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**The health status of children without a resident permit consulting the  
Children's Hospital of Lausanne**

THESE

préparée sous la direction du Docteur Mario Gehri,  
Privat-docent et Maître d'enseignement et de recherche

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par

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## Rapport de synthèse

### Etat de santé des enfants sans-papiers consultant l'Hôpital de l'Enfance de Lausanne

**Auteurs:** Sarah Depallens Villanueva, Marie-Jo Puelma, Jean-Daniel Krähenbuehl, Mario Gehri

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**Objectif:** Evaluer les données sociales, économiques et médicales concernant les enfants sans permis de séjour pris en charge à l'Hôpital de l'Enfance afin de pouvoir mieux comprendre leurs besoins spécifiques.

**Conclusions:** La majorité des enfants ayant participé à l'étude sont originaires d'Amérique Latine et vivent dans des conditions de vie très précaires. Leur état de santé global est satisfaisant et la plupart bénéficient d'un suivi médical régulier. La prévention ciblée sur une meilleure hygiène de vie est particulièrement importante en raison de l'incidence élevée de surpoids et d'obésité dans cette population.

**Ce qui est connu et ce que l'étude apporte de nouveau:** Cette étude est la 1ère qui analyse la situation socio-économique et l'état de santé d'enfants sans-papiers en Suisse. Les points forts de cette étude sont son caractère prospectif et le suivi de plus de la moitié de ces enfants à 1 an malgré une population particulièrement vulnérable et difficile à monitorer.

**Méthode:** Etude exploratoire prospective par le biais d'un questionnaire incluant des données socio-démographiques, médicales et scolaires de 103 enfants sans permis de séjour ayant consulté pour la 1ère fois l'Hôpital de l'Enfance entre août 2003 et mars 2006. Ces enfants étaient ensuite reconvoqués pour une deuxième consultation 1 année plus tard afin d'obtenir un suivi médical.

**Résultats principaux:** 87% des enfants sont originaires d'Amérique Latine, 36% ont moins de 2 ans. Cette population vit dans des conditions précaires avec un revenu familial sous le seuil de pauvreté (89% des familles vivent avec moins de 3100.-CHF/mois). Les raisons principales de consultation étaient des maladies infectieuses, un bilan de santé demandé par l'école ou un contrôle du nourrisson. La plupart des enfants étaient en bonne santé ou présentaient les mêmes pathologies retrouvées chez des enfants d'un âge similaire. 13% des enfants entre 2 et 16 ans sont obèses et 27% souffrent de surpoids. Tous les enfants en âge d'être scolarisés fréquentent l'école dans l'année suivant le 1<sup>er</sup> contrôle médical et 48% sont assurés auprès d'une assurance maladie.

**Biais:** Au contrôle médical à 1 an, nous n'avons pas de donnée supplémentaire concernant 43% des enfants qui avaient été perdus de vue (courrier envoyé revenu en retour).

## The health status of children without a resident permit consulting the Children's Hospital of Lausanne

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No conflict of interest in relation to this article.

### Summary

**Objective:** To assess social, economic and medical data concerning children without a resident permit taken into care by the Children's Hospital of Lausanne (HEL) in order to evaluate their specific needs.

**Methods:** Prospective exploratory study by a questionnaire including the socio-demographic, medical and education data of 103 children without a resident permit, who consulted the HEL for the first time between August 2003 and March 2006. These children were then recalled for a second check-up one year later in order to allow a regular monitoring.

**Results:** Eighty-seven percent of the children were native of Latin America, 36% being less than two years old. This population of children lived in precarious conditions with a family income lower than the poverty level (89% of the families with less than 3100 CHF/month). Forty-five percent of the children had a health insurance. The main reasons for consultation were infectious diseases, a check-up requested by the school or a check-up concerning newborn children. Most of them were in good health and the others were affected by illnesses similar to those found in other children of the same age. At least 13% of the children were obese and 27% were overweight. All children who were of educational age went to school during the year after the first check-up and 48% were affiliated to a health insurance.

