Adolescent Clinic Visits for Contraception: Support from Mothers, Male Partners and Friends

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CONTEXT: *To increase effective contraceptive use among adolescents at high risk of pregnancy, it is important to understand what factors influence them to visit a clinic for contraception, including support from their mothers, male partners and friends.*

METHODS: *Data from a prospective cohort study of 399 teenage clinic attendees using the pill, the implant or condoms were collected through a questionnaire at baseline and at a one-year follow-up interview. Data were analyzed using multivariate regression analysis to show differences in social support for adolescents' clinic visit at baseline and method continuation at one year.*

RESULTS: *Almost all teenagers (96%) reported that their mother, a male partner or a friend was aware of their clinic visit for contraception; of these, 92–96% also said that their mother or a male partner was supportive. Teenagers who chose the pill or implant were more likely than condom users to report that their mother and male partner were aware and that their mother was supportive of their contraceptive clinic visit. Implant users were significantly more likely than those who chose the pill or condom to continue using their chosen method for one year. Teenagers who took part in high-risk behaviors were more likely than others to involve a friend but not their mother or a male partner in their contraceptive decision-making.*

CONCLUSIONS: *Pregnancy prevention programs and counseling protocols that integrate supportive networks for teenagers into contraceptive services may help adolescents to use effective methods.*

Perspectives on Sexual and Reproductive Health, 2004, 36(1):20–26

Sexually active adolescents in the United States are at high risk of pregnancy, largely because of their contraceptive method choices and intermittent use of contraceptives. Adolescents tend to rely on condoms and other less effective methods, and they experience high failure rates.[1] Those who use some effective, hormonal methods—the pill or the injectable—have high discontinuation rates.[2] However, the implant, another hormonal method, which became available in the 1990s, has helped adolescents to use effective methods successfully, contributing to recent declines in teenage pregnancy.[3] Efforts to help sexually active adolescents to choose effective methods and to use them consistently are essential to continued improvements in teenage pregnancy rates.

Because hormonal contraceptive methods are available only by prescription, using them requires a physician or clinic visit. Although a growing body of literature on the influence of parents, male partners and peers has informed the understanding of adolescent sexual risk behaviors and reproductive outcomes, information on the role that these key people play in adolescents' clinic visits for contraception is still limited. In general, parental support, involvement and communication can help female adolescents to avoid sexual risk behavior and pregnancy.[4] Communication with parents on sexual topics typically occurs with the mother,[5] although discussions about contraceptive choices between teenagers and their mothers often occur only after a pregnancy.[6] In a nationally representative sample, more than half of teenagers reported that they had never talked to their parents about contraception;[7] in another study, 59% of teenagers seeking contraceptive services said that they would not obtain services if they had to inform a parent.[8] Adolescents who do not communicate with their parents are more likely than those who do to follow peer norms about sexual behavior and condom use.[9]

Peers are an important influence on adolescent sexual behavior, although the association tends to be in the direction of increased, rather than reduced, risk behavior.[10] Peer influence, as well as risk behaviors, may increase during middle adolescence (ages 15–16), whereas support from partners may be greater for older adolescents as they develop more stable relationships.[11] Support from and communication with male partners can help to increase contraceptive use and to decrease the likelihood of adolescent pregnancy.[12] We might also expect communication with and support from mothers to grow during older adolescence, when female teenagers may feel increasingly comfortable confiding in their mothers that they are sexually active.

In this study, we examined contraceptive decision-making in a sample of low-income teenagers at high risk of pregnancy to see the extent to which their mothers, male partners and friends were involved in their clinic visits for

contraception and whether such support was associated with the selection of more effective methods. We also measured whether the influence on teenagers' method choice was associated with higher rates of method continuation over time. We hypothesized that an adolescent's decision to choose prescription methods entails greater social support than the choice of other methods. We also expected that teenagers with more support—particularly from mothers or male partners—would be more likely than others to continue using their chosen method.

For programs and service delivery of contraception to adolescents to be effective, it is important to understand how different factors work to support adolescents in their efforts to prevent unintended pregnancy. Data on adolescents' interaction with others when seeking contraception can help to improve contraceptive counseling, as well as inform policy debates on parental involvement in adolescent clinic visits for contraception, male involvement in family planning programs and the use of peer programs.

