Published in final edited form as:

Patient Educ Couns. 2011 November ; 85(2): 225–229. doi:10.1016/j.pec.2011.01.031.

“I ll Do What They Did”: Social Norm Information and Cancer Treatment Decisions

Brian J. Zikmund-Fisher, PhD[1,2,3], **Paul D. Windschitl, PhD**[4], **Nicole Exe, MPH**[2,3], and **Peter A. Ubel, MD**[5,6]

[1] Department of Health Behavior and Health Education, University of Michigan, Ann Arbor, MI, USA

[2] Division of General Medicine, Department of Internal Medicine, University of Michigan, Ann Arbor, MI, USA

[3] Center for Bioethics and Social Sciences in Medicine, University of Michigan, Ann Arbor, MI, USA

[4] Department of Psychology, University of Iowa, Iowa City, IA, USA

[5] Fuqua School of Business, Duke University, Durham, NC, USA

[6] Sanford School of Public Policy, Duke University, Durham, NC, USA

Abstract

Objective—Using a cancer-treatment scenario, we tested whether descriptive norm information (e.g., the proportion of other people choosing a particular treatment) would influence people’s hypothetical treatment choices.

Methods—Women from an Internet sample (Study 1 N=2238; Study 2 N=2154) were asked to imagine deciding whether to take adjuvant chemotherapy following breast cancer surgery. Across participants, we varied the stated proportion of women who chose chemotherapy. This descriptive norm information was presented numerically in Study 1 and non-numerically in Study 2.

Results—The descriptive norm information influenced women’s decisions, with higher interest in chemotherapy when social norm information suggested that such chemotherapy was popular. Exact statistics about other people’s decisions had a greater effect than when norms were described using less precise verbal terms (e.g., “most women”).

Conclusion—Providing patients with information about what other people have done can significantly influence treatment choices, but the power of such descriptive norms depends on their precision.

Practice Implications—Communication of descriptive norms is only helpful if prevailing decisions in the population represent good clinical practice. Strategic presentation of such

---

Corresponding author at: Brian J. Zikmund-Fisher, Department of Health Behavior and Health Education, University of Michigan School of Public Health, 1415 Washington Heights, Ann Arbor, MI 48109-2029, USA., bzikmund@umich.edu Telephone: 734-936-9179 Fax: 734-763-7379.

The authors have no conflicts of interest to report.

statistics, when available, may encourage patient outliers to modify their medical decisions in ways that result in improved outcomes.

Keywords

decision making; cancer treatment decisions; social norms; descriptive norm information

1. Introduction

When faced with a cancer diagnosis, patients must make medical decisions with enormous implications for both survival and quality of life. Yet, they have little prior experience to draw upon in order to make those decisions.

In the face of such uncertainty, cancer patients naturally seek information. Usually, they receive such information from medical professionals (e.g., information about the diagnosis or about the risks and benefits of different treatment options). Sometimes they receive information from decision aids—materials designed to help patients understand what choice best matches their preferences and values (1).

Often, however, people making important decisions seek to gain information from more social contexts. Specifically, people often like to know what other people would do when faced with the same decision. For example, game show contestants “poll the audience” and shoppers consult “most often sold” lists. Such information can shape personal beliefs, validate pre-existing beliefs (“everyone else agrees with me”), or trigger more scrutiny (e.g., “no one else is doing this, so what am I missing?”). Classic research in social psychology has demonstrated that descriptive norms (i.e., information about the frequency of a behavior or opinion) can influence people’s behaviors (2, 3). More recent research has investigated various applied consequences of providing people with descriptive norms—such as the consequences for household energy consumption and compliance with laundry conservation efforts in hotels (4, 5). The potential impact of descriptive norm information is becoming increasing relevant for medical decisions too. For example, patients can now use commercial websites such as WiserTogether (wisertogether.com) or Patients Like Me (patientslikeme.com) to learn what other people who faced similar medical decisions chose to do.

This paper addresses whether patients could be influenced by descriptive norm information when making cancer treatment decisions. This work focuses on descriptive norm information that is explicitly provided to a patient rather than descriptive norms that are implicit or assumed by a patient. There are debatable issues of whether providing a patient with descriptive norm information is appropriate and whether it would lead to improved rather than biased decisions. We discuss these issues later in the paper, but the focus of our empirical work is on the potential influence of explicitly provided norm information on decisions made about cancer treatments.

