ITALIAN JOURNAL OF PUBLIC HEALTH

Meeting the Oral Health Needs of Immigrants: National Public Health Services Vs. Charitable Volunteer Services In Rome, Italy

Denise Corridore[1], Fabrizio Guerra[1], Domitilla Di Thiene[2], Guido Giordano[1], Luigi Baggi[3], Roberto Santopadre[4], Livia Ottolenghi[1]

ABSTRACT

BACKGROUND: Oral health is an important aspect of well-being. In Italy immigrants can have different access to health care services, and can opt for the National Health Service (NHS) and/ or private non- profit health care organizations. The purpose of this study was to develop an instrument to evaluate oral health in the immigrant population of Rome and to investigate the differences between two different types of services: the First Observation Unit at the Department of Oral and Maxillo Facial Sciences, at the "Sapienza" University of Rome (a NHS affiliate), and a charitable organization, the Caritas Dental Center (CDC).
METHODS: A multiple-choice questionnaire was administered between the last trimester of 2006 and the first trimester of 2007. A chi square analysis was performed and the level of significance was set at $p<0.05$.
RESULTS: The sample was composed of 250 people, of which 100 were patients of the CDC and 150 were patients of the NHS. The percentage of non-Italians was 80% (n=80) in the CDC sample, and only 16% (n=25) in the NHS sample. In the CDC, definitive resolving therapies, such as tooth extractions, prevailed (60% v's 47% NHS; p=0.033). In addition, the frequency of consumption of sugary foods and drinks was significantly higher among CDC patients (31% reported to consume these over 9 times a day) compared to NHS patients (11% reporting this consumption).
DISCUSSION: The study shows a substantial under using of the National Health Service for Oral health care needs by the immigrant population. The particular composition of the sample, with a high prevalence being of Romanian nationality, might reflect specific conditions of this nationality. The results showed that immigrants were satisfied with the health care even though they encountered difficulties in terms of level of communication .

Key words: Immigrant, Oral health, Access to health care services

(1) Department of Oral and Maxillo Facial Sciences, "Sapienza" University of Rome. - (2) Department of Public Health and Infectious Diseases Sapienza University of Rome. - (3) Dental Unit, National Institute for Health in Migration and Poverty, Rome - (4) Caritas Dental Center Diocesana of Rome.

CORRESPONDING AUTHOR: Denise Corridore - Department of Oral and Maxillo Facial Sciences, "Sapienza" University of Rome. - Telephone number: 3934281156
Email: denise.corridore@gmail.com

INTRODUCTION

There are many different definitions of the term immigration. According to international definitions, immigration occurs when a person (in this paper always men and women unless otherwise stated) moves his or her centre of living over a socially meaningful distance, and it is international immigration when this occurs across national borders (1).

Foreigners with regular presence on the Italian territory, including both residents and nonresidents, are more numerous compared to officially recorded data because they include

people who may have arrived recently and who are, therefore, not yet listed in the municipalities (2). In the province of Rome on the 1st January 2007, the Caritas Dossier had estimated 431 000 foreigners legally residing in the province of Rome, while ISTAT (The National Institute for Statistics) had registered only 279 000 (2, 14) in a total population of about 4 million citizens. While immigrant health has been given ample attention in the literature (3, 4), limited attention has been given to Oral Health issues. However, as has been previously reported (5), Oral Health (OH) is an important mediator of Quality of Life (QoL) in migrant populations, in particular of the physical component of older adults' QoL.

The main variables that affect access to health services for immigrants in our area of Lazio are: the existence of the right of access, the awareness of this legal right, and the effective exercise of their right. Facilitating access to services cannot mask the numerous barriers still existing between the National Health Service (NHS) and alien access to it: problems like legal, economic, bureaucratic and administrative obstacles, and organizational, linguistic, communicative and interpretative barriers (6). The analysis of data, taken from specialist assistance access records in the province of Rome, is based on figures provided by the Ambulatory Assistance Information System (SIAS), which records the benefits provided under regional tariff nomenclature planned by the principals of public and private health accredited structures in the region of Lazio. Such organizations include the First Observation Unit at the Department of Oral and Maxillo Facial Sciences, at the "Sapienza" University of Rome (NHS) and the Caritas Dental Center (CDC). The main differences between the two centres are summarized in Figure 1. The type of dentistry practiced in the CDC, rather than in the NHS, is traditional, but in the absence of an economically viable model becomes an essential and immediate dentistry, while maintaining the quality requirements necessary to provide an efficient service (7). Previous studies have reported inequalities in the access to oral health care due to social conditions (8,9,10,11,12). This paper addresses the issue of access to basic dental services by migrants, by comparing two dental care realities in Rome, the Department of Oral and Maxillo Facial Sciences of the "Sapienza" University of Rome, and the Caritas Dental Center, respectively a public health facility and one funded by private capital. Moreover, according to the study by Zini and colleagues (8, 9), oral health promotion initiatives among immigrants should be based upon optimal descriptive data, in order to accomplish the social commitment inherent in these different populations.

