

A PRELIMINARY EXAMINATION OF THE EFFECTS OF COMPENSATION  
FOR INTERVIEWS ON THE RESPONSE QUALITY IN A STUDY OF DRUG  
TREATMENT PROGRAMS

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The Treatment Outcome Prospective Study (TOPS) sponsored by the National Institute on Drug Abuse (NIDA) is a longitudinal study to examine the factors impacting on behavior of drug abusers entering selected drug treatment programs. The first interview will be at the time of intake into the treatment program. The next will be during treatment at bimonthly intervals or similar intervals. It has also been proposed that applicants not enrolling in treatment or clients dropping out of treatment be interviewed at intervals corresponding to the during treatment interviews for comparison with clients remaining in treatment. The third point of interview is the annual followup on the anniversary of the initial contact with or enrollment in a TOPS program.

In the Pretest for TOPS, interviewers are hired by participating treatment programs under contract with NIDA. The interviewers are trained and supervised by RTI.

One of the major issues that has been raised in the TOPS study is whether participants in TOPS should be compensated for participating in TOPS interviews and, if so, which of the interviews they should be compensated for. To answer these questions the impacts of payment at each of these points of interviewing needs to be considered in terms of the quality of data at a particular point and the overall effect of payment on the TOPS results.

Few studies have examined the effect of payments on the sample bias or the quality of responses. No studies have demonstrated the impact of payment on the generalizability of results of a study or the behavior of those receiving compensation. Cannell and Henson [1] outlined a general model of the impacts of incentives on response bias and response quality. They concluded that payment "may be useful in obtaining the interview originally, but it is unclear as to its effectiveness in motivating accurate reporting (p. 315)." In a national household interview study assessing educational progress, payment was used to significantly improve response rates [2]. Studies of the effects of compensation in consumer expenditure studies were reviewed by Ferber and Sudman [3]. Cooperation did increase by 10-15 percent in one-time interviews. The evidence of the effect of compensation on cooperation and response quality in panel personal interviews was mixed. In diary studies more cooperation was obtained with payment. Results of studies of the effect of payment on response quality were mixed. The authors concluded that

All things considered, the evidence from these studies would seem to support the hypothesized effects of compensation, at least as applied to cooperation. The

evidence, though relatively sparse, supports the positive effects of compensation on cooperation in the case of diary studies with the principal effects being in areas more heavily populated with lower income and more poorly educated households. The evidence is more mixed in the case of personal interview studies (p. 326).

From these and other studies it is clear that payment enhances the probability of contacting respondents in followup studies and may increase response rates at a specific interview point. The effects of payment on other issues particularly response quality or generalizability of results is not clear. Consequently, more information was needed to determine the technical advantages and disadvantages of paying the TOPS respondents.

The issues surrounding the impacts of payment are quite complex. No one study could attempt to resolve these issues. This report outlines the central issues involved in paying TOPS participants, presents some preliminary empirical evidence and presents recommendations for payment and for the continuing assessment of the impacts of payment.

#### MAJOR ISSUES

The impact of payment must be assessed from a variety of perspectives including:

- . Administrative concerns,
- . Ethical considerations, and
- . Technical quality of the data.

The eventual decision on payment will involve a weighting of all these elements. The administrative and ethical limitations preclude a strict empirical test of all aspects of technical issues. The design chosen for this assessment must compare the effects of the most applicable and acceptable payment strategies.

#### Administrative Concerns

Two major administrative concerns will, in part, determine whether clients are paid. The first is the overall cost for payment both in absolute terms and compared to the benefits derived from payment. A second concern is the acceptability of a payment plan to decisionmakers at the programs, at funding sources and at review agencies. Clear technical and ethical reasons must be presented to justify payment if there is administrative opposition to payment.

#### Ethical Considerations

The foremost ethical consideration is that clients should receive some reasonable compensation for the time and effort involved in participation in TOPS. There are strong ethical reasons

to pay clients in followup studies. The issues for clients interviewed while in treatment is less clear. One view is that the time spent, especially for outpatient clients, should be compensated. The issues surrounding payment at intake can be viewed in two ways. Intake can be seen as similar to other interview points and the applicant should be compensated for time spent. On the other hand, in the intake process at most programs, a number of forms must be completed. The TOPS intake interview would likely place little additional burden on the client and would not interfere greatly with the intake process. Another view is that the payment for the intake interview could be perceived as an inducement for entering treatment. Furthermore, payment at intake could be used by clients to sustain a drug habit and perhaps influence a client's decision to enter treatment.

