

Pregnancy Outcomes of Indochinese Refugees, Santa Clara County, California

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Abstract: Birth certificates and a sample of hospital obstetric records for Indochinese refugees in Santa Clara County, CA, 1979–1980, were reviewed. Among 542 live births, the overall median birthweight of 3175 gm and 5.7 per cent rate of low birthweight were favorable; it is our impression that the more recent arrivals, especially Cambodians and Laotians, present at greater risk, lacking prenatal care, and have more infants of low birth rate and more pregnancy complications. (*Am J Public Health* 1982; 72:742–744.)

Since 1975, nearly 400,000 Indochinese refugees have resettled in the United States. Early waves of immigrants were mostly Vietnamese of higher socioeconomic status. New groups include Laotians, Cambodians, and Chinese-Vietnamese, who have less education and are less accustomed to urban living.¹ Health assessments have revealed substantial pre-existing nutritional deprivation, tuberculosis and other infectious diseases, parasitic infestation, and lack of routine immunizations.^{2–7}

The locale of this study, Santa Clara County (SCC), California, a 1300 square mile valley south of San Francisco Bay, has a population of 1,300,000, approximately 30,000 (2.3 per cent) of whom are Indochinese. A monthly influx of over 500 new arrivals has greatly strained existing services, and has seen the establishment of the Indochinese Refugee Assistance Project. We undertook to look at the characteristics of the increasing numbers of births to the Indochinese: 201 in 1979, 341 in 1980.

Methods

A listing was prepared indicating the child's name and mother's maiden name for all non-Chinese, non-Japanese Oriental births for 1979–80 in SCC. The ethnicity of each name was checked to ensure that the study population would

include only Vietnamese, Laotian, and Cambodian births. A compilation of the birth records data was then prepared.*

To probe further, a sample of hospital obstetric charts were also reviewed.

Results

The pre-immigration casualty of this population was evident by findings that 9 per cent of birth documents reported the prior loss of at least one child; of the 610 children previously born to this group, 33 were deceased.

The median age of the 542 mothers was 26 years. Teenage pregnancies (<18 years) accounted for 1 per cent of the total; mothers age 35 and over accounted for 9 per cent. Parity was not high: 70 per cent were having their first or second child, and only 3 per cent were grand multiparae.

Where recorded,** 65 per cent of mothers reported initiating prenatal care in the first trimester, 23 per cent in the second trimester, and 12 per cent in the last trimester or no prenatal care at all.

The birth records data revealed a median birthweight of 3175 gm and 5.7 per cent low birthweight (LBW \leq 2500 gm) neonates (Table 1). Of the 450 births where gestational age was recorded, 13.5 per cent were premature (<37 weeks gestation). Thirty-six births to recently arrived Laotian or Cambodian women accounted for four LBW infants, a LBW rate of 11 per cent.***

Fifteen per cent of birth certificates reported complications during pregnancy, labor, or delivery. Chief among these were cephalo-pelvic disproportion (CPD) (4.6 per cent), malpresentation (3.0 per cent), and pre-eclampsia/toxemia (1.3 per cent). The rate of Cesarean section was 11 per cent.

SCC reported seven instances of congenital malformation identified at birth among Indochinese during both years. There was one infant death per 201 live births in 1979, and four fetal deaths (>20 weeks gestation) per 542 live births in 1979 and 1980 combined.

A review of 37 hospital obstetric charts, selected at random revealed considerable underreporting of complications to Vital Statistics. Size-dates discrepancy (59 per cent),

*California legal constraints regrettably prevented access to individual documents or personal identifiers.

**Recorded in 494 (91.1 per cent) of 542 certificates.

***Arrival time specified as under one year in nine hospital charts. Remaining cases assumed to be recent arrivals because most Laotians and Cambodians (identified by name) arrived after mid-1979.

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TABLE 1—Frequency Distribution of 542 birthweights, SCC Indochinese, 1979–1980.

Birthweight (grams)	Frequency	Per Cent
<1501	7	1.3
1501–1750	2	0.4
1751–2000	2	0.4
2001–2250	3	0.6
2251–2500	17	3.1
2501–2750	50	9.2
2751–3000	111	20.5
3001–3250	128	23.6
3251–3500	112	20.7
3501–3750	69	12.7
3751–4000	23	4.2
4001–4250	10	1.8
4251–4500	6	1.1
>4500	2	0.4
TOTAL	542	99.6

Source: SCC Vital Statistics

multiple parasitic infestation (16 per cent), unsupervised medications, e.g., first trimester antimalarials overseas (16 per cent), anemia (14 per cent), hemoglobinopathy (5 per cent), and conversion of the tuberculin test (5 per cent) were prevalent risk factors. During delivery, 3° or 4° lacerations were the chief complication (16 per cent).