The objectives are therefore: (i) the development of a questionnaire for collecting epidemiological data on comparable quality of life in relation to oral health, (ii) the comparative study of two OH service realities (Public Health versus Private Catholic health Care), and the difficulties of accessing them, as well as possible correlations with socio-legal status.

FIG. 1

MAIN DIFFERENCES BETWEEN NHS AND CDC OH CARE SERVICES.

Structure	NHS	CDC
Users	NHS STP*	All subjects
Provided service	Multi-specialistic Dentistry	Traditional and basic Dentistry
Service cost	Ticket (except exempted) Material expenses (prosthesis, orthodontics)	Full cost of the expenses by the facility
Staff	NHS employee	Voluntary workers
Opening schedule	Monday-Saturday	Monday-Friday

**STP: Temporarily Present Foreigner (in Italian: Straniero Temporaneamente Presente). From 2008 is no longer allowed the STP issue to EU (European Union) citizens without health coverage. For them the NHS issues a code ENI (European Non Inscribed) with half-year renewable term*

METHODS

Questionnaire: definition and validation in Italian

A questionnaire was developed in order to identify the cultural origins and oral health status of patients who utilized the two structures previously mentioned. The developmental process was carried out according to the guidelines published by the World Health Organization, in particular those referring to Oral Health Care taken from the World Health Survey Instruments and Related Documents, Short Version (available at http://www.who.int/healthinfo/survey/instruments/en/index.html).

Additional questions were added, based on the parameters developed by the European Global Oral Health Indicators Development Project I (13).

The questionnaire was originally developed in English. It was then translated into Italian. Standard translation protocols were used in order to accurately reflect responses made in patients' original languages. The protocol was as follows: translation, counter translation, validation and check through focus groups. The validating focus group was composed of 12 people: health staff from the university and from CDC, cultural mediators of the main linguistic groups (Arabic and Romanian) and patients from the two different care facilities. The questionnaire was developed using the Morgan, Krueger and King procedure (14, 15).

The questionnaire consisted of 31 multiple-choice questions, with one answer to be selected. The questionnaire was divided into the following four sections: (i) socio-demographic characteristics (12 questions); (ii) medical access (4 questions); (iii) oral health care (6 questions); (iv) risk behaviour and Oral Health-Related Quality of Life (9 questions).

Calibration and Pilot Study

One examiner was involved and the questionnaire was submitted to a group of 20 people randomly selected among users of the two care facilities. The patients returned after 48 hours to newly answer the questions.

In this case, the intra examiner calibration matching was equal to 95%.

An experimental pilot study was performed on a sample of patients from the two areas to verify questionnaire easiness, potential difficulties, adverse conditions of the respondents, and correct interpretation of data.

Questioning Methods and Sample

Questions were multiple-choice and administered during a face-to-face interview, by a single calibrated interviewer, according to the previously described methods.

The study sample was composed of both men and women, aged 18 and over, both Italian and non-Italian, who spontaneously accessed the National Public Health Service (Department of Oral and Maxillo Facial Sciences) or the Charitable Volunteer Service (Caritas Diocesan of Rome) for their first dental visit.

The questionnaires were administered during the following period: between the last trimester of 2006 and the first trimester of 2007.

Statistical analysis

For the final step of the epidemiological study, a Z test (standard normal deviation) and a chi-square test were performed to analyse data, and a 0.05 significance level was set.

