modern contraception. There was no difference in distance by ethnic group: 4.2 km for Mayans, compared with 3.8 km for ladinos. The average time to a facility was 33.6 minutes for Mayans and 35.8 minutes for ladinos.

Findings from this analysis (Table 7) were similar to those for the overall population. Mayans were considerably less likely to use contraceptives than were ladinos (odds ratio, 0.03), and socioeconomic factors—particularly having a secondary education—had a large positive impact upon contraceptive use.

This model also included two dummy variables to measure access. The first identified all women living within 10 minutes of a facility offering family planning services, and the second, which tested whether access had a different effect for Mayan than ladino women, was an interaction between the first dummy and the indicator of Mayan ethnicity. With this model, travel time had a positive and significant impact for Mayans; Mayan women within 10 minutes of a family planning facility were 2.3 times as likely to use contraceptives as Mayans who must travel more than 10 minutes. In contrast, access had no influence on contraceptive use among ladinos. This measure of access may be a proxy for cultural isolation. However, in this multivariate model, one would expect cultural isolation to be partially captured by education, work outside the home, and radio or television ownership.

We conducted several simulations to determine the implications of these findings (data not shown). As a reference point, 4% of Mayan women in union in these departments used a modern contraceptive method as of 1995–1996. If every Mayan woman lived within 10 minutes of a family planning facility, prevalence in this group would increase to 6% (assuming everything else remained constant).

Conclusions
The findings from this analysis indicate that Mayan contraceptive use has increased, but very slowly, over the past 20 years: from 4% in 1978 to 13% in 1998. Little progress has been made in rural areas, where only 6% of Mayan women were married or in union, used contraceptives as of 1998, and even fewer (5%) used a modern contraceptive. In contrast, use among ladinos in 1998 reached 50%.

Among those using contraceptives, the ethnic groups are quite similar in terms of method mix. With a few exceptions (e.g., the slightly higher reliance on female sterilization among Mayan than ladino users in 1987, or the slightly higher use of injectables among Mayans than ladinos in 1998), shifts in method preference have been similar for the two groups over time. This finding most likely reflects the availability of methods to Guatemalan women at different times over this 20-year period, regardless of ethnic group. If provider bias has been a factor in method selection, it seems to have operated similarly for Mayans and ladinos.

To the extent that differences in method mix exist between the two groups, they appear to reflect the particular circumstances of the groups. The drop in the relative popularity of female sterilization among Mayans as of 1995 could indicate that service delivery providers have changed their strategy to offer a fuller range of methods, placing less emphasis on long-term methods. Changes in APROFAM’s pricing for all methods, including sterilization (in an attempt to become financially self-sufficient), may also have prompted some Mayans to opt for other methods.

The data suggest that some have instead resorted to the injectable, which became increasingly available during the 1990s (and more widely acceptable worldwide following its approval in the United States). The injectable offers several advantages that may appeal particularly to women living far from a service facility, of scarce economic means, whose husbands may not know they are using a method and whose difficult lives make daily pill-taking inconvenient. Finally, the greater use of rhythm among Mayans than ladinos most likely reflects barriers (distance, linguistic, cultural, financial, etc.) to using family planning services, as well as a preference for a “natural” method to space births.

It is also noteworthy that the source of contraception has been quite similar for the two groups over time. The proportion of all users obtaining methods from APROFAM increased markedly between 1978 (14%) and 1998 (38%); the proportions of Mayan and ladino users obtaining their methods from APROFAM have been generally similar since 1987. At each point, Mayan users were more likely than their ladino counterparts to seek services from the Ministry of Health, reflecting the free or low-cost services available from this source. By contrast, Mayan users were less likely than ladino users to obtain methods from a pharmacy, again reflecting more isolated residence in rural areas, lack of disposable income for purchasing commodities at a pharmacy and less use of condoms. On balance, the small differences noted directly above are perhaps less noteworthy than the overall similarities.

Several programmatic conclusions emerge from this analysis. First, continuing investment in improving social conditions for Mayans will have secondary payoffs in terms of contraceptive use. In this