TABLE 1. Percentage of female adolescents who received contraceptive services from five San Francisco clinics, by selected characteristics, 1994–1995

Characteristic	% (N=399)
Social/demographic	
Race/ethnicity	
Hispanic	41.8
Black	25.6
White	17.0
Asian	8.3
Other	7.3
Married	6.5
Sexual/behavioral risk factors	
Ever been pregnant	47.1
Ever had a birth	28.8
Ever had an STD	21.5
Had >1 partner in past year	40.5
Partner had >1 partner in past year	26.1
Used substance in past year	77.8
Primary contraceptive method	
Implant	50.1
Pill	25.1
Condom	24.8

METHODS

Data

We used data from a 1994–1995 prospective cohort study of 399 sexually active teenage women using the implant, the pill or condoms as their primary method of contraception.[13] Participants were recruited from five clinic sites in the San Francisco area: two university-affiliated urban hospital clinics, one clinic based in an urban public high school and two suburban Planned Parenthood clinics. To be eligible to participate, women had to be 13–19 years of age and initiating use of the implant, receiving a prescription for the pill or planning to use condoms as their primary method of contraception; those who were pregnant, had used the pill in the month prior to enrollment (among those choosing oral contraceptives) or were unable to speak English or Spanish were excluded.

Trained, bilingual interviewers administered structured questionnaires to participants in English or Spanish at admission and either one year later (for participants who were still using their method) or at discontinuation (for those who became pregnant or stopped using their method).* The one-year follow-up interviews were conducted at the original clinic site or by phone. All study participants received routine contraceptive counseling and gynecologic services; contraceptives were distributed at no charge. In addition, all participants were given condoms and were encouraged to use them. The study was approved by the University of California, San Francisco, Committee on Human Research.

Measures

We assessed social support for teenagers' clinic visit for contraception by using items from the baseline questionnaire that documented the sources of support (mother, male partner or friend) and the degree to which those sources were involved. For level of involvement, we assessed whether each person was aware of the clinic visit for contraception and supportive of the visit (for mother and male partner only),† and who had the most influence in the adolescent's decision to use a contraceptive method (mother, male partner, friend or self).

We defined teenagers' contraceptive method type by their primary method: the implant, the pill or condoms. Method continuation was measured at one year. In our models, we considered social and demographic characteristics (age, race and ethnicity, and mother's age at first birth), and sexual and behavioral risk factors (pregnancy, birth and sexually transmitted disease [STD] histories, number of female and male sexual partners in the past year and substance use in the past year). We tested age as a continuous variable as well as a categorical variable—coded early (14 or younger), middle (15–16) and late (17–19) adolescence—to be able to trace the stages of development. However, we present only results for the continuous coding, because the age differences were not strong enough to be detected when we coded the variable categorically.

Statistical Analyses

We used descriptive and chi-square analysis, as well as logistic regression analysis. The analysis was divided into two parts. First, we estimated a series of models to show variations in social support for teenagers' clinic visit by contraceptive method, as well as by social and demographic characteristics, and sexual and behavioral risk factors. Second, we used longitudinal models to measure whether any support from the mother, a male partner or a friend predicted method continuation at one year. For the predictor variables, we included flags for missing data in the models. We used Stata 6.0 for all analyses.

*Participants were asked to inform the study upon method discontinuation. In addition, researchers called participants every six months to verify method continuation.

†A measure of support by friends was not included in the survey.

RESULTS

On average, the participants were aged 16.5; their mothers had a mean age at first birth of 19.7. Forty-two percent of the sample were Hispanic, 26% black, 17% white, 8% Asian and 7% members of other racial or ethnic groups (Table 1, page 21); 7% were married at the time of the survey. Almost half (47%) had ever been pregnant, and more than a quarter (29%) had ever given birth. Twenty-two percent had ever had an STD, 41% reported having had more than one sexual partner in the past year and 26% reported that their male partners had had more than one partner in the past year. More than three-fourths (78%) had used alcohol or drugs in the past year. Half of teenagers chose the implant as their primary contraceptive method; 25% each used the pill and condoms.