RESULTS

Socio-demographic characteristics (Table 1)

The sample composition is shown in Table 1. The sample was composed of 250 people (144 Italians and 106 non-Italians). 100 were patients of the CDC and 150 were patients of the Italian NHS. The percentage of non-Italians was 80% (n=80) in the CDC sample and only 16% (n=25) in the NHS sample. For both care centres, the distribution of men and women varied, with women representing approximately 55% and men approximately 45%. This is in line with data provided by the Caritas/Migrantes Statistical Report on female migration (2).

These results are statistically significant: one out of ten (10%) CDC patients had no home/stable housing conditions (mostly hosted in homeless centres) and 43% were dissatisfied with their current one. The situation of NHS patients is markedly different: 1,3% had no home/stable housing conditions (mostly due to a move and/or transfer in progress), and 20% were dissatisfied with their current one ($p<0.001$).

In both health care facilities, more than 50% of patients had a job. Most of the NHS patients had a public or private employment contract, whereas in CDC patients, 13% worked without any registered contract.

Interestingly, the "unemployed" status had a different connotation in the two facilities: in NHS patients, being "unemployed" was mostly related to being retirees, students and homeworkers. In CDC patients instead, an "unemployed" status was associated to real unemployment.

The CDC patients were evenly distributed among other situations ($p<0.001$) (Table 1).

With regard to smoking habits, it appeared that there were no significant differences between the two groups, 38% v's 34% ($p=0.137$).

Oral Health Status and therapeutic experiences (Table 2)

Thirty seven percent (37%) of NHS patients indicated "often" in response to the question regarding chewing difficulty and mouth and/or teeth pain, while 32% of CDC patients reported these disturbances ($p=0.020$).

Moreover 32% of NHS patients indicated "often" with regard to pain experienced over the

TABLE 1

SOCIO-DEMOGRAPHIC CHARACTERISTICS				
	CDC (%)	NHS (%)	Total	p
Gender				
Female	54 (53.0)	90 (60.0)	144 (57.2)	0.270
Male	47 (47.0)	60 (40.0)	107 (42.8)	
Age				
18-40	52 (52.0)	59 (39.3)	111 (44.4)	**<0.001**
41-60	38 (38.0)	47 (31.3)	85 (34.0)	
Over 60	10 (10.0)	44 (29.3)	54 (21.6)	
What is your [ethnic/ cultural/others] background?				
Italy	20 (20.0)	125 (83.3)	145 (58)	**<0.001**
Eastern Europe	49 (49.0)	8 (5.3)	57 (22.8)	
Asia	14 (14.0)	5 (3.3)	19 (7.6)	
Africa	12 (12.0)	6 (4.0)	18 (7.2)	
South-Central America	5 (5.0)	6 (4.0)	11 (4.4)	
Status				
Italian citizen	2 (2.0)	125 (83.3)	127 (50.8)	<0.001
Foreign with residence permit	50 (50.0)	18 (12.0)	68 (27.2)	
Foreign temporarily present	27 (27.0)	6 (4.0)	33 (13.2)	
Political asylum	2 (3.0)	0	2 (0.8)	
Missing	19 (19.0)	1 (0.7)	20 (8)	
How many years of school, including higher education have you completed?				
<5	17 (17.0)	31 (20.7)	48 (19.3)	0.599
5-10	48 (48.0)	62 (41.3)	110 (44.2)	
>10	34 (34.0)	56 (37.3)	90 (36.1)	
Missing	1 (1.0)	0	1	
What is your current job?				
Government Employee	1 (1.0)	24 (16)	25 (10.0)	**<0.001**
Nongovernment employee	18 (18.0)	35 (23.4)	53 (21.3)	
Self-employed	16 (16.0)	9 (6.0)	25 (10.0)	
Not working for pay	13 (13.0)	6 (4.0)	19 (7.6)	
Unemployed	52 (52.0)	76 (50.7)	127 (51.0)	
How good are your current living arrangements				
Very satisfactory	7 (7.0)	58 (38.7)	65 (26.0)	**<0.001**
Satisfactory	40 (40)	61 (40.7)	101 (40.4)	
Unsatisfactory	43 (43)	29 (19.3)	72 (28.8)	
Homeless	10 (10)	2 (1.3)	12 (4.8)	
Smoking habits				
Yes	38 (38)	51 (34)	89 (36)	0.137
No	62 (62)	99 (66)	161 (64)	