**Conclusions:** The majority of the children from Latin America lived in very precarious conditions. Their general health status was good and most of them could benefit from regular check-ups. Prevention, focused on a healthier life style, was particularly important among this population characterised by a high incidence of overweight and obesity.

**Key words:** *Illegal immigrants; insurance; obesity; Lausanne*

### Introduction

Nowadays the proportion of people living without a resident permit, known as illegal immigrants, represents 2% of the world population [1]. In Switzerland, estimations put this at between 200,000 and 300,000 [2].

According to a 2003 report of the town council of Lausanne there were between 4,000 and 6,000 persons without a resident permit in Lausanne. The majority of them originated from Latin America. More than half of them were women, who mostly had a child living in Switzerland or in their country of origin. Concerning the school year 2002–2003, 292 children [3] without status attended primary and secondary schools in Lausanne. The majority of children without a resident permit were still at preschool age.

The Children's Hospital of Lausanne (HEL) is the paediatric reference centre for Lausanne and suburbs (approximately 250,000 inhabitants). Every year, about 46,000 patients come to the HEL. Among them, more than 30,000 consult the Emergency Department (ED). Seventy percent of these patients are immigrants. The HEL is engaged in the medical monitoring of children without a resident permit. By word of mouth, most families recently arrived in and around Lausanne know that the HEL offers free medical care in a system of confidentiality without transmission of information to administrative or police authorities.

During the last decade, the number of families without a resident permit has grown. Since 2004 the number has stabilised, probably due to the tightening of the regularisation laws concerning illegal immigrants as well as growing unemployment.

At present life conditions and specific health problems of children without a resident permit are not well known. Several Swiss and international studies concerning immigrants already exist [4-9], including several on their health status and their care consumption, but there is no European study focusing on children without a resident permit. This population lives in very different circumstances (lodgings, work, etc.) than the other immigrants.

The objectives of this study were to assess social, economic and medical data concerning children without a resident permit taken into care by the Children's Hospital of Lausanne (HEL) in order to evaluate their specific needs.

## Methods

This prospective and descriptive study included children without a resident permit consulting the HEL. Children without a resident permit coming to the HEL were cared for by a multidisciplinary team [4] (doctors, nurses, social workers, interpreters and mediators). The check-up upon arrival consisted of completing the vaccinations, performing a tuberculin test, detecting an underlying anaemia and immediate treatment of a possible intestinal parasitosis. In many cases, children arriving at the HEL were without health insurance. With the help of the nurse, every family filled in a request for social security, this request was then sent to the Social Insurance and Hospitalisation Service (SIHS) that has a special budget for this purpose. This study included all the children without a resident permit aged 0 to 18 years old, who consulted the HEL for the first time between August 2003 and March 2006. Parents received information (in French and Spanish) concerning the general aim of the study and its confidentiality in the treatment of data, and then they gave their written consent in order to participate. Afterwards, a medical form was filled out by the doctor during two crucial moments: the first consultation and the medical check-up after 1 year.

The data (table 1) were extracted from:

- a) The medical form of the study including child's education, the understanding of the French language by their mother or of the accompanying adult, with a systematic monitoring during one year.
- b) The social security request, filled in during the arrival assessment, with information concerning the socio-economic situation of children and their families (housing, incomes, education of the mother, arrival of the child in Switzerland).

This was in accordance with the usual recommendations given to the migrant children on their arrival in Switzerland. All this information was collected at the end of the study to proceed to the data analysis.

### Table 1

Data contained in the social assistance form and in the medical form.

Health insurance

Sex

Date of birth

Origin

Maternal education

Maternal understanding of French

Date of entry in Switzerland

Housing (number of persons/room)

Family monthly income

Child's education

Reasons of the consultation

Status (percentiles, BMI, pathologic sign)

Diagnostics

Blood-sampling results (Hb, Hepatitis B, others)

Mantoux test results (for children from 2 to 16 years old)

Vaccine status

Therapies

Number of consultations per year

## Results

From August 2003 to March 2006, 103 children were included in the study. Sixty children were seen at the yearly check up, 31 did not follow the study through, 7 returned to their country of origin and 5 chose another attending physician. As 100% of the children consulted the ED of the HEL without an appointment, more than one third of them received a further consultation one week later as an interpreter was not available during the first medical consultation.