Social Support

Forty-five percent of teenagers reported that their mother was aware that they were visiting the clinic for contraception (Table 2); 77% reported that a male partner knew, and 72% that a friend knew. Overall, 96% said that at least one person was aware of their clinic visit for contraception. Moreover, teenagers typically reported that several people were aware of their decision to go to the clinic for contraception: About three out of four said that more than one person knew of their clinic visit (not shown). A positive association was found between mothers' and male partners' awareness, whereas a negative association existed between male partners' and friends' awareness.

Among those whose mother was aware of the clinic visit, almost all reported that she was supportive (96%—Table 2); support among partners who were aware also was high (92%). Twenty-two percent of teenagers said a male partner had had the most influence over their contraceptive decision, 13% their mother, 12% a friend and 49% themselves; 9% of teenagers cited more than one person as having had the most influence over the contraceptive decision (not shown). All the teenagers who said their mother or a partner had had the most influence over their decision also reported that those people were supportive.

TABLE 2. Percentage of adolescents, by level and source of support for their clinic visit for contraception

Level and source of support	N	%
Aware		
Mother	393	45.3
Male partner	363	77.1
Friend	394	72.3
Mother, male partner or friend	399	96.0
Supportive†		
Mother	175	96.0
Male partner	271	92.2
Most influential in decision to use method		
Mother	393	12.7
Male partner	363	21.8
Friend	394	11.7
Self	398	48.5

†Of those who were aware of the clinic visit.

• *Bivariate analyses.* Adolescents who used hormonal methods were more likely than those who used condoms to report that their mother or a male partner was aware and supportive of their clinic visit for contraception: A significantly greater proportion of implant users than of pill or condom users reported that their mother (63% vs. 36% and 20%, respectively) or a male partner (88% vs. 71% and 61%) was aware of their clinic visit. However, the proportion reporting that a friend was aware did not differ by contraceptive method, and a smaller proportion reported that a friend had had the most influence on their decision to use the implant (28%) or the pill (33%) than condoms (39%).

Adolescents' choice of a primary contraceptive method varied widely by race and ethnicity. Greater proportions of blacks and Asians (35–36%) than of whites or Hispanics (16–22%) chose condoms as their principal method of contraception. Hispanics were the least likely to use the pill (19%, compared with 28% of blacks, 30% of Asians and 31% of whites), although they were the most likely to use the implant (66%, compared with 33% of Asians, 36% of blacks and 47% of whites). All of these racial and ethnic differences were statistically significant.

Patterns in social support for clinic visits for contraception also differed significantly by race and ethnicity. Fifty-six percent of black teenagers reported that their mother was aware of their clinic visit for contraception, compared with 44% of whites, 48% of Hispanics and 12% of Asians. Among teenagers whose mother knew of their clinic visit, 96–97% of blacks reported that their mother was supportive, compared with 75% of Asians. Hispanics were the most likely to report that a male partner was aware of their clinic visit (83%, compared with 79% of Asians and whites, and 68% of blacks); whites were the most likely to report that a friend was aware (87%), followed closely by Asians (85%). In addition, a greater proportion of white teenagers (65%) than of blacks (49%), Hispanics (45%) or Asians (33%) said that they themselves had had the most influence on their choice of primary method.

We also detected certain age differences in social support and method choice, although they were not as large or significant as the racial and ethnic differences. Teenagers who reported that a friend had had the most influence over their method choice were slightly younger than those who did not (mean age, 16.0 vs. 16.6), and teenagers whose partner was aware of their visit were slightly older than those whose partner was not aware (mean age, 16.7 vs. 16.3). On average, implant users were slightly older than pill users (16.8 vs. 16.4), who in turn were older than condom users (16.1).

Furthermore, sexual and behavioral factors were associated with different levels of social support. For example, a greater proportion of teenagers who had had a birth than of others reported that their mother was aware (72% vs. 34%) and supportive (99% vs. 93%) of their clinic visit for contraception. On the other hand, a significantly greater proportion of adolescents who had never given birth than

TABLE 3. Odds ratios from logistic regression analyses assessing the associations between selected characteristics and the likelihood that teenagers' mothers, male partners and friends were aware of, supportive of or most influential in the decision to visit a clinic for contraception

