



# 'Falling off the radar' of public health: The case of uninsured Chinese patients in Vienna, Austria<sup>☆</sup>

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## ABSTRACT

In public health policy debates, the 2015–2016 refugee crisis made visible that even in European welfare states with (close to) universal health coverage there are specific vulnerable groups with highly limited access to health care. Among them is a population of so-called 'undocumented' or 'irregular' migrants who have no regular status of residence and falls off the radar of publicly funded health care services and thus from the public health surveillance systems. The aim of our study is to provide the first-of-its-kind evidence on the characteristics, health problems and health care needs of one such vulnerable group in Austria – Chinese migrants residing in Vienna without a regular status. Medical records of 74 uninsured assumingly undocumented Chinese patients were analysed. The data was provided by a Non-governmental organisation (NGO) which delivers primary care to uninsured people in Vienna. The most frequently diagnosed health problems clustered around cardiovascular and metabolic-related diseases (hypertension and diabetics) and there was a high burden of multiple chronic non-communicable diseases. Further efforts and resources are needed for collecting more data in a systematic way. A trusting relationship between science and practice and a cooperative relationship between and among the government agencies and NGOs are essential for evidence-based public health policy making.

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## 1. Introduction

In public health policy debates, the 2015–2016 refugee crisis made visible that even in European welfare states with (close to) universal health coverage, there are specific vulnerable groups with highly limited access to health care. Among them is a population of 'undocumented' or 'irregular' migrants defined in the European Union (EU) context as 'third-country nationals present on the territory of a Schengen State who do not fulfil, or no longer fulfil, the conditions of entry as set out in the EU regulations, or other conditions for entry' [1]. Studies indicate that inadequate response to the health needs of undocumented migrants increases costs not only to the health care system but to the society as a whole [2,3]. This is especially so when access is limited to emergency care only, which is the case in the majority of the EU Member States [3,4]. Current

political debates in Europe tend to concentrate on newly arrived undocumented migrants associated with the recent refugee crisis. This overshadows the fact that there are many other types of irregular migrants with different immigration 'history', who have been residing in a European country for a relatively long time and may be facing specific health problems with specific health care needs. It is important from the humanitarian, economical as well as public health perspectives to have solid evidence base on different types of migrant groups residing in Europe and to properly understand their health needs [4,5]. Undocumented migrants often fall off the radar of publicly funded health care services and thus from the public health surveillance systems. Thus data and knowledge of these population groups are extremely limited challenging evidenced-based public health policy making and intervention. This study contributes to filling this gap by presenting a detailed description of the health problems of a specific group of uninsured Chinese migrants in Vienna, Austria.

The Austrian health care is based on a social insurance system that is close to universal coverage [6]. Having a health insurance is a prerequisite for acquiring a long-term resident permit for third-country nationals [7,8]. Given this obligation, there is a very high chance that uninsured migrants are in fact undocumented migrants. In Austria, there are no laws that specifically regulate the health care of undocumented migrants [9]. Under the Aus-

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trian Federal Hospitals Act (KAkuG), all hospitals in Austria are obliged to admit all emergency patients without exception, including those without insurance, and provide first aid care. In case the cost cannot be reimbursed by the insurance or paid by the patients, the hospitals have to cover the expenses [10]. This means that undocumented migrants' legal access to publicly funded health care service in Austria is limited to emergency care only. In practice, however, some hospitals provide care to uninsured people beyond emergency care. There are some hospitals, operating also as Non-governmental Organisations (NGOs), that are specifically dedicated to treating people without insurance including the undocumented migrants [6,8]. For primary health care, there are also small numbers of NGOs that are dedicated to providing primary care to everyone in Austria without insurance [6,8]. These NGOs are recognised by state's health and social welfare institutions which provide financial support for their activities. By defining the entitlement criteria to poverty and vulnerability, the legal status of the undocumented migrants is 'ignored', which allows the NGOs to provide care to this specific group of people without insurance [8].