last 12 months, while only 22% of CDC patients indicated this frequency (p=0.047). Among CDC patients, mouth and/or teeth diseases were indicated as not serious enough to impede normal life/work situations in76% of cases versus 64% of the NHS sample (p=0.042). Among patients who accessed the NHS for the first time , 63% had not been treated in the 12 months prior to access. In the CDC group, the percentage was equal to 26% (p<0.001). Motivation for seeking dental care (dental care demand) was notably different in the two OH care facilities, as were the therapeutic choices. In the CDC, definitive resolving therapies, such as tooth extractions, prevailed (60% v's 47% in the NHS group; p=0.033). Conversely, during the first visit, the

TABLE 2

ORAL HEALTH AND SATISFACTION OF THERAPEUTIC EXPERIENCE			
	CDC (%)	NHS (%)	p
Have you received any treatment during the last 12 months			
yes	74 (74)	56 (37)	<0.001
no	26 (26)	94 (63)	
What types of care or treatment did you receive for problems with your mouth and / or teeth?			
Medication	8 (10)	13 (23)	0.033
Dental work / Oral surgery	46 (60)	27 (47)	
Dentures or Bridges	18 (23)	9 (16)	
Information or counseling on dental care / oral hygiene	5 (7)	8 (14)	
Which reasons best explain why you did not get oral health care in the last 12 months			
Cost of living / transport	5 (21)	31 (31)	0.037
Distrust of physicians / medical facilities	1 (4)	12 (12)	
Could not take time off work or had other commitments	1 (4)	4 (4)	
You did not know where to go	6 (25)	4 (4)	
I was not sick enough	3 (12)	27 (27)	
Fear	8 (33)	21 (21)	
When you last needed health care, where did you get care?			
Public Health Service	8 (8)	58 (39)	<0.001
Private health service	12 (12)	90 (60)	
Voluntary Health Services	80 (80)	1 (0.5)	
more	0	1 (0.5)	
How have you been treated by health workers?			
Well	86 (86)	127 (85)	0.808
So-so	12 (12)	16 (11)	
Bad	2 (2)	7 (5)	
Was the communication satisfactory?			
Yes	86 (86)	125 (84)	0.788
So-so	12 (12)	18 (12)	
No	2 (2)	7 (5)	
How many times did you have chewing difficulties in last 12 months?			
Never	35 (35)	62 (41)	0.020
Sometimes	33 (33)	32 (21)	
Often	32 (32)	56 (37)	
How many times did you have pain in the last 12 months?			
Never	26 (26)	41 (27)	0.047
Sometimes	52 (52)	61 (41)	
Often	22 (22)	48 (32)	
How many times did you have problems during your daily activities due to oral pain in the last 12 months?			
Never	76 (76)	96 (64)	0.042
Sometimes	17 (17)	37 (25)	
Often	6 (6)	16 (11)	

NHS patients had chosen medium-long term care (medication, oral hygiene sessions). For patients in both structures, the cost of living influenced choices to forego a dental examination (21% CDC and 31% NHS). Moreover, regarding the same issue, it was significant that 25% of CDC patients refused an oral examination due to lack of information about the possibility to access such a service, compared to 4% of NHS patients (p=0.037). It's important to highlight that 80% of CDC patients went directly to the CDC for care, while NHS patients referred first to the NHS (60%) and 39% to private offices (<0.001).

TABLE 3

RISK BEHAVIOUR			
	CDC (%)	NHS (%)	p
Cigarettes a day	**From 1 to 10**	**From 11 to 20**	
1-10	15 (39)	17 (32)	0.033
11-20	5 (13)	19 (36)	
Over 20	19 (49)	16 (31)	
Sweet food and beverage a day*			
1-4	41 (41)	112 (75)	**<0.001**
5-8	28 (28)	22 (15)	
Over 9	31 (31)	16 (11)	

** Frequency of utilization (times/day).*

Risk behaviours (Table 3)

As previously reported, there were no differences in the prevalence of smoking between patient groups of the 2 care centres. However, "heavy smokers" (those who smoked more than 20 cigarettes a day) were mostly found in the CDC group (49%) while these represented 31% of the NHS group (p=0.033). The overall distribution shows that people who smoked 10-20 cigarettes a day (intermediate smokers) were mostly in the NHS group and that 39% of CDC patients smoked less than 10 cigarettes a day, compared to 32% of NHS patients.