Characteristic	Mother			Partner			Friend	
	Aware (N=389)	Supportive (N=389)	Most influential (N=389)	Aware (N=357)	Supportive (N=357)	Most influential (N=346)	Aware (N=389)	Most influential (N=389)
Aware of visit								
Partner	1.75	1.68	0.81	na	na	na	0.83	0.31**
Friend	0.82	0.93	0.81	0.57	0.72	0.89	na	na
Mother	na	na	na	1.70	1.58	1.05	0.88	1.37
Social/demographic								
Race/ethnicity								
Hispanic (ref)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Black	3.25**	3.22**	2.02	0.61	0.50*	0.34*	1.04	1.02
White	1.84‡	1.83‡	2.13	1.27	0.81	1.29††	2.88*,†	0.59‡
Asian	0.34†††	0.24*,†††	0.38	1.67	1.43	1.63††	2.56†	2.47
Other	1.08	0.93	1.26	2.17	2.21	0.89†	3.76*	0.98
Age	0.92	0.94	0.97	1.10	1.05	1.09	0.91	0.80
Mother's age at first birth	0.92*	0.93*	0.98	1.00	0.99	1.01	0.99	1.12**
Sexual/behavioral risk factors								
Ever had a birth	3.27***	3.73***	1.22	0.95	0.98	1.20	0.78	0.79
Ever had an STD	1.23	1.03	0.78	0.79	0.64	0.66	0.92	
Had >1 partner in past year	1.06	1.07	0.68	0.92	0.88	0.85	1.03	na
Partner had >1 partner in past year	1.27	1.26	0.89	0.49*	0.52*	0.93	2.40**	1.69
Used substance in past year	1.02	0.97	1.17	0.66	0.50	0.50*	2.82***	1.18
Primary contraceptive method								
Implant (ref)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Pill	0.37**,§	0.38**,§	0.52	0.45*	0.60	2.05*	0.62	2.14
Condom	0.14***	0.16***	0.30*	0.39*	0.63	1.29	0.42*	1.89
$\chi^2(df)$	*120.4(20)*	*120.3(20)*	*21.9(20)*	*57.7(19)*	*54.9(19)*	*39.0(18)*	*58.3(20)*	*50.9(20)*

*Significantly different from reference group at p≤.05. **Significantly different from reference group at p≤.01. ***Significantly different from reference group at p≤.001. †Significantly different from black at p≤.05. ††Significantly different from black at p≤.01. †††Significantly different from black at p≤.001. ‡Significantly different from Asian at p≤.05. §Significantly different from condoms at p≤.05. *Notes:* Where reference group is not designated, the variable is either continuous (age and mother's age at first birth) or dichotomous (all others). na=not applicable. ref=reference group.

of those who had said that a friend was aware (76% vs. 63%) or had had the most influence (14% vs. 5%). A greater proportion of teenagers who had used alcohol or drugs in the past year than of those who had not reported that a friend was aware of their clinic visit (78% vs. 52%); a greater proportion of teenagers who had not used substances in the last year than of those who had said that their mother (58% vs. 41%) or a partner (88% vs. 73%) was aware of their clinic visit. Seventy-eight percent of teenagers with more than one sexual partner in the past year reported that a friend was aware of their clinic visit for contraception, compared with 69% of those who had had one or no partners; 81% of teenagers whose partner had had more than one partner reported that a friend was aware of their clinic visit, compared with 64% of those whose partner did not have other partners.

• *Multivariate analyses.* Results from a set of multivariate logistic regression models are generally consistent with the bivariate findings (Table 3). Black teenagers had more than three times Hispanic teenagers' odds of reporting that their mother was aware (odds ratio, 3.3) and supportive (3.2) of their contraceptive clinic visit; the results for blacks also were significantly different from those for Asian teenagers, confirming that blacks had the greatest likelihood of these outcomes. Participant's age was not associated with mother's awareness or support, but the older a mother was at first birth, the lower the likelihood that she was aware or supportive of her daughter's visit to the clinic (0.9). Teenagers who had ever given birth had increased odds of having their mother be aware or supportive (3.3 ad 3.7, respectively). Teenagers who chose the pill or condom as their primary contraceptive method were less likely than implant users to report that their mother was aware and supportive of their clinic visit (0.1–0.4); teenagers who used the pill were more likely than those who chose condoms to report that their mother was aware and supportive. Condom users had about one-third the odds of implant users of saying that their mother had had the most influence on their contraceptive decision (0.3).

