

misrepresent our paper somewhat. First, we did not claim a relationship between dichlorodiphenyl dichloroethene (DDE) and insufficient milk; we did not study this question. What we did claim was a relationship between DDE and duration of lactation. While we did suggest in the discussion that the mechanism producing this relationship could involve insufficient milk, this was purely speculation. Second, insufficient milk was a reason reported for ending lactation, not for early introduction of non-breast-milk foods. While these events are related, they are not the same. We did not ask about reasons for the latter.

We stated, and Lutter and Perez-Escamilla concur, that inclusion of an outcome (such as introduction of alternate foods) as a predictor in a model studying etiology is inappropriate. No bivariate relationship between DDE and any particular reason for weaning (such as insufficient milk) would change this.

Lactation certainly involves a host of physiological, behavioral, and other factors. However, we do not see how the complexities accurately described by Lutter and Perez-Escamilla could produce an apparent relationship between DDE and duration of lactation that does not truly exist.

We cannot say why a relationship was not seen in primiparous women, as it was in our previous study. We would encourage further studies of the effect of DDE and other xenobiotics on lactation in order to sort out this and other questions. □

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Native Hawaiian Mortality, 1980 and 1990

Limited research on Hawaiian health indicates that Native Hawaiians have higher morbidity and mortality rates compared to other races in the state.^{1,2} While public health reports outside Hawaii rarely disaggregate the Asian and Pacific

TABLE 1—Cause-Specific Standardized Mortality Rates per 100 000 Population for Full, Part, and Non-Hawaiians in Hawaii, 1980 and 1990

Cause of Death	1980		1990	
	Mortality Rates	95% Confidence Intervals	Mortality Rates	95% Confidence Intervals
All causes				
Full Hawaiians	892.1	774.3, 1026.8 ^{a,b}	1062.7	947.9, 1191.3 ^{a,b}
Part Hawaiians	391.9	363.7, 422.5 ^c	449.6	420.8, 478.4 ^c
Non-Hawaiians	315.2	296.0, 335.4	281.4	263.4, 299.4
Heart disease				
Full Hawaiians	340.8	275.7, 422.6 ^{a,b}	375.9	313.1, 451.1 ^{a,b}
Part Hawaiians	125.8	110.9, 142.6 ^c	146.8	130.9, 164.5 ^c
Non-Hawaiians	89.3	83.8, 95.0	68.5	64.3, 72.9 ^d
Malignant neoplasms				
Full Hawaiians	192.3	140.2, 257.7 ^{a,b}	231.6	181.8, 294.1 ^{a,b}
Part Hawaiians	90.8	76.7, 107.5 ^c	109.6	96.7, 124.3 ^c
Non-Hawaiians	66.4	62.4, 70.7	67.0	62.9, 71.3
Stroke				
Full Hawaiians	55.7	31.3, 91.9 ^{a,b}	62.0	36.1, 99.2 ^{a,b}
Part Hawaiians	19.8	13.8, 27.5	23.1	16.8, 30.9
Non-Hawaiians	20.7	18.8, 22.9	17.7	16.2, 19.4
All accidents				
Full Hawaiians	76.7	35.1, 145.7 ^b	60.3	22.1, 131.4
Part Hawaiians	35.6	27.4, 46.3	28.8	22.2, 37.4
Non-Hawaiians	31.3	30.8, 35.1	24.5	21.9, 27.5 ^d
Diabetes				
Full Hawaiians	39.2	18.8, 72.1 ^b	44.4	23.6, 75.9 ^{a,b}
Part Hawaiians	13.2	8.3, 20.0	15.2	10.2, 21.9 ^c
Non-Hawaiians	5.8	4.7, 7.0	4.9	4.1, 5.9

Significant differences in mortality rates:
^aFull Hawaiian > part Hawaiian.
^bFull Hawaiian > non-Hawaiians.
^cPart Hawaiian > non-Hawaiians.
^d1980 > 1990.

Islander American groups, even within the state, few disaggregate full and part Hawaiians.^{3,4} As Hawaii is the only native home for the Hawaiian race and culture, the status of full Hawaiians is of global interest.

Among the few empirical studies on Hawaiian health, a 1982 report by Look presented age-adjusted, standardized mortality rates per 100 000 for full Hawaiians, part Hawaiians, and all races for the decade years 1910 through 1980, which showed significantly higher mortality rates for full Hawaiians.⁵ Because the "all races" group included the full and part Hawaiians, the 1982 report presented a skewed comparison. Thus, this study recalculated mortality rates for 1980 for a "non-Hawaiian" group and added the 1990 rates for full, part, and non-Hawaiians. Analysis was limited to these two time points because changes in the coding of ethnicity and disease over the century, as well as changes in census procedures since statehood (1959), de-

crease the certainty of comparisons with pre-1980 time points.

