UNIVERSITY OF CINCINNATI

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I, Courtney R. Doughty, hereby submit this work as part of the requirements for the degree of:
Master of Science

in:
Medical Genetics

It is entitled:

Retrospective Comparison of Patient Outcomes After In-person and Telephone Results Disclosure Counseling for BRCA1/2 Genetic Testing

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       Jennifer Manders, MD, FACS
Retrospective Comparison of Patient Outcomes after In-person and Telephone Results Disclosure Counseling for BRCA1/2 Genetic Testing

A thesis submitted to the
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of the University of Cincinnati

in partial fulfillment of the requirements for the degree of:

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in

Medical Genetics

Genetic Counseling Program
In the Department of Analytical and Diagnostic Sciences
of the College of Allied Health Sciences
May 16, 2008

By:
Courtney R. Doughty
B.S., Miami University, 2006

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ABSTRACT

Telephone disclosure of BRCA1/2 molecular genetic test results has been proposed as a feasible alternative to traditional in-person results disclosure. The purpose of this study was to investigate the relationship between method of result disclosure with the patient outcome variables of knowledge, cancer worry, cancer risk perception, satisfaction, and cancer screening and prophylactic surgery behaviors. Study participants included 228 women who completed retrospective, self-administered, mailed surveys regarding their pre-test genetic counseling and results disclosure. No significant relationships were found between result disclosure method and the outcome variables investigated. A majority (90%) of individuals who received positive results by telephone returned for follow up visits. Factors which genetic counselors believed influenced their clinical decision to offer telephone disclosure, such as history of breast cancer, \textit{a priori} risk of genetic mutation and family history of known mutation were not shown to significantly impact the actual disclosure method. This study suggests that phone results disclosure is clinically appropriate when counselors utilize their clinical judgment to determine which patients are appropriate candidates.

\textbf{Key Words:} genetic testing, telephone counseling, BRCA1, BRCA2, results disclosure, breast cancer, hereditary cancer
ACKNOWLEDGEMENTS

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We would also like to thank all the women that participated in the study.
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INTRODUCTION

Breast cancer is the most frequently diagnosed carcinoma in women and the second leading cause of cancer-related mortality [1-3]. Hereditary breast cancer accounts for 5-10% of all detected breast cancers [1, 3, 5]. Two genes are associated with a significant portion (30-40%) of familial breast cancer [2,4]. Specifically, mutation in these genes, \textit{BRCA1} and \textit{BRCA2}, confers an increased susceptibility to several forms of cancer; the most clinically significant risks for women being breast and ovarian cancer [5].

The demand for genetic consultation regarding hereditary breast cancer is increasing. In 2008, an estimated 184,000 new breast cancer diagnoses will be made [3]. With 5-10% of these cancers estimated to be associated with genetic mutations, a significant number of individuals are likely candidates for genetic counseling and testing. Furthermore, awareness of the role of genetics in cancer susceptibility and predictive testing among medical professionals and the general public has lead to increased numbers of referrals to genetics clinics [7]. Scheuner et al. examined the challenges and barriers to the integration of genomic medicine for common disease, such as breast cancer, into clinical practice. The authors cited insufficient numbers of genetic professional as a major barrier in meeting the increasing demand. The authors also cited several possible ways of addressing this barrier, one of which included the use of telephone genetic counseling [8].

Telephone counseling has been investigated as an alternative to in-person counseling in a variety of health-care setting over the last decade [9-12]. Based on these studies and others related to the provision of genetic counseling services by telephone, the possible benefits of telephone counseling include convenience for practitioners and patients, reduction in stress, anxiety and time associated with clinic visits for patients, and increased accessibility to genetic
counseling services [11-14]. The utilization of telephone results disclosure does not go without some proposed disadvantages. Among the concerns is a lack of face-to-face communication negatively affecting the counselor-patient relationship, inability to use non-verbal communication, such as visual aids, to convey information, external distraction and privacy issues during conversations, and reimbursement issues for counseling services provided by telephone [15-16].

Telephone counseling to facilitate disclosure of molecular test results for hereditary cancer syndromes is less well understood. With regard to hereditary cancer genetic counseling, most practice guidelines produced by national organizations, such as the National Society of Genetic Counselors and American Society of Clinical Oncologists recommend a series of in-person counseling sessions with the goal of providing necessary medical, genetic and psychosocial information to empower the client to make informed decisions [17-19].