We conducted two randomized experiments using a hypothetical scenario about adjuvant therapy decision making following breast cancer surgery. In Study 1, women aged 40–75 viewed risk information about survival rates with adjuvant hormonal therapy alone versus combined with chemotherapy. Across participants, we varied whether chemotherapy was described as providing a small or large risk-reduction benefit. More critically, we also manipulated numeric norm information about rates of people choosing chemotherapy--low norm (15%), no norm, or high norm (60%). Participants then indicated their own treatment preference. We predicted that, relative to participants in the no-norm condition, participants would be less likely to choose chemotherapy in a low-norm condition and more likely to choose chemotherapy in a high-norm condition. By manipulating the stated risk-reduction benefit of chemotherapy, we could test whether the effect of descriptive norms would depend on a non-social parameter relevant to this type of cancer-treatment decision.

Study 2 was identical to Study 1 except that non-numeric expressions of the descriptive norms (“a few women” and “most women”) replaced the precise numeric ones. Such expressions are more flexibly interpreted than are precise numbers (6–8), and their use can therefore be a source of confusion (9, 10). Understanding whether there are different effects for numeric versus non-numeric expressions of norms is important because the use of non-numeric expressions of probability is common in medicine. So much so, in fact, that the European Commission (EC) Pharmaceutical Committee identified 5 such verbal terms in their 1998 guidelines for describing the incidence of adverse effects.(9) Such preferences for non-numerical expressions may carry forward to communication of descriptive norms, especially when accessing or generating precise numeric estimates for descriptive norms is difficult or impossible.

2. Study 1

2.1 Study 1 Methods

A stratified random sample of women 40–70 years old (the age range of most breast cancer patients) was selected from a panel of Internet users administered by Survey Sampling International (SSI). To ensure at least moderate demographic diversity (but not representativeness) and offset large expected variations in response rates, we drew distinct sub-samples by both age and race, and the number of email invitations in each demographic sub-sample was dynamically adjusted until all quotas were achieved. Selected panel members received email invitations to complete the online survey. Upon completion, participants were entered into both an instant-win contest and a monthly drawing administered by SSI for modest prizes.

Respondents read a vignette in which they imagined being diagnosed with breast cancer, having surgery, and then discussing adjuvant therapy options with their doctor. (See Appendix for full text.) The vignette first discussed hormonal therapy, which we described as having very little risk and a significant benefit. As a screening question, participants were asked if they would take hormonal therapy. The few participants who said they would refuse any hormonal therapy did not proceed further in the study (an intentional design feature given that our eventual outcome measure concerned treatment preferences between adjuvant hormonal therapy alone versus combined with chemotherapy).

The critical information and independent variables were introduced next. Relevant risk information (likelihood of survival, death from cancer, and death from other causes under both hormonal therapy only and combined chemotherapy and hormonal therapy) was presented using multi-colored pictographs (icon arrays), a format demonstrated to improve risk communication in a variety of medical contexts (11–15), including adjuvant therapy decisions (16). To create the graphs, we used mortality risk statistics derived from Adjuvant! (www.adjuvantonline.com) for a 62 year old patient in good health with a 2.5cm Grade 2 estrogen receptor-positive (ER+) tumor with 1–3 lymph nodes involved.

We experimentally manipulated two factors in a 2 (Incremental Benefit) x 3 (Descriptive Norm) between-subjects design. The incremental benefit (i.e., the reduction in 10-year mortality risk) achievable by adding chemotherapy to hormonal therapy was either low (1%) or high (5%), a manipulation that allowed us to assess the influence of norm information when chemotherapy was more or less attractive. These levels are consistent with the use of either first-generation or second-generation chemotherapy agents. For the descriptive-norm manipulation, women were randomly assigned to a low-, no-, or high-norm condition. Specifically, one-third of women were told that 15% of women like them chose to take both chemotherapy and hormonal therapy (low norm), one-third received no descriptive norm information (no norm), and one-third were told that 60% of women like them chose to take both chemotherapy and hormonal therapy (high norm).

