appointments with respondents in their place of residence: the original place if they hadn't relocated, a new hotel or other emergency housing options, or apartments when respondents were permanently housed. For respondents who had relocated outside the region, the questionnaire was administered on the phone. Again, each respondent was compensated for their time with a 25-euro voucher. It was sent by post to respondents who answered the follow-up questionnaire on the telephone. 284 respondents participated in the follow-up quantitative survey.

#### 2.7.4 Qualitative surveys implementation

In both waves of the qualitative survey, respondents who had consented to participate were contacted by telephone by a qualitative surveyor speaking her language. The surveyor gave information about the interview, noting that the interview would be recorded and that the recording would be destroyed after transcription and anonymization. They insisted that participating would have no positive nor negative impact on the respondent's housing or administrative situation. When respondents agreed to these terms, an appointment was made at a time when the respondent would be alone. On the day of the appointment, the surveyor explained again the objectives and the content of the interview and collected written informed consent.

#### 2.7.5 Attrition

Because recruitment for qualitative surveys were nested within the quantitative data collection, questions of attrition only apply to the quantitative surveys.

Of the 438 respondents who provided contact details, 23.5% (103 respondents) could never be reached on the telephone (first and second phone number, if provided). Of the 76% of the respondents who were reached, 284 (64.8%) responded to the follow-up survey (including 22 on the telephone). 7.1% explicitly refused to participate in the second survey, and 4.1% didn't refuse explicitly but never went ahead with the follow-up survey (couldn't find an appropriate time, couldn't be reached again to make the appointment, etc.) (See Figure 1).

In the end, 284 respondents participated in the follow-up survey. They constitute 60% of the total sample of the inclusion survey, and 64.8% of the respondents who provided contact details. 76% of the respondents who provided contact details were reached successfully on their contact cell phones. 85% of the respondents who answered their contact cell phones completed the follow-up survey. In binary analysis, not answering the contact phone was associated with administrative status, with respondents without documentation answering the contact phone more frequently than respondents with any residence permit ( $p = 0.03$ ). It was also associated with region of origin, with respondents born in Sub-Saharan Africa answering the contact phone more frequently than respondents from North Africa and Eastern Europe/Russia ( $p = 0.007$ ). Considering only the respondents who answered the contact phone, completing the follow-up survey was also associated with administrative status, with respondents without documentation completing the second survey more frequently than respondents with any residence permit ( $p = 0.08$ ).

**Figure 1.** Recruitment and response rates

First wave			
469 first-wave respondents (100%)			
444 respondents with contact details (94%)			30 without contact details (6%)
Second Wave			
336 reached by telephone (75.6%)		108 never reached (24.3%)	
283 second-wave respondents	31 explicit	19 never	

(60%)	refusals (7%)	went ahead (4.3%)		
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## 2.8 Design of the health interventions

Two outreach sexual health interventions were conducted directly following the inclusion quantitative survey. Respondents to the inclusion survey were assigned to one of the interventions or to a control group based on their hotel of residence. Participants in the control group received only written information on the locally available health resources.

### 2.8.1 Sexual health collective interventions

The aim was to facilitate sharing of knowledge and experience among peers on sexual health topics. Group discussion sessions took place once a week for six weeks after the end of the first wave of data collection, in a closed room within the place where they lived or nearby. An experienced organization, the French Movement for Family Planning (Mouvement français pour le planning familial, MFPP) facilitated the group discussions. Covered themes related to sexuality, gynecology, health, experience of violence and living conditions. Attendance varied across sessions, with a maximum of 8 participants in one session. 138 respondents were housed in hotels targeted by the collective intervention and were eligible to participate. As attendance to the sessions was anonymous, we don't know how many respondents participated, as some attended once while others attended multiple times. 79 of the eligible respondents participated in the follow-up survey.

### 2.8.2 Sexual health individual interventions

The aim was to link the respondents with female health mediators who provided individual sessions of counselling in sexual health education. When relevant, they would refer the respondents to appropriate health professionals and could occasionally accompany respondents to appointments. The health mediators were available for six weeks in three hotels and were monitored by the Samusocial de Paris. 126 respondents were housed in hotels targeted by the individual intervention and were eligible to participate. In total, 89 respondents met with a health mediator from one to seven times in the course of the intervention. Most counselling sessions (80%) were conducted in French. Information regarding sexual health was provided to almost all participants, while referrals to health professionals were made for 50% of the participants (through referral letters or making appointments on the phone). 59 of the eligible respondents participated in the second wave of the survey.

## 2.9 Ethics in data collection

Independent ethical overview and approval was granted by the People Protection Committee for medical research (CPP West 6, on 03/30/2017). The research method was submitted to the National Commission for Computerized Data and Freedom (CNIL) and cleared for use of individual data. Participants provided written informed consent.

A two-wave survey involves ethical elements regarding confidentiality and data protection. In the first-wave survey, respondents were asked for their authorization to get in touch with them eight months later for a follow-up survey, or sooner, for some of them, to participate in the first wave of the qualitative survey. When they gave consent, contact details were collected: their cell phone number, or a phone number on which they could be reached. When possible, we asked for a second phone number in case their original phone number was



disconnected. We also asked for other means to get in touch that could be acceptable for respondents: Whatsapp number, email address, Facebook profile name. The contact details were collected on a separate sheet on which the questionnaire identification number was recorded. The questionnaires for the inclusion survey were kept in a locked cabinet at the Demography Institute of Paris 1 Pantheon-Sorbonne University (Cridup). The contact sheets were kept in a locked cabinet inside the National Institute of Demographic Studies (INED), acting as a trusted third-party for data protection. After the follow-up data collection was completed, the contact detail sheets were destroyed and data from the first and second questionnaires were merged using the questionnaire identification number.