In studies investigating client satisfaction comparing individuals who received in-person versus telephone disclosure sessions, the majority of responders reported high levels of satisfaction regardless of the method in which their results were disclosed [20-22]. Individuals were more satisfied with the disclosure method when given a choice between telephone or in-person disclosure, than those who were not given a choice [20]. A study in which participants were randomized to receive in-person and telephone results confirmed previously reported similarities in satisfaction between disclosure method groups [23]. In addition, they reported high levels of general well-being and low levels of distress regardless of method of result disclosure. No difference in knowledge of breast cancer genetics and genetic testing was observed between methods of result disclosure groups [23].
Based on initial studies, telephone disclosure of *BRCA1/2* genetic test results is a feasible alternative to in person disclosure. However, there are many variables such as screening behavior and therapeutic and prophylactic surgeries that have not been studied, and there are no guidelines established to assist genetic counselors in deciding when to offer alternative methods of disclosure.

Thus, while telephone disclosure may serve as a valuable tool in hereditary risk assessment service, there is a critical need for further evidence to support its use. The following is a retrospective analysis of the impact of disclosure method on patient outcomes (knowledge, cancer worry, cancer risk perception, patient satisfaction, and disclosure method preference) and on screening/prevention behaviors. We hypothesize that method of results disclosure does not impact patients negatively. Finally, we will discuss the factors that may be important for health professional to consider before choosing to offer alternative disclosure methods, as well as direction for future research.
MATERIALS AND METHODS

Study Participants

Participants were identified through the clinical patient database maintained by the Hereditary Cancer Program at Cincinnati Children’s Hospital Medical Center. Eligible participants included women over age 18 years, who received pre-test genetic counseling, molecular testing for BRCA1/2 and post-test counseling between January 1, 2004 and December 31, 2007.

Determination of Disclosure Method

The participants were not randomized to receive in-person or telephone results disclosure. The decision of whether to offer the option of telephone results disclosure was based on the clinical judgment of the genetic counselor at the time of pre-test counseling. Therefore, some individuals were not offered a choice of result disclosure method. Those electing telephone disclosure were informed that if results provided by telephone were either positive or variant of unknown significance, an in-person follow-up visit would be required. If the results were negative, the patients would have the option of returning for a follow-up visit. A total of five genetic counselors provided pre-test and result disclosure counseling to the participants of this study.

Procedures

Six hundred and forty-six women were eligible to participate in this study, which was reviewed and received dual approval by Cincinnati Children’s Hospital Medical Center Institutional Review Board and the University of Cincinnati Institutional Review Board. The
BRCA1/2 test results and the clinical estimate of risk of genetic mutation for each participant were obtained from the clinical database. Risk of gene mutation was calculated by genetic counselors at the time of initial pre-test counseling using established risk models [24,25]. Genetic test result and risk of genetic mutation data was stored in a separate Microsoft Access database created specifically for the study. De-identified data were entered by unique study number. Surveys were also labeled with a corresponding unique study number for each participant.

Paper-based surveys were mailed to eligible participants. Consent to participate was implied by returning the survey and the survey was determined to be minimal risk. Two weeks after the initial survey was mailed, a reminder flyer was sent to all participants. Returned survey data was entered into a Microsoft Access database. When a survey was returned, we cross referenced the unique study number on the survey with the corresponding test results and a priori risk of genetic mutation data.

Concordance of reported method of result disclosure (on survey) and actual results disclosure method (documented in the clinical database) was compared. Actual results disclosure method was obtained by cross referencing unique study numbers with clinical database information. When reported and actual disclosure method was discordant, chart review was undertaken by genetic counselors.

Measures

The survey was developed using existing survey tools from the literature and several novel questions generated by the investigators. Demographic information was collected including age, race, education, marital status, and cancer history (breast, ovarian, and other).
Data was also collected regarding method in which participant initially received results, participant recollection of test results, time lag since receiving results, length of initial result session (in minutes), type of health care provider who disclosed results, presence of follow-up in-person session to discuss results, and presence of a family member(s) with positive BRCA1/2 results.

Knowledge

Hereditary cancer knowledge was defined as the general information about Hereditary Breast and Ovarian Cancer Syndrome (HBOC) a patient gains during a cancer genetic counseling session. The ASCO Policy Statement for Genetic Testing for Cancer Susceptibility [17] describes 12 recommended elements of basic informed consent that should be discussed with a patient before genetic testing and may be discussed again after results disclosure. Based on these identified elements of informed consent, general knowledge about HBOC was measured using eight modified items previously described [26-28]. Four additional items asked participants to estimate the lifetime risk for women to develop breast cancer and ovarian cancer in the presence and absence of a BRCA1/2 gene mutation. Therefore, a total of 12 items were used to measure knowledge.