Our outcome measure was participants' treatment preferences between hormonal therapy alone versus combined with chemotherapy. Specifically, participants were asked: “at this point, would you want to take both chemotherapy and hormonal therapy or hormonal therapy only?”

All analyses were performed using STATA 11 (17), and all tests of significance were two-sided and used alpha = 0.05. This design received Institutional Review Board exempt status approval as anonymous survey research.

2.2 Study 1 Results

A total of 2,238 women age 40–75 reached the survey website, viewed the scenario, and answered the treatment intentions question (excluding an additional 108 who reported a previous diagnosis of breast cancer). We observed a wide range of educational achievement, with 28% having completed a Bachelor's or higher college degree but also 27% with only a High School education or less. While 20.4% of respondents reported (after completing the experimental vignette) having had a prior breast biopsy and 17.4% reported having a first-degree relative with a prior diagnosis of breast cancer, a sensitivity analysis showed that exclusion of these groups did not qualitatively change the results reported below (except for reduced statistical power). As expected given our experimental design, there were no significant variations in sample demographics across the experimental conditions.

As shown in Table 1, women in the high benefit condition (5% risk reduction from chemotherapy) who received no norm information chose chemotherapy treatment 45.4% of the time. However, among women who were told that 15% of women with similar cancers choose chemotherapy (low-norm group), their rate of choosing chemotherapy was significantly lower than the baseline level of 45.4%. Also, among women who were told that 60% of women with similar cancers choose chemotherapy (high-norm group), their rate of choosing chemotherapy was significantly higher than the baseline.

Not surprisingly, interest in chemotherapy was much lower among women in the low benefit condition (1% risk reduction from chemotherapy), with the baseline rate being 26.9%. As shown in Table 1, interest in chemotherapy was not significantly different from baseline in the low-norm group. It was, however, significantly higher than baseline in the high-norm group.

3. Study 2

3.1 Study 2 Objective

Study 1 demonstrated that descriptive norms, presented as precise numeric proportions (“15%” and “60%”), can influence women's cancer treatment selections. However, for a variety of reasons, medical professionals might prefer or tend to use non-numeric expressions rather than precise numbers to communicate norm information. For example, in some cases, accessing or generating precise numeric estimates for descriptive norms would be exceedingly difficult. In these cases, less precise, non-numeric expressions of proportions (e.g., “a few women” and “most women”) might be used as a substitute for precise numbers. Study 2 was designed as an initial test of whether such verbal expression of social norms would have similar influence as the numeric expressions tested in Study 1.

Numerous studies have investigated the mappings and biases involved in translating expressions (e.g., rare, a few) into numbers (6–8), including the confusion that can result when such terms are used in clinical consultations (9, 10). However, no studies have investigated how nonnumeric expressions might have different consequences as descriptive norms for decisions. One might assume that as long as the expressions and numbers refer to (or translate to) the same proportions, they will have the same impact when used as descriptive norms. However, there are two other possibilities. First, non-numeric expressions are more common in natural language and connote an interpretation (e.g., “most women” might suggest more of a conclusion about the rate than does an objective number) (18, 19). For these reasons, the influence of verbal terms as norms might be stronger than that of numbers. Second, because verbal expressions can be flexibly interpreted (6–8), people might find it easier to interpret a phrase as roughly consistent with their initial expectations about norms, thereby making the expression less influential as a norm.

3.2 Study 2 Methods

Study 2 involved a separate sample of participants from the same pool used for Study 1. The methods of Study 2 were identical to those of Study 1 except that we used verbal rather than numerical terms: low-norm condition (“a few women”) and high-norm condition (“most women”). Also, after the outcome measure, participants in the low- and high-norm groups were asked to provide a numeric interpretation for the term they saw.

3.3 Study 2 Results

A total of 2,154 women age 40–75 reached the survey website, viewed the scenario, and answered the treatment intentions question. (This total excludes 81 women with a prior breast cancer diagnosis.) Education levels were similar to Study 1 (e.g., 23.7% with high school education or less, 27.2% with college degree) as was prior familial experience with breast cancer. A sensitivity analysis showed no qualitative difference in the results when participants with familial experience with breast cancer were excluded, therefore all results are reported with this group included.