This study is based on data provided by one such Vienna-based NGO. The NGO has been providing free primary care services to uninsured people since 2004 regardless of their nationalities and legal status. Their activity is funded by private donation, public funding, and in-kind supports in a form of free medicines and voluntary work of health care professionals. The NGO works in collaboration with volunteer interpreters, general practitioners and health specialists as well as with a network of external laboratories, diagnostic institutions and specialists who care for the patients and carry out screening and diagnostic tests without remuneration. Typically, a patient with a health problem has a consultation with a physician (a general practitioner or a specialist on duty) and is diagnosed and treated on the spot. In case where in-house specialist consultation, diagnostic testing, screening or treatment (such as for surgery or dental treatment) is not possible, the patient is referred to another collaborating institution or hospital in Vienna. The volunteer interpreters sometimes accompany the patients to external institutions, call patients to make sure they show up to appointments and also give them advice in how to take medications in a correct way [11]. No costs are incurred by the patients for any of these services.

The NGO approached the researchers as they have been observing continuously high number of uninsured Chinese patients coming to the NGO. In 2016, for example, 3,517 patients were treated at the NGO of which 10% were Chinese. In the peak year of 2011, one-fifth of their patients were Chinese. In 2015, there were eight volunteer interpreters working for the NGO and half of them were Chinese interpreters [11]. The legal status of the Chinese patients coming to the NGO is unknown but given the compulsory nature of the insurance system in Austria as outlined before, most or quite likely all of them are assumed to be undocumented migrants.

In fact, the number of Chinese migrants to Europe has increased rapidly over the past decades and is projected to continue to rise [12]. In 2011, more than 826,000 people born in China were living within the territories of the EU Member States making them the tenth largest non-EU foreign communities in the EU territory [13]. Between 2008 and 2017, average 11,000 Chinese citizens per year were 'found to be illegally present' in the EU [14]. The actual number of undocumented Chinese or of any undocumented migrants in the EU is unknown [5,8]. In Austria, officially registered numbers of people born in China and living in Austria more than doubled between 2002 and 2018 from approximately 7,600 to 17,000 [15]. There are more female (58%) than male [16] and almost half of them lives in Vienna [17]. Chinese communities in Austria represent a mixed migration pattern comprised of all types of migrants from asylum seekers and refugees, economic migrants, to relatively well-off students and business people [12]. Nonetheless, majority

are considered to be economic migrants engaged in the sectors of gastronomy, retail or wholesale [12,18].

Actual or estimated numbers of undocumented Chinese migrants in Austria is unknown. In fact, hardly anything is known about this population group. The aim of our study is to provide first-of-its-kind descriptive evidence on the characteristics, health problems and health care needs of this specific vulnerable population who come and seek primary health care in an NGO in Vienna that treats uninsured people.

## 2. Material and methods

Our data comprise of medical records of all patients who have been recorded as having a Chinese background by the NGO and who have received care from the NGO during the sampling period of 1st May to 31st July 2015. Original medical records have been filled out electronically by several general practitioners and specialists per consultation. A compilation of these records per patients without personal identifiers such as names, address or telephone numbers were given to the researchers in hard copy. All participants received information on the aims and purposes of the study and consented to the anonymous use of their data. Demographic data included in the analysis was: sex, date of birth, patients' insurance status and German language proficiency. Since no standardised disease categorisation system has been applied in the original patient records, the medical data was coded using the German and English versions of the International Classification of Primary Care, 2nd version (ICPC-2), version 7.0 [19]. ICPC-2 is an internationally recognised classification tool recommended especially for its use in understanding and classifying primary health problems not only from clinical but also from patients' perspectives. We used this tool to identify the major disease categories and the specific diseases with which the patients were diagnosed, and the reasons why the patients came to seek help [20]. Two features of ICPC-2 were applied: 'body system chapters' and 'reasons for encounter' (RFE) [21]. We used the body system codes to identify broad and specific disease categories and types of health problems most frequently observed in our sample and RFE to identify health needs expressed in a form of problems and symptoms from the patients' perspective. Since we were primarily interested in patients' health problems, ICPC-2 items related to procedures and process of care ('episodes of care') were not used in our study. The analysis is purely descriptive: frequency count of major health problems and needs identified within our sample. The first author (YS) systematically coded all medical records using the computer-based scientific software Atlas.ti [22]. The result was exported to Microsoft Excel for basic descriptive analyses. In addition, YS conducted a qualitative text analysis using Atlas.ti based on the notes written by the physicians in the patient records. The second (SNZ) and the third (UT) author checked the quality of the data analysis process and verified the results. No inferential statistical analysis or tests were applied as we did not aim to draw general conclusion from our sample. The aim of our study was to generate the first impression regarding undocumented Chinese migrants' health in the specific setting of Vienna, Austria.