Partner's awareness of the clinic visit for contraception did not differ significantly by race or ethnicity, but support and influence did. Blacks were less likely than Hispanics to report that a male partner was supportive of their clinic visit (odds ratio, 0.5) and less likely than Hispanics, whites and Asians to say that a partner had had the most influence on their contraceptive decisions (0.3). Age was no longer significant in the multivariate analysis of partner's awareness, support or influence. Teenagers whose male partner had had other partners in the past year had reduced odds of reporting that a partner was aware or supportive of their

clinic visit for contraception, and teenagers who had used substances had reduced odds of saying that a partner had the most influence on their choice of a contraceptive (0.5 for each). Teenagers who chose the implant were more likely than those who chose other methods to report that a partner was aware of their clinic visit; however, those who used the pill were more likely than implant users to report that a partner had had the most influence on their choice of a method (2.1).

In analyses of support from friends, teenagers whose male partner was aware of their clinic visit were significantly less likely than others to report that a friend had had the most influence over their contraceptive decision (odds ratio, 0.3). Whites and Asians were significantly more likely than Hispanics to report that a friend was aware of the clinic visit for contraception (2.9 and 2.6, respectively); the difference between whites and blacks also was statistically significant. The odds that a friend had had the most influence on teenagers' decision to use a method increased as their mothers' age at first birth increased (1.1); however, age was no longer significant in the multivariate analysis of friend's awareness, support or influence. Those who used drugs or alcohol, or had a partner who had had more than one partner within the previous year, were more likely than those without these characteristics to say that a friend was aware of their contraceptive visit (2.8 and 2.4, respectively). Finally, teenagers who used condoms were less likely than implant users to have a friend who was aware of their clinic visit (0.4).

Contraceptive Continuation

In bivariate analyses, one-year continuation rates differed little by awareness of and support for teenagers' initial clinic visit. Mothers' support of the clinic visit for contraception was associated with a slightly elevated continuation rate, but the difference was not significant. However, teenagers who reported that a friend had had the most influence over their contraceptive method choice were significantly less likely than others to continue use. One-year continuation rates also varied significantly by method: 82% for the implant, 52% for condoms and 40% for the pill. Having given birth was associated with a higher continuation rate, whereas substance use and having a male partner who had had other partners were associated with lower rates. We measured dual method use at follow-up as well, and found that although the majority of dual method users (70%) had male partners who knew about their primary contraceptive method, their partners were slightly less likely to know about the main method than partners of teenagers who were using one method. This suggests that some teenagers who use dual methods may want their partners to use condoms to protect against STDs without having to tell them that they are using a hormonal method to prevent a pregnancy.

Although reporting that a friend had had the most influence over the decision to use a method was associated with teenagers' contraceptive continuation in the bivariate analysis, the variable was shy of significance in the multivariate model (Table 4). Mothers' older age at first birth was associated with increased odds of continuation (odds ratio, 1.1). However, method type was the most significant predictor variable: Compared with implant users, teenagers who used the pill or condoms had significantly reduced odds of still using their method at one year (0.2 and 0.3, respectively). In additional multivariate analyses with each of the social support variables, we found no differences in method continuation (not shown).

TABLE 4. Odds ratios from logistic regression analyses assessing the associations between selected characteristics and teenagers' likelihood of contraceptive continuation at one year

Characteristic	Odds ratio (N=341)
Social support	
Friend most influential in decision to use contraceptive	0.49
Social/demographic	
Race/ethnicity	
Hispanic (ref)	1.00
Black	0.84
White	0.70
Asian	1.12
Other	0.65
Age	1.02
Mother's age at first birth	1.09*
Sexual/behavioral risk factors	
Ever had a birth	1.19
Ever had an STD	1.78
Had >1 partner in past year	1.33
Partner had >1 partner in past year	0.69
Used substance in past year	0.84
Primary contraceptive method	
Implant (ref)	1.00
Pill	0.17***
Condom	0.28***,†
χ^2 *(df=18)*	*69.99*

*p≤.05. ***p≤.001. †Significantly different from the pill at p<.001.