### Social data

The socio-demographic data showed that 87% were originally from Latin America and 54% from Equator (fig. 1). Among the children that we studied, 25% were born in Switzerland. The educational level of the mothers was good: 38% of them had finished their primary education, 48% had completed their secondary education, with one fifth having been to university. In 58% of the cases an interpreter was necessary during the medical consultation.

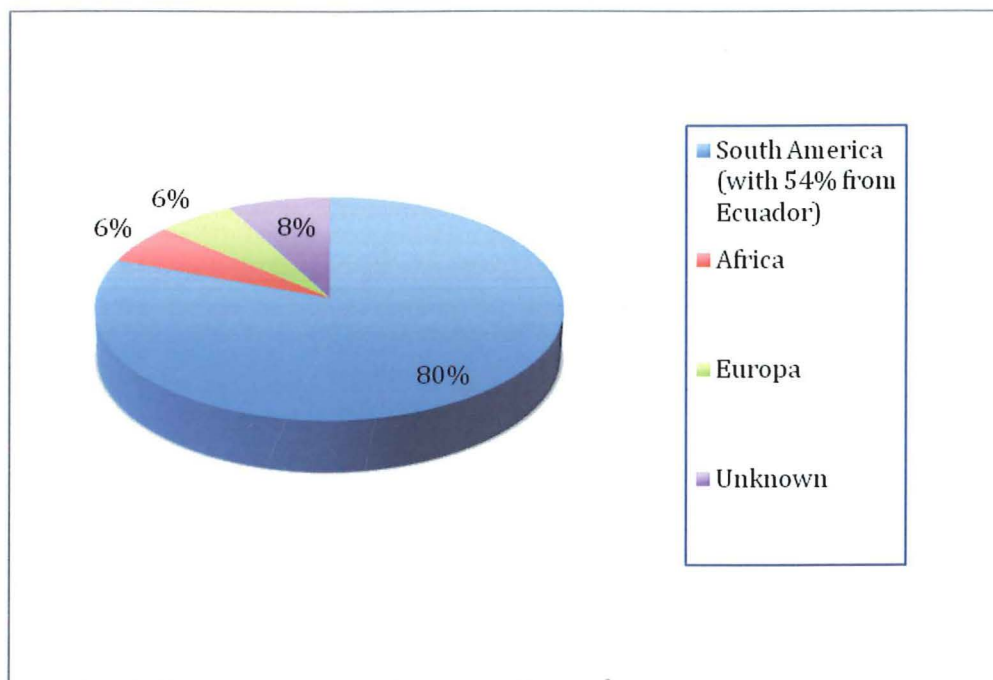
According to the mothers interviewed, 56% of the children were living with two or more persons per room, and 35% with three or more persons per room (fig. 2). The family income (mother and/or father) was, in 89% of cases, lower than 3100 CHF/month (about 2000 Euro). Thirteen percent of children had a health insurance during the first consultation, while 48% acquired one during the study year.

Thirty-six percent of the children born in Switzerland were less than two years old. 64% were between two and 16 years old. The average age of the children when they joined the study was 5.6 years. Fifty-three percent were girls and 47% boys. Eighty-five percent of the children in the study were of school age at the time of their first consultation. All these children monitored were going to school at the time of the yearly check up.

The average time delay for the children aged from 2 to 16 years old from their arrival in Switzerland to their first medical consultation was 15 months.