The frequency of consumption of sugary foods and drinks was significantly higher among CDC patients (31% reporting a consumption of over 9 times a day, compared to 11% of NHS patients reporting such). On the contrary, low consumption (< 4 times a day) was declared by 75% of NHS patients and 41% of CDC patients (p<0.001).

DISCUSSION

The samples' composition leads us to identify that users of the CDC were mostly foreigners and those of the NHS were mostly Italians. This clear difference reveals possible difficulties in accessing public health care facilities by the immigrant population, that ultimately prefer the CDC. However the percentage of immigrants referring to the NHS (16%) was higher compared to the national ratio of immigrant population reported in 2006 (about 5%) (16). Moreover, a precarious housing situation echoes these difficulties in 53% of Caritas interviewed patients (among them 10% were homeless or guests of the reception centres throughout Lazio Region). The year 2007 was also characterized by the particular situation of the entrance of Romania and Bulgaria into the European Union. The expected consequence of a reduction in CDC users did not occur. The high prevalence of Romanian users in the Caritas Dental Center might highlight greater difficulties in accessing the NHS that this population experience. A strong flow of people due to the opening of the borders, and the economic difficulties of those who have undergone recent immigration, might explain this result. With regard to irregularly present foreigners, they reported a continuing strong lack of information about their rights to access public health services and general regulatory information for the STP - Temporary Present Foreigner - card, thus reducing the number of those who turn to the NHS for their dental care needs. From 2008 is no longer allowed the STP issue to EU (European Union) citizens without health coverage. For them the NHS issues a code ENI (European Non Inscribed) with half-year renewable term The volunteer service of the CDC was a prevalent point of referral for the "Temporarily Present Foreigner", a place that provided immediate assistance, without red tape, and a dedicated acceptance point. The public service continues to be under-used by immigrants, mostly because of loss of working days (i.e. those who work "on the side" or temporary contract workers who are not entitled to health leave) and because of difficulties in orienting themselves in a language environment that does not facilitate those who are non-native Italian speakers. The main way of accessing health facilities (both NHS or CDC) is by "word of mouth" between immigrants themselves, so their experience is the only channel of information (16). The vast majority of the sample

presented oral health problems during the last 12 months, and this serves to highlight the absence of a preventive approach adopted by these structures, but rather an approach oriented towards a problem-solving habit (17). A patients' request drives the specialist towards selecting a therapy that is as fast and decisive as possible (such as conservative dentistry and oral surgery).

Overall, a wide scale information policy regarding the rights immigrants have to access public health services is still missing: as much as 25% of CDC users said that he/she did not visit a dentist in the past 12 months because they "did not know where to go". However, despite these shortcomings, the overall satisfaction with health care and quality of communication was remarkably high(Table.2). As for smoking habits, there were no significant differences between the two groups (38% vs. 34% (p=0.137) vs. 21.7% national mean) (18).

This study has some limitations, including its sample size and cross-sectional design, which prevent us from making definitive clear statements that can be generalized to the larger immigrant population of Rome, and may thus limit the implications of our results. However, it presents previously unavailable data regarding the determinants of OH care facility utilization among subgroups of immigrants. The results also suggest the need for larger studies, both quantitative and qualitative, to clarify the potential role of culturally influenced care-seeking behaviours in immigrants and strategies to implement oral health care provision and promotion. Understanding the determinants of how oral health care services are used among immigrants is important given the growing number of this group in the overall population, and given that unmet treatment needs may contribute significantly to the overall health status of the Country (19,20). Further studies are needed to point out the specific Italian situation, with social/private services acting as counterparts to the public health care system in the assistance of immigrants.

References

(1) Spallek J, Zeeb H, Razum O. Prevention among immigrants: the example of Germany. BMC Public Health 2010;10:92:1-6.

(2) Geraci S. Accessi ai servizi sanitari degli immigrati a Roma (Health care access of immigrants in Rome), in: Caritas di Roma. Osservatorio Romano Sulle Immigrazioni Terzo Rapporto 2006. Roma, Idos Nuova Anterem, 2007:272-287.