## 3. Results

### 3.1. Patients' characteristics

Our total sample size comprised of 74 Chinese patients composed of all Chinese patients who visited the NGO during the three-month survey period. This covered half of the total number of Chinese patients who visited the NGO in the same year. Summary characteristics of our sample are depicted in Table 1. None of them

**Table 1**  
Characteristics of participants.

Demographic data	Total	Female	Male
Number of patients, n (%)	74 (100%)	47 (64%)	27 (37%)
Age, years at last visit, mean $\pm$ SD* (Range; Median)	44.6 $\pm$ 9.7 (24–67; 47)	44.8 $\pm$ 9.4 (24–67; 47)	44.3 $\pm$ 10.3 (25–63; 48)
Total encounters	791	491	300
Mean number of visits per person per year $\pm$ SD (Range; Median)	3.7 $\pm$ 3.5 (1–21; 2.6)	3.7 $\pm$ 3.8 (1–21; 2.0)	3.6 $\pm$ 3.0 (1–11; 3.0)
Patients visiting the NGO more than the mean, n (%)	21 (28%)	12 (26%)	9 (33%)

\* SD, Standard Deviation.

**Table 2**  
Year of first encounter.

Year	Patient, n	%
2008	1	1%
2010	3	4%
2011	7	9%
2012	5	7%
2013	11	15%
2014	12	16%
2015	35	47%
Total	74	100%

had health insurance. In our sample, there were more female than male, very few young patients, no children or infants and majority of them were in their 40s (43% of female and 38% of male). Almost one third of the patients were frequent repeated users – coming and being treated at the NGO more than four times a year. More than half were long-term users with one patient receiving care since 2008 (See Table 2).

### 3.2. Health problems and reasons for encounter (RFE)

In total, 126 different types of disease (diagnosis) and 107 symptoms (RFE) were recorded. 75% of the patients were diagnosed with two or more health problems. The most frequent ones (for single-diseases and major disease categories) are listed in the Appendices. Mean number of health problems diagnosed per patient was 4.3 (SD 4.1; range 1–20) for female and also 4.3 (SD 2.9; range 1–11) for male. Share of patients above this mean was 38% for female and 56% for male indicating many patients having multiple health problems. The most frequently diagnosed diseases in the single-diagnosed disease category clustered around cardiovascular and metabolic-related diseases for both sex. 21% of female and 26% of the male was diagnosed with hypertension, frequency of type II diabetes was 17% among female and 19% among male, and 13% of female and 15% of male were diagnosed with lipid disorders (high cholesterol or high triglyceride levels, or both).

Our RFE analysis revealed that 11% of the female and 8% of the male patients visited the NGO regularly in order to receive medication for diabetics and hypertension. 85% of the patients diagnosed with type II diabetes already knew they had diabetes and came to the NGO when feeling quite unwell or in need of medication, or both. Mean number of visits among type II diabetes patients was 6.7 times per person per year, which was almost twice as often as the sample mean of 3.7 times.