Risk Perception

Risk perception was defined as a woman’s risk estimate of her absolute lifetime risk of developing cancer and how worried she was about the risk. Risk perception was measured using three previously validated [29] questions reported elsewhere [30,31]. Three Likert style items used to measure this variable included a numerical measure, a verbal measure and a comparative
measure. Cancer worry was measured by the four-item, Likert style Cancer Worry Scale (CWS), first developed by Lerman et al. [32] and used in other studies [33,34]. The scale has been shown to have high reliability (Cronbach $\alpha = 0.70$).

**Screening/Prevention Practices**

Screening practices were defined as actions women may take to assist in the detection of breast or ovarian cancer. We used “yes”/“no” format questions to measure whether participants had obtained a clinical breast exam, mammography, breast MRI, trans-vaginal ultrasound and/or CA-125 screening or not since receiving their genetic test results. We also obtained data on prophylactic or therapeutic surgeries by providing a “check all that apply” option. Choices included “no surgery”, “lumpectomy”, “unilateral mastectomy”, “bilateral mastectomy”, “unilateral oophorectomy”, and “bilateral oophorectomy”.

**Satisfaction**

Satisfaction was measured in an attempt to identify if the results disclosure session fulfilled the participants’ expectations. Measurement of patient satisfaction was operationalized by using validated portions of the Shiloh ‘Satisfaction with Genetic Counseling Scale’ [35], which measures overall satisfaction with genetic counseling. The survey measures three subscales of satisfaction including instrumental (evaluation of counselor’s skills), affective (evaluation of counselor behavior towards patients), and procedural (evaluation of administrative procedures and staff) and is formatted in a Likert scale model. A shorter version of the full 32-item scale was developed and shows good reliability with the longer version (Cronbach $\alpha = 0.78$). For this survey, items from the instrumental and affective subscales of the Short Form
were used. The two subscales have a reliability of 0.68 and 0.64, respectively [35]. Procedural subscale items were not relevant, especially if patient received results via telephone, and were therefore excluded.

An additional general satisfaction 5-point Likert question (“How satisfied were you with the discussion you had with the health care provider at the time your results were given to you?”) was included in the survey. Satisfaction was also indirectly measured using three preference items: the questions “would you have liked to receive your results in another way?” and “which way would you have preferred to receive your genetic test result?”, and a table which asked participants if mail, in person conversation, and/or telephone conversation were acceptable methods of disclosure. We also collected data regarding participant’s perception of length of time between their blood draw and the receipt of results and whether or not they were given a choice by the genetic counselor of how to receive their results.

**Statistical Analysis**

Prior to data analysis, continuous variables were measured for normality and outliers. As all continuous variables were normally distributed, continuous data were analyzed in their original units. All analyses were performed in SPSS version 12.0 (Chicago IL) and SAS version 9.1 (Carey, NC).

As the purpose of this study was to explore the impact of BRCA1/2 genetics test results disclosure, the first task was to determine the comparability of participants who reported receiving their test results by phone versus those reporting receiving their results in person; therefore the demographic variables including age, race, education, marital status, and cancer diagnosis were compared. Differential disclosure method was also tested for association with
type of result received (positive or negative), presence of known familial mutation, and clinically
calculated risk of having a gene mutation. Analysis of these variables was carried out using chi-
squared tests for discrete variables and t-tests for continuous measures. Given the number of
tests (tests = 8) we performed, there was an increased risk of false positives, so a Bonferroni
correction was performed and the required $p$-value for significance was 0.00625 (0.05/8).

To accomplish the primary goal of exploring differences between patient outcomes
(patient knowledge, risk perception, satisfaction and screening behaviors), the two groups, those
reporting receiving results by telephone and those receiving results in person, were compared.
The Satisfaction with Genetic Counseling Scale score, total knowledge score, and numeric risk
perception estimate were continuous variables and thus a student’s t-test was used for
comparison. The relationship between method of results disclosure with verbal risk, comparison
risks, screening practice, therapeutic and/or prophylactic surgery, and some measures of
satisfaction were analyzed using chi-square tests. Individuals who reported having bilateral
mastectomy or bilateral oophorectomy were excluded from analysis for breast cancer screening
and ovarian cancer screening, respectively. Additionally, logistic regression was used to adjust
for length of time since receiving results. For the primary outcome measures, the required $p$-
value for significance was 0.005 after a Bonferroni correction (0.05/10).
RESULTS