Numerator data were derived from Hawaii's computer files of death records. Denominator data were based on the US Census but adjusted according to ethnic distribution obtained through the state's Health Surveillance Survey, which collects more detailed data on ethnicity than does the US Census (e.g., the census combines part and full Hawaiian into a single category). Through this method, about 9019 (0.8%) Hawaii residents were full Hawaiian, and about 201 071 (18%) were part Hawaiian in 1990.⁶ As in the 1982 Look study, average mortality rates were age-standardized to Hawaii's 1950 population, by using the indirect method and expressed per 100 000. The 95% confidence intervals were calculated with a method developed by Mantel.⁷

Table 1 provides the age-standardized mortality rates per 100 000 and the 95% confidence intervals for the leading causes of death in Hawaii for 1980 and

1990 for the three groups. In both years, full Hawaiians exhibited significantly higher mortality rates than the other two groups, while part Hawaiians exhibited significantly higher mortality rates than non-Hawaiians for all causes, heart disease, and malignant neoplasms, and, in 1990, for diabetes. Only the non-Hawaiian group experienced significant declines in mortality rates between decades—in heart disease and accidents.

Work is currently underway to further disaggregate the data, calculating rates by gender, age group, and the ethnic groups that constitute the non-Hawaiian group. Even in aggregate, however, these data show that full and part Hawaiians continue to have dramatically higher mortality rates than the rest of the population in Hawaii. In light of the fact that a goal of *Healthy People 2000* is to reduce health disparities among Americans, these findings suggest that special attention needs to be paid to the health of Native Hawaiians, especially full Hawaiians.⁸ □

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Acknowledgments

Support for this research was provided by the Office of Hawaiian Health of the Hawaii State Department of Health, the Straub Pacific Health Foundation, and The Queen's Health Systems.

We thank the staff of the Office of Health Status Monitoring of the Hawaii State Department of Health for assistance in obtaining the data, and Thomas A. Burch, MD, MPH, for assistance with the methodology. Acknowledgments also are tendered to Virginia S. Tanji, MSLS, and Jo Ann Tsark, MPH, for their assistance and support.

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The Need for Adolescent Health Education and Training among Health Professionals

One of the most important aspects of meeting the health needs of adolescents is having well trained and qualified individuals available to provide adolescent health care. Unfortunately, most adolescents receive their care from health professionals who have little to no formal training in adolescent health.¹

The lack of professional training in adolescent health is one of the major barriers for adolescents accessing health care. Few physicians receive training in adolescent medicine, and many feel that their specialty training did not prepare them with the necessary skills to manage effectively the complex social and emotional problems of adolescents.²

This has been recognized recently in recommendations on improving adolescent health care through health care reform. The recommendations include the need to incorporate “interdisciplinary training in adolescent health as a designed component of all primary care disciplines to improve the quality of care received by adolescents.”³ As the current health care reform debate continues, the needs of the growing adolescent population must be addressed.

A survey of Association of Schools of Public Health–accredited schools of public health and Maternal and Child Health Bureau (MCHB)–funded adolescent training programs was conducted.

Overall, 82% of the surveys were completed and returned. Among schools of public health, the response rate was

greatest for those programs that also received MCHB adolescent training funding: 87% (13 of 15 schools). Seventy-three percent (8 of 11) of non-MCHB-funded programs responded. Eighty-six percent of the adolescent medicine training programs responded to the survey.

Results showed that the amount of focus that is placed on adolescent health in these programs is directly related to the availability of funding for education and training in adolescent health. In schools of public health receiving MCHB funding, 54% offer a course focused on adolescent health, and all have maternal and child health courses that discuss various issues of adolescent health. Only one of the schools with no additional MCHB funding has an adolescent health course. Each of the adolescent medicine training programs offers courses in adolescent health.

To date, there is little consensus regarding the definition of adolescence. This lack of consensus exists among the surveyed programs as well. Many programs used age markers in defining adolescence. The beginning age of adolescence identified ranged from 11 to 13, while the ending age ranged between 17 and 22. Other programs defined adolescence with biologic markers that included prepuberty through puberty; developmental stages; and one lengthy definition of developmentally through physiologic maturation, socially through economic independence, and intrapersonal through developing mutuality in relationships.

Additional differences between programs included the amount of time devoted to adolescent health and various adolescent health topics. Courses on adolescent health ranged from full semester or quarter courses to mini one- and two-day courses, and individual lectures as part of other courses.

There are no comprehensive data that describe the number of adolescent health specialists or the nature of their training. In order to move forward in meeting the needs of the adolescent population, education and training in adolescent health must be emphasized as a specialty area for training and practice. Schools of public health and schools of medicine offer a unique setting through which this can be accomplished. As one survey respondent commented, “I feel strongly that adolescent health and services for adolescents should be taught in all schools of medicine and public health.” □

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