Stomach function disorders (mostly gastritis) were also frequent among both sex (female 13% and male 11%). A major health problem characteristic only to male was teeth and gum disease (mostly dental caries). 33% were diagnosed for a need for treatment while this was only 11% among female. RFE analysis showed that 41% of the male patients visited the NGO due to problems related to teeth and gum. Health problems characteristic to the female patients included excess menstruation and vaginal discharge (13% and 13%, respectively). According to the RFE analysis, 49% of the female patients came to the NGO due to symptoms and concerns related to menstruation, vaginal and breast symptoms. 23%

required gynaecological-obstetric care related to: pregnancy (6%); ante-partum bleeding (2%) and previously implanted intrauterine device (IUD) (15%).

15% of the female patients expressed some types of mental health concerns. 9% was actually diagnosed as having psychological health problems requiring specific intervention. In contrast, 22% of the male patients were diagnosed with psychological health problems (including tobacco and alcohol abuse) while only 15% expressed their symptomatic concerns. High percentage of patients (32% female; 30% male) expressed symptoms of unspecified health problems such as pain, chills, weakness or generally feeling ill. 19% of both female and male suffered from headaches. 32% of female and 33% of male expressed symptoms related to skin such as swelling, itchiness and rash. 30% and 44% of female and male patients expressed musculoskeletal problems, all of which were diagnosed for a need for treatment including physiotherapy.

Frequencies of communicable diseases were 21% for female and 33% for male patients. 13 different single-diagnosed communicable diseases in five disease categories were recorded. The three most frequent types of communicable health problems according to the ICPC-2 disease categories were: skin infections (9%) such as warts, herpes and fungal infections; infections of the respiratory system (8%); and infections of eyes (conjunctivitis) and ears (otitis media) (7%). Frequency of genital candidiasis among the female patients was 6%. There was one case of a notifiable communicable disease – syphilis – which was handled by the NGO according to the Austrian regulation. Syphilis is one of the notifiable communicable diseases which health professionals are mandated to report to the authority only when there is a fear that it will spread further and this was not the case [23].

### 3.3. Communication as a challenge in health care provision

Demographic data showed that 92% of the patients could not communicate with the physicians in German. The text analysis of physicians' notes revealed that despite having interpreters, 18% of the patients were considered to have high communication barrier. More than 25% of the patients were given specific health behaviour change advices such as altering diet or doing more exercise. Two physicians made extra text remarks that communicating these messages and ensuring adherence were difficult due to language barriers.

## 4. Discussion

To our knowledge this is the first study of its kind that investigated into the specific health problems and health care needs of Chinese uninsured and assumingly undocumented migrants in Austria. Our study implies that there are considerable numbers of uninsured Chinese people without a regular status living and working in Austria for a long-time period with high primary health care needs. The right of health for all, including preventative care, is stipulated under the European Convention on Human Rights and is part of the Austrian constitution [24]. Under the current system in Austria, such obligation is fulfilled by a small number of dedicated

NGOs that provide primary health care to undocumented migrants who otherwise have restricted access to regular health care services [8]. Studies indicate that these NGOs are also saving health care costs by preventing emergency cases and hospitalisation, and that timely access to treatment and care for undocumented migrants reduces costs to the society as a whole [3,4,25].

Our study also reveals the important function of the NGOs not only as deliverers of health care to the vulnerable population but also as an institution for collecting valuable data that can be used for public health surveillance and policy making. In line with previous studies that reviewed the health needs of undocumented migrants in the context of Europe, our results imply that needs for this vulnerable group are highly diverse [3] but are particularly unmet in the areas of chronic diseases, obstetric and gynaecological care, dental and mental health [26].