Study population

Six hundred and forty-two questionnaires were mailed to eligible participants. Two hundred and sixty-six questionnaires were returned (41.4% response rate). Of the 266 returned surveys, 133 were from participants who first received their results in-person, 111 by telephone, eleven by mail, one by Myriad letter and ten were unsure. Participants who received result by methods other than telephone or in-person were excluded from analyses. Sixteen participants received “variant of unknown significance” results and were excluded, leaving a total of 228 questionnaires for final analyses.

Basic descriptive statistics by disclosure method are provided in table 1. Briefly, participants ranged in age from 19 to 89 years, 93% were Caucasian, 85% reported some college or a college degree, and 79% were married. A higher percentage of married women received results in-person; however, after Bonferroni correction this difference was not statistically significant. Sixty-nine percent had been diagnosed at least once with breast cancer, 4.5% had been diagnosed with ovarian cancer, and 8.2% reported being diagnosed with another type of cancer. Twenty percent of individuals reported that another member of their family had tested positive for a BRCA1/2 mutation.

Time since receiving results

Figure 1 illustrates the different lengths of time in which participants reported receiving their results. There was a statistically significant relationship between time lapsed since receiving results and method of result disclosure ($\chi^2=41, p<.0001$), such that those who received their results more recently were more likely to receive telephone results disclosure.
Length of disclosure sessions

Length of disclosure session was more likely to be longer if results were disclosed in-person. Figure 2 shows the reported difference in disclosure session length between in-person and telephone results.

Result Disclosure Concordance

By comparing responses provided on the study survey and information in the clinical database, reported and actual initial result disclosure methods were compared for concordance. Ninety percent of study participant accurately reported the method in which they first received their results. The 10% (n=23) of individuals who reported inaccurate initial result disclosure methods were more likely to be individuals who received results by telephone, rather than in-person. Fifteen of the twenty three individuals reported receiving results in-person when the actual initial disclosure was by telephone. None of the fifteen individuals received a follow up in-person visit to discuss results.

Knowledge

Mean knowledge scores measured by the twelve item scale were 7.93 (range 4-12; SD=1.85) and 7.96 (range= 4-12; SD=1.67) for in-person and telephone disclosure method groups respectively. This difference was not statistically significant. When knowledge scores were adjusted to account for time lapse since receiving results, the difference in knowledge was still not statistically significant.
Risk Perception and Worry

Scores on the Cancer Worry Scale were 7.09 (range 4-16; SD=2.56) and 7.11 (range 4-16; SD=2.18) for results disclosure groups of in-person and telephone respectively. There was no significant difference in the cancer worry between those receiving results in-person versus by telephone.

Using the numeric, verbal, and comparative items, perception of risk for developing cancer was found to be similar between groups. There was no significant difference in risk perception between methods of result disclosure and the three items. The cancer worry scale and the numeric risk perception item showed a small degree of correlation ($r = .47, p < .0001$).

Screening/Prevention Practices

No significant relationship between having therapeutic or prophylactic surgery and method of results disclosure was identified. Time since receiving results did not affect the likelihood of having either bilateral mastectomy or bilateral oophorectomy. In participants who reported no history of breast cancer, 17% (11/65) had undergone prophylactic bilateral mastectomies. There was no significantly statistic relationship between method of disclosure and undergoing prophylactic bilateral mastectomies since receiving genetic test results. Of participants who reported no history of ovarian cancer, 26% (55/208) had undergone a prophylactic bilateral oophorectomy. There was not a statistically significant relationship between disclosure method and having a prophylactic bilateral oophorectomy.

With regard to the breast and ovarian screening practices of individuals who did not undergo bilateral mastectomies or oophorectomies, 90% (129/143) had a clinical breast exam, 82% (117/142) had a mammogram, 38% (51/134) had breast MRI, 27% (38/142) had a
transvaginal ultrasound, and 26% (34/131) had CA125 screening. Length of time since receiving results did affect the likelihood of having clinical breast exams, mammograms, and transvaginal ultrasound. Logistic regression was utilized to adjust for the effect of time. No statistically significant differences were found between disclosure method and having a clinical breast exams, mammograms, or transvaginal ultrasound. There was also no relationship between results disclosure method and use of breast MRI or CA-125 screening.