As shown in Table 2, baseline interest in chemotherapy (no-norm groups) was very similar to the levels observed in Study 1. However, the descriptive norms had a generally weaker effect in Study 2. In the 5% benefit group, the descriptive norms (“a few women” or “most women”) did not produce any significant changes to respondents’ interest in chemotherapy. In the 1% benefit group, the high-norm did significantly increase interest in chemotherapy (but the increase in chemotherapy uptake was smaller than in Study 1), and the low-norm did not have a significant impact.

The different patterns of behavior observed in Study 2 cannot be attributed to our verbal terms being perceived as generally less extreme than the numeric terms used in Study 1. In fact, when asked to translate the verbal terms into numerical probabilities, participants gave responses that were generally about equal to or *more* extreme than the numerical values provided in Study 1. Participants felt “a few women” translated to a median value of 10% (mean: 17.6%), although those participants who chose chemotherapy reported on average a significantly higher numerical equivalent than those who refused chemotherapy (mean: 21.8% vs. 15.5%, $t = 4.31$, $p<0.001$). The phrase “most women” was considered equivalent to a median value of 75% (mean: 71.1%) and did not depend on participants’ choices about chemotherapy. Thus, the difference in perceived probabilities associated with the verbal terms used in Study 2 was larger than the difference in the specific descriptive norm statistics used in Study 1.

4. Discussion and Conclusion

4.1 Discussion

Women's decisions about breast cancer treatment options can be influenced by descriptive norm information about what other patients with similar cancers choose, especially when the norm information is presented as a precise number. In particular, information that suggested that a majority of women chose chemotherapy consistently increased the proportion of study respondents who chose chemotherapy themselves. Information that stated that chemotherapy use was rare among other women had a less consistent effect, only influencing study participants' decisions (by reducing chemotherapy intentions) when both the benefit of chemotherapy was large (5% risk reduction) and the social norm information was presented using exact statistics.

The fact that descriptive norm information can influence cancer treatment decisions raises several questions about whether such data should be provided to patients. First, as Cialdini and others have noted, social norm information is *persuasive*.(4, 20) To use the terminology of Thaler and Sunstein (21), it is a type of "nudge" that can help induce particular behaviors without restricting individual choice. Its use, therefore, may be inappropriate in patient decision aids or other situations where one s goal is to inform patients decision making without influencing their decisions.

Second, even when persuasion is ethically appropriate (e.g., when seeking to reduce harmful behaviors, increase uptake of preventive services, or encourage use of effective therapies by those who would receive the most benefit), provision of descriptive norm data will only improve outcomes if the majority of patients are already making optimal choices or doing the preferred behaviors. In those specific circumstances, our data suggest that providing norm information could be effective in helping outlier patients (i.e., those few who are making poor choices) to modify their medical decisions to match descriptive norms that correspond with improved outcomes. However, if the majority of patients are currently making sub-optimal choices, providing descriptive norm information will only reinforce the problem. In fact, multiple studies have shown that using descriptive norm information can sometimes backfire, by convincing some people to change their behavior towards less optimal choices.(4, 20)

Yet, medicine cannot ignore either the problems or the opportunities posed by descriptive norm data. As mentioned earlier, new websites are explicitly offering information about the proportion of people who choose various options when making treatment decisions. Availability of descriptive norm information will only increase over time as electronic medical records make it easier to gather large-scale data on patient decisions. Furthermore, the popularity of such sites suggests that people will seek out data about what other patients are doing whenever possible.

Should clinicians consider providing descriptive norm data to their patients? Our data suggest that there is no simple answer to that question. While healthcare providers could make social norm statistics available to all patients who are considering a particular medical decision, such an approach seems relatively high risk, as it could cause either significant improvements or problems in public health, depending on whether most people are currently making decisions that are consistent with good clinical practice. Alternately, clinicians could consider using descriptive norm data more narrowly, e.g. as part of "targeted" communications to only those patients who (a) appear to be acting in a manner inconsistent with prevailing norms and (b) would likely experience significant health benefits if they were to bring their behavior in line with others.