DISCUSSION

Our results from a sample of low-income teenagers at high risk of pregnancy showed that the vast majority visited the clinic for contraception with the knowledge of their mother, a male partner or a friend. Furthermore, teenagers who looked to their mother or a partner for support overwhelmingly received it. The fact that teenagers sought contraception from a clinic within a larger network of support can be useful in designing ways to help them make better contraceptive choices. It is also likely, however, that the absence of support from mothers or male partners prevented many teenagers from ever making it to the clinic to choose among effective prescription methods.[14]

Also, the data suggest that social support for contraception varies by method choice. Teenagers using hormonal methods were more likely than condom users—and implant users were more likely than pill users—to report that their mother and a male partner knew about their clinic visit. Oral contraceptives require a prescription, and the implant requires a surgical procedure; logically, it makes sense that

teenagers who choose these methods, which are more complicated to begin using and difficult to discontinue than condoms, would rely more extensively on the support of their mothers and male partners.

A clinical implication of our findings is that enabling teenagers to choose effective methods may involve health care providers' asking them who is involved in their contraceptive decisions and encouraging them to communicate more with those people with whom they feel comfortable seeking support. For teenagers who cannot talk with their parents or partners about contraception, providers should suggest alternative sources of support, such as other adult relatives, peer counseling or support groups, or mentor programs. Although clinicians should support all teenagers in communicating with parents about contraception, they should be aware that significant differences in communication exist by race and ethnicity, and by fertility experience, rather than by age. Teenagers who have never been pregnant may require additional support at clinics to use hormonal methods.

More than three-quarters of teenagers reported that a male partner was aware of their clinic visit for contraception; of these, more than 90% said that their partners were supportive. These findings give empirical support to the programmatic idea of increasing male involvement in family planning efforts. Our results were largely consistent with previous literature showing that Hispanics are more likely than women of other races or ethnicities to make contraceptive decisions jointly with their male partners.[15] In the clinic setting, offering female teenagers the choice of including their male partners in contraceptive counseling may be welcomed in many cases and could create an opportunity for healthy male participation in contraceptive decision-making. Our results, however, also suggest that in certain situations (e.g., when dual method users do not tell their male partners about their main method), a young woman might not see her male partner as the best person to support her contraceptive efforts; male involvement programs should address this reality.

It is important to be aware that individual teenagers may rely on a variety of sources of support, and that facilitating effective contraceptive use may require multiple approaches, particularly for clinics serving diverse populations. As in other studies, we found that white teenagers[16] and those involved in risky behavior[17] (e.g., having a partner who has recently had other partners or using substances) relied more than others on their friends. Also, younger teenagers tended (according to our bivariate results) to rely more on friends than older teenagers did, as we might expect, given developmental differences. Clinical implications of teenagers', especially younger teenagers', relying on friends is that they may be in greater need of counseling to make healthy choices and more open to learning from peer counselors than from other sources. They might benefit from referrals for risk behaviors in other areas as well.

We found only an indirect association between social support, as measured, and method continuation at one year. There was some indication that teenagers whose friends had had the most influence on their contraceptive choice were slightly less likely than others to continue using their chosen method. Moreover, we identified a strong association between method choice and support from mothers and male partners for the initial clinic visit for contraception, and found that method choice at the clinic visit was a key predictor of method continuation over time. Our conclusions are limited by our measures; it may be necessary to assess continued discussions and support from mothers, male partners or friends to identify their impact on method continuation. Also, there were so few unsupportive mothers and male partners that we had to code those who were unaware together with those who were unsupportive. Presumably, some of the mothers and male partners who were unaware would be supportive, were they to know.

Continuation rates among pill and condom users were low, but the rate among implant users was significantly higher; this is not surprising, as removal of the implant requires a clinician. Although the implant studied, Norplant, is no longer on the market, our data on factors predicting choice and continuation rates among adolescents are important in light of the impending introduction of a single-rod, etonorgestrel implant.[18] Even though our results are from a low-income sample of teenage clinic attendees and may not be generalizable to all sexually active adolescents, our findings may help in supporting effective contraceptive use among those at particularly high risk of pregnancy.

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Acknowledgment

The authors gratefully acknowledge the support of the Stewart Foundation and the Kaiser Family Foundation.

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