**Satisfaction**

*Overall Satisfaction*

Total satisfaction with the results disclosure session was high. The mean satisfaction scores were 31.41 (range 9-36; SD=9.22) and 30.14 (range 9-36; SD=9.07) for in-person and telephone groups respectively. There was no statistically significant difference in satisfaction between disclosure methods. Overall mean satisfaction as measured by a single item from the Shiloh subscale (“Overall, how would you rate your satisfaction with the counseling?”) was not statistically different between results disclosure groups.

*Disclosure preference*

The majority of participants were satisfied with method of disclosure, 87.1% of those who received results in-person and 91.2% of those that received results by telephone, did not prefer to receive their genetic test results in another way. In total, 25 individuals would have preferred to receive their results by a different method than they reported receiving (Table 2). Receiving a positive or negative result was not associated with preferring a different disclosure method. Fourteen percent of women who receive telephone disclosure would have preferred in-
person disclosure and 23.3% who received in-person disclosure would have preferred telephone. This difference was not statistically significant.

**Follow up visits**

Twenty-one percent (22/101) of individuals who reported receiving genetic test results by telephone also reported returning for an in-person follow up visit. Of the 15 people with positive results 87% returned for an in-person follow-up visit. Of those that received negative results, only 10.5% (9/86) returned for follow up visits.
DISCUSSION

Recent literature has addressed and proposed alternate methods of molecular test result disclosure. Telephone disclosure is one method which may allow flexibility for genetic counselors in meeting the increasing demand for genetic risk assessment and testing for Hereditary Breast Ovarian Cancer syndrome. Telephone disclosure provides increased convenience, decreased time commitment, as well as a faster turnaround time for receipt of results.

Data reported here is consistent with previously reported studies demonstrating that disclosure of results by telephone may be an appropriate alternative to in-person result disclosure [21-23]. In this study, method of result disclosure did not influence knowledge of hereditary breast cancer, perception of cancer risk, cancer worry, or overall satisfaction with the disclosure process.

This is the first study that has investigated the impact of differing result disclosure method in relation to screening behavior and prophylactic surgery outcomes. The likelihood of engaging in screening behaviors such as clinical breast exams, mammography, and breast MRI or preventive behaviors such as bilateral mastectomy and oophorectomy, is not affected by method of result disclosure. This is an important finding which supports telephone disclosure as a feasible alternative to in-person disclosure. One of the main objectives of hereditary cancer risk assessment and genetic testing is to promote informed decision making with regard to cancer screening and prevention. The absence of a difference in screening and surgery behaviors between the groups suggests that patients receiving their results by telephone are translating that information into the same behaviors as women who are receiving in-person results.
If an individual receives a positive test result by phone, a follow-up in-person counseling session is considered important. The follow-up visit allows for further discussion of test result implications including medical management, importance of informing blood relatives, and planning for future contact with the hereditary genetics clinic. A potential concern for providing results by telephone is that patients will choose not to return for such visits. In the population studied, this was not a concern which would prohibit the use of telephone disclosure. The majority of individuals returned for follow up visits after receiving positive results.

Overall, patients were satisfied with the method of disclosure they receive. For each type of disclosure method, there was a small group of individuals who indicated a preference for receiving their results by another method. Unlike Jenkins et al. [23], who identified a statistically significant preference for telephone results, this study did not suggest there to be a preference for one disclosure method over the other. Furthermore, we have shown that that the results a patient receives (positive or negative) does not influence their preference for disclosure method. While there seems to be no clear patient preference for one disclosure method over another, the trend of increasing disclosure by telephone could impact patient preference in the future and would continue to be important to study with regard to patient satisfaction.

Although we have demonstrated that telephone disclosure was not associated with patient outcome measures, these findings do not suggest that telephone disclosure is appropriate with all patients or in all circumstances. This study found that the majority of telephone disclosure sessions are conducted in less than fifteen minutes, compared to a majority of in-person session lasting over fifteen minutes. This contradicts the findings by Jenkins et al. [23] which found similar time in minutes spent counseling for both in-person and telephone. The total amount of time counselors spent in preparation, counseling, and follow up for each disclosure was not
analyzed, nor was cost for patient and provider analyzed. Although the telephone call might save time, it is difficult to get reimbursement for telephone counseling, and the overall non-reimbursable time may be a detriment to providing telephone results to all patients. While some studies have suggested billing for genetic services as a package, rather than for individual counseling appointment, further study into the financial impact of telephone disclosure and the variety of reimbursement schemas utilized in today’s society is also important.