Suspected intrauterine growth retardation was a frequent consideration in this sample, influenced by uncertainty as to dates and perhaps perceptions of maternal stature. (Our sample revealed a mean height of 155cm, S.D. 6.4cm, and a mean reported pregravid weight of 48.6kg, S.D. 2.5kg, N = 43). Initial presentation at labor, just a few weeks after arrival in the US, was not unusual: many of the women do not appear to be so advanced in pregnancy. Ultrasound growth monitoring was very useful in obstetric management, more sensitive than specific, anticipating all LBW births.

Difficulties with cross-cultural communication, often impacting substantially upon obstetric management, were noted in over half the obstetric charts.

Discussion

Obstetric risk assessment methodologies would consider the Indochinese refugees at high risk chiefly due to poor nutritional status, psychosocial factors, and the high prevalence of infectious diseases. However, findings of lower perinatal morbidity and mortality among LBW infants born to shorter mothers have suggested that other adaptive mechanisms are important in various populations.^{8,9}

Our data suggest that the SCC Indochinese, especially the Vietnamese, have adapted well to their situation in terms of outcomes of pregnancy. Their median birthweight (3175gm) approached that of a recent US series (3340gm)¹⁰ and the LBW rate was lower (5.7 per cent vs 7.1 per cent).¹¹ The Cesarean section rate was lower (11 per cent vs 13.4 percent), but the incidences of CPD and pre-eclampsia were higher (4.6 per cent vs 3 per cent, 1.3 per cent vs 0.6 per

cent, respectively).¹² SCC Indochinese infant mortality rates were lower than for the overall county.

Pregnancy outcome is associated with socioeconomic factors. The flexibility and favorable social adaptation of Vietnamese immigrants have been demonstrated—where there was neither substantial unemployment nor deculturation.^{13–5} We are concerned that downward social mobility, trans-migration to inner cities, and the loss of program funding will adversely affect future pregnancy outcomes. We are also concerned about various interventions, e.g., that nutrition programs might negatively impact upon the already highly nutritious traditional dietary patterns and preferences or upon the prevalence of breastfeeding.^{16–21}

We believe that the pregnancy outcomes of SCC Indochinese have, in general, been favorable. But both the target population and the socioeconomic environment are changing. The data suggest that there exists a subgroup of more recent arrivals, especially from Cambodia and Laos, who present lacking prenatal care, are at greater risk, and suffer more complications and LBW infants. Further data on this population are needed.

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6th National Conference on Medical Care and Health Services in Correctional Institutions

The 6th National Conference on Medical Care and Health Services in Correctional Institutions will be held October 7-9, 1982 in Chicago, Illinois.

The two-day conference, directed to organizations and individuals directly involved in inmate health care, is endorsed by the American Medical Association and funded by The Robert Wood Johnson Foundation. It is the only national meeting devoted to the care of the incarcerated.

For further information on conference registration or the call for papers, contact: 6th National Conference, American Health Care Consultants, 333 E. Ontario Street, 2902B, Chicago, Illinois 60611.

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"Frontiers in Medicine: Implications for the Future"—an international symposium cosponsored by the UCLA Schools of Medicine, Public Health and Nursing, Harbor-UCLA Medical Center, and the Los Angeles County Medical Association—will be held October 1-2, 1982, at the Beverly Hilton Hotel, Beverly Hills, California.

This international symposium will examine the latest developments in heart disease, cancer, diabetes and aging, and the most promising leads toward the solutions of these disorders. Guest lecturers include the most prominent research and practitioners in these fields.

The symposium fee is \$225 for physicians; \$175 for physicians-in-training, postdoctoral research fellows, nurses and other health professionals, and \$95 for documented students (limited to the first 100 enrollments).

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JHU Symposium on Health Education Needs

The John Hopkins University School of Hygiene and Public Health is sponsoring "Educational Diagnosis and Evaluation in Health Program and Medical Care" to be held July 19-23, 1982 in Baltimore, Maryland. The course is approved for six credit hours/day for physicians, and .5 CEUS/day for allied health professionals.

The purpose of this symposium is to develop skills in the assessment of health education needs and program outcomes. The application fee for the 5-day symposium is \$310, with lesser fees for 2 to 4 day attendees.

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