In our sample, frequency of diabetes and related morbidity was particularly high, and 85% of the type II diabetic patients came to the NGO presenting severe symptoms that required immediate medication. Studies from Italy also reported high type II diabetes prevalence among the Chinese migrants [27] and high medical prescription needs for hypertension and diabetics among undocumented Asians [28]. A study conducted in a primary health clinic in Geneva, Switzerland also found multiple health problems of chronic nature characteristic to its sample population of undocumented migrants [29]. Given that China has the largest number of adult population living with diabetics in the world [30,31], being undocumented and coming from China may indicate being at particular high risks of diabetic and related chronic conditions.

Our data also indicate diversities in gender-specific needs. We identified particularly high demand for primary health care among middle-aged undocumented female migrants. This result was similar to one of the outcomes of the Swiss study mentioned previously [29]. Our detail analysis showed that the types of obstetric and gynaecological care needs of our female patients reflected their age and possibly their occupation. For male participants, a targeted intervention on raising awareness on oral hygiene issues may be useful though making contact with this population group outside the NGO-setting could be challenging. Male patients in our study seemed to be less aware of their mental health issues than their female counterparts but further study is needed to confirm such finding. A culturally-appropriated and gender-specific mental care is another area of major challenge.

There was no single dominant communicable disease observed in our sample and one case of notifiable infectious disease. The overall profile of the communicable diseases was different from that of the findings from a study conducted among the refugees and asylum seekers arriving in Europe in 2015 [32]. Monitoring specific patterns of communicable diseases among different populations is one of the major tasks of public health surveillance and future studies could include and compare the patterns between and among different migrant groups too.

The limitation of our study is that we could not compare our sample with regular Chinese population in Austria because to our knowledge, such data does not exist. Instead, we compared our results with findings from studies in other European countries which included Chinese or undocumented Asian population, or both. Our sample size was relatively small and the study period short. This was due to limited resources. Nevertheless, our sample contains half of all Chinese patients who visited the NGO in 2015. The sampling period could have influenced certain health problems to show up more frequently (such as allergy symptoms) or less frequently (such as infections due to influenza) but are overall findings were in line with studies conducted among undocumented migrants in other European countries [3,26]. Our study adds to the collections of previous knowledge by presenting the first impression of the situation in Austria. Further studies with larger data,

longer study period, and possibly incorporating more providers' side perspectives are therefore recommended in the future.

## 5. Conclusions

Despite the repeatedly emphasised needs for collecting better quality data on the health of undocumented migrants, our study highlights the fact that there are still many undocumented migrants who fall off the radar of the public health system and thus from the public health surveillance system. We draw two policy implications from our study findings. First, accessing, compiling and processing data related to undocumented migrants' health is challenging. Increased support and resources are needed to make more comprehensive datasets available that allow better monitoring, comparison across and between different ethnic and migrant groups as well as comparison between countries.

Second, the current system in Austria represents a paradoxical situation in which on a legal base, health care for undocumented migrants is restricted to emergency care only, but from human rights perspective a broader range of health care is provided by organisations outside the official public health system [8]. Dedicated NGOs deliver the health care services and health-related state's institutions acknowledge and financially support them [8]. The paradoxical system, however, still hinders data collection efforts and public health surveillance. To bring back the vulnerable population group 'on the radar' of public health and regular health care system, it is necessary to promote communication and coordination between public health and immigration policy makers [25]. A constructive cooperative relationship between science and practice is also necessary. Such coordination and cooperation would be beneficial to the society from humanitarian, economical and public health perspectives.

## Authors' contribution

Yuki Seidler: Investigation, Methodology, Data curation, Writing – original draft, Writing – review and editing, Validation.

Sonja Novak-Zezula: Conceptualization, Investigation, Methodology, Writing – review and editing, Validation, Supervision.

Ursula Trummer: Conceptualization, Investigation, Methodology, Writing – original draft, Writing – review and editing, Validation, Supervision.

## Conflict of interest statement

The authors have no actual or potential conflict of interest in this work.

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## Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.healthpol.2019.04.002>.

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