Baumanis et al. [20] found that 92.5% of genetic counselors have disclosed results to patient by telephone under some circumstances. Our data suggest a trend, at least at the site of this study, of increasing use of telephone disclosure within the last two years. What has not been thoroughly addressed is which circumstances are most appropriate for an alternative method of disclosure. There might be patient characteristics that should be recognized before telephone disclosure is offered with confidence. In this study, counselors used clinical judgment to determine which clients would be provided the option for an alternative method of results disclosure. When asked prior to the study, counselors predicted that client characteristics such as risk of having a genetic mutation, positive family history for a known mutation, or previous cancer diagnosis assisted in the determination of when and to whom an alternative disclosure method was offered. Interestingly, when comparing the groups who received results in-person and by telephone, they were similar in all of these characteristics. Thus, the factors which counselors felt influenced their clinical decision to offer an alternative result disclosure were not shown to be significant. Some patients are not offered alternative results disclosure, while others are. Clinical judgment, therefore, seems to be an important factor in selecting appropriate candidates for telephone results. This study design was not intended to describe what patient characteristics might be influencing clinical decisions regarding results disclosure method.
Better characterization of the factors that predict positive response to alternative methods of result disclosure should be pursued, since factors other than those previously studied may play a role in client outcome, as related to different method of result disclosure. Variables to be studied further may include patient preference, demonstrated knowledge during pre-test counseling, distance from patient’s home to clinic, simultaneous ongoing cancer treatment, physical wellbeing, presence of a support system, and expressed plan of action for negative, variant, and positive results. Qualitative and quantitative research is needed to further address these variables. This may clarify what elements the counselor should use to determine result disclosure options for patients, and give a clearer picture of the factors important in predicting positive response to alternative disclosure methods.

There are several limitations of this study. The retrospective nature prohibits the ability to compare variables of interest between the two disclosure groups over several time points, specifically from pre-test to post-disclosure. Also, any differences in surgical or screening decisions may be more apparent with additional time between the disclosure and the survey, for some of our patients this time was less than three months. As with all retrospective surveys, recall bias is a potential concern. Ten percent of individuals in the study were found to have reported a different disclosure method than they actually received based on chart review. The majority of those inaccurately reporting their method of results disclosure method received their results by telephone. One possible explanation is that the telephone result disclosures were so brief that the clients forgot about the conversation or did not understand the purpose of the conversation. Such questions should be addressed in future studies to ensure that clients are appropriately informed and understand the counseling process. Finally, we may have observed no difference in satisfaction and disclosure method because patients adjusted to the information
and manner it was received, and may not adequately reflect preferences if patients were asked at the time of testing.

We suggest that telephone disclosure is appropriate in some clinical cancer counseling cases. Counselors in this setting were able to utilize clinical judgment to successfully identify those patients for whom phone result disclosure was appropriate. Additional research is needed to identify patient characteristics which may help to predict a positive response to telephone result disclosure. Research into the time and financial concerns and benefits of telephone disclosure should be investigated. Until further information is available, our study suggests that phone results disclosure is clinically appropriate when counselors utilize their clinical judgment to determine which patients are appropriate candidates.
Figure 1. Length of time since receiving results.

Figure 2. Duration of initial result disclosure session.
### Table 1. Demographics of study population

<table>
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<tr>
<th>Demographics</th>
<th>In-person (N=125)</th>
<th>Telephone (N=103)</th>
<th>P value (Two-tailed)</th>
</tr>
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<tbody>
<tr>
<td>Age (y) Mean (range)</td>
<td>50.89 (22-79)</td>
<td>50.03 (19-89)</td>
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</tr>
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<td>Race</td>
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<tr>
<td>High school education or less</td>
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<tr>
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<td>13</td>
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<td>Married</td>
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<td>Mean</td>
<td>24.18</td>
<td>24.59</td>
<td></td>
</tr>
</tbody>
</table>

*aSums do not total N because missing responses were not analyzed.
Table 2. Participants who preferred a different method of disclosure.

<table>
<thead>
<tr>
<th>Result Type</th>
<th>N (%)</th>
<th>Number with positive/negative result</th>
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<tbody>
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<td>In-person</td>
<td>16</td>
<td>11 negative result</td>
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<tr>
<td></td>
<td></td>
<td>5 positive result</td>
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<tr>
<td>Telephone</td>
<td>9</td>
<td>8 negative result</td>
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