The research team was intentional in seeking out proper consent from respondents to participate in the survey. Emergency housing in hotels is a situation of many constraints for the individuals that are housed: besides uncertainties regarding stability and length of stay, residents abide by sometimes strict rules regarding schedules, cooking, use of shared amenities and children's noise; hotel managers can decide the eviction of residents. It was therefore crucial that potential respondents understand that they could refuse to participate. Surveyors insisted that the survey was optional, that participating or not participating would not compromise nor help their housing situation. Respondents in the quantitative survey were compensated for their time with a 25-euro voucher that could be used in grocery stores, and with a 50-euro voucher for participants in the qualitative survey, as qualitative interviews lasted longer.

### **3. Discussion**

The DSAFHIR research project allowed for the collection of much needed data on migrant women's health and their access to healthcare services. While we could foresee many different challenges in terms of feasibility and acceptability, the favorable outcome of its protocol allows us to draw positive lessons concerning its methodology. First, implementing a rigorous protocol, including a pragmatic and respectful allocation of interventions is applicable in difficult settings and with very hard-to-reach and disadvantaged respondents. Moreover, the participation of peers (women with experience of migration and homelessness) at every stage of the research protocol is a tool for better connection with respondents, better acceptability and feasibility of the survey.

We could anticipate that it would be challenging to get in touch with the respondents again for various reasons: the questions on intimate subjects wouldn't be acceptable and respondents wouldn't want to participate again; as this population lives in very unstable housing and has precarious administrative status, it would be hard to reach them again; we could question the use of cellphones as a tool to get in touch with the respondents: cellphones get disconnected for lack of funds, they get lost, stolen or broken, etc. We could also argue that eight months is a long time considering these obstacles. Nevertheless, the second round of data collection was satisfactory: the response rate for the follow-up quantitative survey is 60% of the original sample, or 64% when taking into account only respondents who provided contact details. This response rate is comparable to a previous longitudinal study on recently arrived migrants in France carried out in 2006-2007, the *Parcours and Profiles Migrant* survey (Bèque, 2009), with 62% of the respondents of the first survey who completed the second survey. Similarly to our study, respondents provided contact details themselves and the period between the two surveys was approximately one year. More recently, the French ELIPA study (Longitudinal Survey of the Integration of First-time Arrivals, 2010-2013) enrolled migrants obtaining their first residence permit in France. 78% of the respondents of the first survey completed the second survey (Domergue & Jourdan, 2012). In the Canadian study Elic (Longitudinal Study of Immigrants to Canada, 2001-2005), 77% of the

respondents of the first survey completed the second survey (Statistique Canada, 2007). In addition to contact details provided by the respondents, these two studies also used administrative data to retrieve new contact details of the respondents when they had changed. This contributes to explain a smaller attrition. Cellphones have been used as a likely tool to reach respondents, with 76% of the respondents who provided contact details successfully reached on their contact cell phones.

Unexpectedly, respondents with more precarious administrative status were successfully reached and completed the second questionnaire more frequently. It suggests that it is possible to conduct this type of study with people who are unstably housed with very little means to plan for the near future. With 85% of respondents who were reached successfully completing the second survey, acceptability of the survey was high.

There were other obstacles to overcome. Efforts were made to acknowledge and to address the issue of consent in the context of emergency housing. The attention was also directed towards the issue of recounting trauma, listening to traumatic experiences and to current situations of despair. It was acknowledged as the most challenging aspect during data collection, for respondents and surveyors, and it impacted the organization of data collection: the pace of data collection, daily check-ins with the coordinators, a psychologist on-call every day.

The diversity of spoken languages was central to this project and determined the organization of data collection, with efforts directed at matching respondents with surveyors speaking the same language while depending on respondents' availability. It also represents one of the main strengths of this research project: collecting data from migrant women who don't speak the language of the host country and usually remain unheard. In this respect, conducting in-depth qualitative interviews in the respondents' language allowed respondents to express nuanced experience and constitutes rare material.

Interviewing homeless migrant women in their housing location made it possible to reach respondents that wouldn't be reached in other survey settings, such as hospitals or other medical or service providers: women that are furthest from care and services could be heard, despite language barriers, isolation and instability.

## Declarations

**Ethics approval** Independent ethical overview and approval was granted by the People Protection Committee for medical research (CPP West 6) on March 30<sup>th</sup> 2017 (CPP reference number: IDRCB number 2016-A02005-46). The protocol was also registered with CNIL (Commission Nationale de l'Informatique et des Libertés – Board enforcing data protection legislation) on October 2<sup>nd</sup> 2017, conforming to regulations concerning the collection and analysis of personal data (CNIL reference number: 2034475).

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**Conflict of interest:** The Authors declare that there is no conflict of interest.

**Authors' contribution:** All authors have made substantial contributions to the conception and the design of the study. MF, LP, ME, MG and AA were instrumental in data collection;

MF, ME and FR implemented the health-interventions. AS, DH, AA, MF, ME, MG and CS were essential in the conception and development of the survey questionnaires and health interventions, and edited the manuscript. LP wrote the manuscript. AA was a major contributor in writing and editing the manuscript. All authors read and approved the final manuscript.

## List of abbreviations

DSAFHIR: Rights and Health of isolated migrant women housed in hotels

EU: European Union

MFPP: French Movement for Family Planning

CPP: People Protection Committee for medical research

CNIL: National Commission for computerized data and freedom

CRIDUP: Demography Institute of Paris 1 Pantheon-Sorbonne University

INED: National Institute of Demographic Studies

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