(3) Llácer A, Zunzunegui MV, del Amo J, Mazarrasa L, Bolumar F. The contribution of a gender perspective to the understanding of migrants' health. J Epidemiol Community Health. 2007;61:4-10.

(4) Baglio G, Saunders C, Spinelli A, Osborn J, Utilisation of hospital services in Italy: a comparative analysis of immigrant and Italian citizens. J Immigr Minor Health. 2010;12:598-609.

(5) Mariño R, Schofield M, Wright C, Calache H, Minichiello V. Self-reported and clinically determined oral health status predictors for quality of life in dentate older migrant adults. Community Dent Oral Epidemiol 2008; 36:85–94.

(6) Geraci S. Il diritto alla salute degli Immigrati: scenari nazionali e politiche locali (The Right to health of immigrants: National setting and local politics), Nuova Anterem, Roma 2002.

(7) Santopadre R. Approccio odontoiatrico al paziente immigrato extracomunitario presso il centro odontoiatrico della Caritas (Oral health approach in immigrants patient at Caritas odontoiatric Centre), Conference Proceedings IX Convegno, Fragilità sociale e tutela della salute: dalle disuguaglianze alla corresponsabilità 13 dicembre 2006, Caritas Diocesana di Roma, Istituto Superiore di Sanità 2006.

(8) Zini A, Vered Y, Sgan-Cohen HD. Are immigrant populations aware about their oral health status? A study among immigrants from Ethiopia. BMC Public Health 2009 9:205:1-6.

(9) Cruz GD, Chen Y, Salazar CR, MPH, Karloopia R, LeGeros RZ. New Determinants of Oral Health Care Utilization Among Diverse Groups of Immigrants in New York City. J Am Dent Assoc 2010;141;871-878

(10) AAVV. Immigrazione e Accesso ai servizi Sanitari Nazionali. (Immigration and access to health care) Rapporto C.N.E.L (Consiglio Nazionale dell'Economia e del Lavoro) dicembre 2000.

(11) Barbara JS, Greenberg Jay V K, Holly S. Dental Case Management Increasing Access to Oral Health Care for Families and Children With Low Incomes. J Am Dent Assoc, 2008; 139:11:121-141.

(12) Gao XL, McGrath C. A Review on the Oral Health Impacts of Acculturation. J Immigrant Minority Health 2011; 13:202–213.

(13) Morciano G, Bourgeois DM. Indicatori di salute: EUWorking Group per lo sviluppo di indicatori di salute orale (Health Indicators: EUWorking Group for the development of Oral Health indicators). Prevenzione Odontostomatologica 2005;3:67-71.

(14) Harkness A. Round 4 ESS translation strategies and procedures. Available from http://www.europeansocialsurvey.org/index.php?option=com_docman& task=doc_download&gid=351&itemid=80/ (Last access June, 2010).

(15) Elaine G, Jones and Joyceen S. Boyle. Working With Translators and Interpreters in Research: Lessons Learned. J.Transcult. Nurs. 2011; 22(2): 109 –115.

(16) ISTAT " Istituto nazionale di Statistica" La popolazione straniera residente in Italia (Foreign population resident in Italy). Available from: http://www.istat.it/salastampa/comunicati/non_calendario/20071002_00/testointegrale20071002.pdf (last access: June 2011)

(17) Cruz GD, Chen Y, Salazar CR, Karloopia R, LeGeros RZ. Determinants of oral health care utilization among diverse groups of immigrants in New York City. J Am Dent Assoc. 2010;141(7):871-8.

(18) Petersen PE. Improvement of global oral health - the leadership role of the World Health Organization. Community Dental Health. 2010; 27:194-199.

(19) ISTAT "Istituto nazionale di Statistica". Condizioni di salute, fattori di rischio e ricorso ai servizi sanitari. (Health conditions, risk factors and health care utilization) Available from: http://www.istat.it/salastampa/comunicati/non_calendario/20070302_00/testointegrale.pdf (last access: June 2011).

(20) Wamala S, Bostrom G, Akhavan S, Bildt C. Does socioeconomic disadvantage explain why immigrants in Sweden refrain from seeking the needed medical treatment?. Ital J Public Health 2007; 4(3): 227-234.