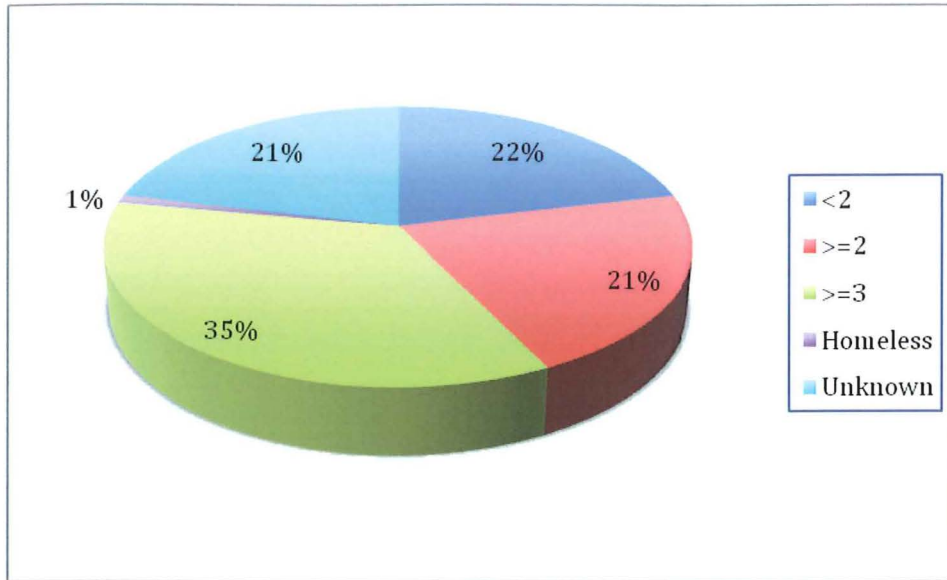
**Figure 1**

Native country of patients.



**Figure 2**

Housing: number of persons/room.



### Medical data

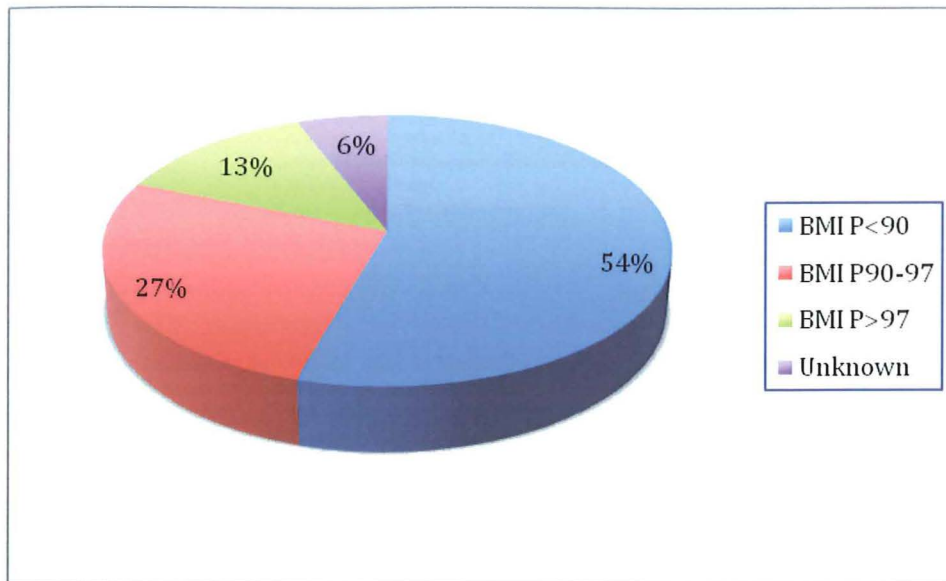
Twenty-seven percent of the patients were born in Switzerland. We observed that 59% consulted for the first time at the HEL for the control of a newborn or due to a pre-school assessment, 25% because of infectious symptoms (ENT, fever, respiratory, gastroenterology, dermatology). Diagnoses showed that 42% of the children were in good health. Of 60 children tested for haemoglobin levels, six suffered from anaemia and needed an iron therapy. Seventeen percent needed a specialised consultation (surgery, dermatology or ophthalmology). Sixty of the 103 children attended the medical check-up after one year. In this group of 60 children, 30% went to the ED or to the outpatient unit of the HEL more than six times during the year of the study, 44% between two and six times, and 21% between null and one time. We had no data for 5% of the patients.