A second ethical consideration is that payment may affect the treatment process in a negative way. Payment may attract those who do not want or need treatment, forcing others in need of treatment to wait. Payment for followup interviews with clients who drop out could affect a client's decision to stay in the program.

#### Technical Issues

The technical issues in the payment of TOPS participants fall into three major categories:

- . Sample bias
- . Response quality
- . Generalizability of results.

Within each category, specific points must be examined. Some can be evaluated on a short term, cross-sectional comparison; others necessarily must be observed over a long-term.

Sample Bias. In TOPS it is critical that the study respondents reflect the population of clients in the TOPS programs. TOPS is designed as a census of participating programs, therefore, any bias due to selective participation in TOPS could distort the results or the interpretation of the outcomes of TOPS. The specific points to be examined include:

- . Response rate at each interview point
- . Sample attrition
- . Sample representativeness.

Another important issue is the extent to which respondents are lost from the initial sample. This effect can only be examined over the long term. The full impact of payment for intake or intreatment interviews on sample attrition may not be recognized until the followup. Furthermore, payment may interact with treatment behavior to affect the rate of sample attrition.

Comparison between TOPS participants and the eligible treatment population in terms of demographic description (age, sex, ethnicity, marital status) and behavioral indicators (drug use, employment, criminality, treatment experience) can be examined to indicate the degree of bias in the TOPS sample.

Response Quality. While payment may increase the rate of participation in the study,

some respondents may be less committed to efforts to provide accurate data under payment conditions. Therefore the completeness and accuracy of responses must be thoroughly examined. Response quality can be examined by observing three characteristics of the interviews:

- . Refusals
- . Missing data
- . Response validity.

Special attention can be given to selected sensitive questions on drug use, crime and employment compared to other basic information that would be less threatening to a respondent.

Generalizability of Results. The most complex element of payment is the effect of payment on the behavior of applicants coming to treatment and clients in treatment. It is very conceivable that payment could affect a variety of treatment behaviors. For example, payment may affect the characteristics of clients entering treatment, thus distorting the "typical" population in a program; or it may change the behaviors of the "typical" population in a program. These behaviors in turn could distort the results of the study in many ways. Consequently the conclusions reached in the TOPS study, based on a total census of TOPS program clients, may not be generalizable to other treatment programs. Five main elements of treatment behavior must be examined to determine the impact of payment on the generalizability of results. These are:

- . Application
- . Admission
- . Retention
- . Discharge
- . Readmission.

Some of these impacts can be observed in the short run; others may require long term observation to gauge the impact of payment. Treatment behavior may also interact with payment to affect the sample bias or the response quality.

#### DESIGN

Within the constraints of a complex ongoing Pretest of data collection instruments and procedures where payment was already a part of the data collection contract with programs, RTI was requested to develop a procedure for empirically examining the impact of payment.

A complex research design is needed to fully assess the many issues regarding payment. However, such a design was beyond the scope and requirements of the project. To be able to isolate the impact of payment, three basic controls must be included:

- . Community environment
- . Program modality
- . Client characteristics.

Each of these factors could account for some differences in sample bias, response quality or treatment behavior. Any covariation of these factors with payment could confound the results. Consequently, it would not be possible to isolate the impacts of payment.

From alternative designs with random assignment of programs or clients, matching of programs or clients and using each program as its own

control, a combination of program matching and each unit as its own control was selected. Basic elements of controls, covariance and experimental conditions were proposed as a basic approach to assessing gross effects of payment given the time and resource constraints of this work.

The design included matched treatment programs in four cities in payment and non-payment conditions. Clients in a large methadone maintenance, a large residential, and a large outpatient drug free program were not paid for interviews conducted at the initial point of contact with the program. Clients in three similar programs in other cities received a payment of eight dollars for completing a 45 minute interview on drug use patterns, criminal backgrounds and employment histories. Because of the time needed to modify the payment study design, payment and nonpayment programs were begun at different times.