In the children from 2 to 16 years old, 48% had been completely vaccinated in their country of origin. Among them, 52% benefited from a vaccine refresher. The patients belonging to this group did not show any sign of malnutrition (height less than 1% lies below the P3). Twenty seven percent of these children from two to six years old were overweight and 13% were obese (fig. 3), according to the German stoutness curves [10] and to the definition of the weight excess in children [11].

At the one year medical check-up, no supplementary data concerning the children's health were observed. Nevertheless it was possible to estimate the frequency of consultation and the affiliation of these children to a medical insurance.

**Figure 3**

BMI (Body mass index) percentile of patients from 2 to 16 years old



## Discussion

This was the first study on the health and socio-demographic situation of children without a resident permit in our region. These children lived in precarious conditions and 89% of the families were under the poverty level (less than 3100 CHF/month for an adult and a child, according to the standards of the Swiss Conference of Institutions of Social Action, [www.skos.ch](http://www.skos.ch)). All these children, whose mothers attended obligatory school (88%), went to school in Switzerland. In spite of their difficult living conditions and illegal arrival in our country (absence of border medical examination contrary to people seeking for asylum), these children were vaccinated and were in good health. The main reasons for consultation were a control of child development or a pre-school check-up.

Despite the modest socio-economic level of these families, 45% of the children had a health insurance in the year following their first consultation at the HEL. The percentage of insured children was higher than that of adults without a resident permit [12]. This could be explained by the concern of mothers to assert an optimal quality of care for their children and by the possible effect of the application of the obligatory affiliation principle to an insurance for patients without a resident permit (law of December 19th 2002). Literature has shown a direct correlation between the good health of a child and his affiliation to a health insurance [13]. Finally the federal politics of integration or expulsion of immigrants without a resident permit might influence the parents' decision not to acquire health insurance for their children, for fear of revealing their illegal status.

This study also showed that 40% of the children between two and 16 years old were overweight or obese, which was far superior to data for Swiss schoolboys attending the sixth year of primary school [14].

The relationship between poverty and/or migration and infantile obesity in developed countries is well described in the literature [15–18]. Studies in Switzerland have shown a higher percentage of overweight in immigrant children [19, 20]. This particular point requires critical public health measures. In another area, a study from Geneva showed the importance of preventive measures concerning non-intended pregnancies of women without a residence permit [21].

Strengths of this study are its prospective character and the success of this vulnerable population's monitoring, of which more than half of the children could be re-examined after one year. The latter is a remarkable achievement in such populations. Having a reference nurse permanently present, allowed us to keep in contact with these families and to call them regularly to monitor them. The main difficulties were to localise and get in touch with those families living in a precarious situation. Indeed, 43% of them had disappeared and no information about them was received thereafter (mail returned).

This study allowed a better knowledge of the child population without a resident permit in Lausanne. This population was mainly constituted by Latin American children who were provided with education and were in good somatic health. In Lausanne, their access to care has been facilitated by different factors: the creation of a multidisciplinary team (mediators, interpreters, etc.) at the HEL, the financial support of the SIHS, the recent setting-up of the application of the obligatory affiliation principle to a health insurance for patients without a resident permit and the support of the school health system. The integration of these children in a health system is essential as emphasized in the literature [22]. The recent and important changes in asylum politics in Switzerland have stabilised the migratory flow of this population. We must remain attentive to



the fact that in the future new categories of immigrants originating from Africa, Balkans or Caucasus are likely and may present other socio-medical problems. Networks of collaboration between the different partners involved (state, schools, places of care, immigrant associations, etc) should be created in order to allow an increase of responsibility adapted to the needs of this community, so difficult to evaluate in the context of the complex beginnings of migratory flow.

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