### RESULTS

The preliminary analysis of the available data focused on response rates, data quality and response validity. The response rates for intake interviews for the six programs are presented in table 1. The available information indicated no differences in response rates among these programs under payment and nonpayment conditions. However in another methadone program which agreed to not pay clients for interviews, the response rate was under 20 percent. When payment was introduced with other changes in procedures, the response rate rose to 60 percent for one three week period. Because of the difficulties in developing a data collecting system in this program, these results can not be interpreted to support arguments for payment.

In addition to the overall response rate for the study, response rates to individual items were also examined. The most sensitive portion of the intake instrument involves self-reports of illegal activity that did not result in arrest. No differences between payment and nonpayment groups were found in the willingness to fill out a chart indicating involvement in twelve types of criminal activity (see table 2).

A third element of data examined was the response quality. Results of edits of 10 completed interviews from each of six program components were examined. In general, there were few cases in which respondents refused to give responses, reported they did not know an answer or gave inappropriate or multiple responses to an item. The number of interviews with any of these problems are noted in table 3.

From these results it does appear that payment may lead to more missing data or refusals on individual items. However, the training of the interviewers did vary among the programs. More complete editing of the data is continuing and the quality will be further examined.

The final preliminary check on response quality is the validity of the data. The initial examination included an attempt to verify phone numbers and to determine if corresponding zip codes and addresses were provided. The results from these checks are shown in table 4.

Although some differences in the validity of individual items were observed between the payment and nonpayment groups, in general, there appeared to be no consistent differences between the validity of responses of clients in the two groups.

### CONCLUSIONS

The preliminary analysis of the effects of payment revealed no systematic differences on participation rates in the study or response rates to selected items. There were indications that the response quality and validity may be affected to some extent by payment. More detailed analyses of the current results and observations of the impact of initial payment conditions on future study results need to be conducted.

The results, however, must be considered within the context of the issues and constraints surrounding payment in studies of drug treatment programs. In some programs precedents for payment for participation in research studies have already been established. Attempts to conduct a study without payment in programs where payment has previously been offered could jeopardize the study results. This was one explanation offered for the low response rates obtained without payment in one program. Other programs will not participate in research unless clients are compensated for the time required for the study. On the other hand, some programs do not feel clients should be paid for ethical, administrative and programmatic reasons. Given the lack of clear evidence that payment lowers the quality of the data in a study, the program should be offered the option of compensating the client for participation in research. Furthermore, observations of possible effects of payment should be noted and, where possible, tested in a controlled methodological study.

### REFERENCES

- [1] Cannell, C.J. and Henson, R. "Incentives, Motives and Response Bias. *Annals of Economic and Social Measurement*. 3(1974), 307-317.
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Table 1

Response Rates for Programs Under Payment  
and Nonpayment Conditions

	Modality		
	Methadone	Residential Drug-Free	Outpatient Drug-Free
Payment	92% (n=25)	98% (n=25)	64% (n=50)
Nonpayment	94% (n=32)	100% (n=19)	73% (n=22)

Table 2

Number of Clients Completing Information About Undetected  
Illegal Activity in Payment and Nonpayment Conditions

	Modality		
	Methadone	Residential Drug-Free	Outpatient Drug-Free
Payment n=30	8	10	9
Nonpayment n=30	9	10	9

Table 3

Interviews With Response Quality Problems in  
Payment and Nonpayment Conditions

	Modality		
	Methadone	Residential Drug-Free	Outpatient Drug-Free
Payment n=30	2	2	2
Nonpayment n=30	1	1	0

Table 4

Verified Identifying Information from Respondents Under  
Payment and Nonpayment Conditions

	Own Zip Code	Contact Zip Code	Own Phone	Contact Phone
Payment N=41	87%* n=30 (5)	88% n=43	48%* n=31 (5)	55% n=38
Nonpayment N=43	86% n=28 (12)	97% n=36	67% n=24 (12)	40% n=37

\*Twelve respondents in the nonpayment and five respondents in the payment condition reported the program address and phone number.