For cases in which providing norm information could be desirable, there remains the issue mentioned earlier about difficulty in locating the precisely appropriate statistics to use for communicating a descriptive norm. Furthermore, even when descriptive statistics about other patients decisions are available (and they often are not), in principle one must adjust for numerous clinical factors (e.g., cancer type or stage, co-morbidities) and individual differences (e.g., age, race) to identify an appropriate set of “comparable others.” We note, however, that patients are unlikely to be particularly discriminating about the quality of norm statistics. Clinicians need to be aware that patients may be swayed by descriptive norm information even when such data describes populations that may differ from the patient in important clinical characteristics.

Our findings from Study 2 show that substituting non-numeric probability phrases is unlikely to be an effective solution to this data availability problem. The effects of norm information were largely absent when the norms were expressed as verbal terms. The one exception was in the 1% benefit condition. When women read that “most women” would choose chemotherapy, this information increased the rate at which they themselves chose chemotherapy.

We suspect that descriptive norm information has its greatest impact when a decision maker finds it to be noticeably different from his/her intuitive expectations or implicit assumptions (however vague) about descriptive norms. In the 1% benefit condition, perhaps the implicit assumption was that very few women would chose chemotherapy. Consequently, low-norm information had little impact, but high-norm information did have an impact. In Study 2, perhaps the ambiguity of interpretation inherent in verbal proportion terms (6, 8, 22) made them insufficiently surprising when used to convey social norm information.

The primary limitation of our study is its use of a hypothetical treatment scenario. It is unclear, however, whether real cancer patients would be more likely to be swayed by social norm information in actual treatment decisions (because of the emotional power of such information) or less likely to be affected (because personal preferences would be more resilient in an actual treatment decision). Our findings are also limited by the gender-specific scenario and sample; male patients could react differently or to a different degree to social norm statistics. Further clinic-based research is warranted.

4.2 Conclusion

Based on our experimental findings, providing descriptive norm data to people may lead them to make treatment decisions more congruent with the extant social norms. Provision of exact statistics appears to have a stronger influence on treatment choices than discussing descriptive norms using less precise verbal probability terms, even under circumstances when most people translate those verbal terms into more extreme statistics.

4.3 Practice Implications

Telling patients what similar others have done in situations like theirs is a simple intervention, easily implemented in a variety of clinical contexts, that has significant potential to influence patients choices about cancer treatments and other medical decisions. Whether this powerful communication tool should be used, however, depends on whether most “comparable others” are doing the preferred option, and indeed on whether there is something that can be characterized as preferred. In such circumstances, providing descriptive norm information could help to persuade outlier patients to consider whether their initial preference represents an informed perspective that reflects their values (which may perhaps be different from those of most others) or reflects confusion or comparative ignorance. If, however, most patients are making “poor” choices, providing descriptive norm data could backfire and lead to worse outcomes. The fact that the influence of descriptive norms appears to be smaller (but not entirely absent) when the information is described in non-numeric expressions is important to remember when considering the use of such information in clinical practice, given that patients and physicians often prefer to express uncertainty using verbal probability expressions instead of numbers (23–26) and that the calculation of descriptive norm statistics for appropriate comparison populations is challenging. Given the increasing availability of descriptive norm data to both clinicians and patients, we urge greater research into its potential impact on medical decision making, especially in regards to unfamiliar cancer treatment decisions.

Acknowledgments

Financial support for this study was provided by the National Institutes for Health / National Cancer Institute (R01 CA87595). Dr. Zikmund-Fisher is supported by a career development award from the American Cancer Society (MRSG-06-130-01-CPPB). The funding agreements ensured the authors' independence in designing the study, interpreting the data, and publishing the report. We thank Mark Dickson for technical support in programming and fielding the Internet survey. Version: July 1, 2010.

References

1. O'Connor AM, Stacey D, Entwistle SD, Llewellyn-Thomas H, Rovner D, Holmes-Rovner M, et al. Decision aids for people facing health treatment or screening decisions. Cochrane Database Syst Rev. 2003:CD001431. [PubMed: 12804407]
2. Cialdini RB, Reno RR, Kallgren CA. A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. J Pers Soc Psychol. 1990; 58:1015–26.
3. Deutsch M, Gerard HB. A study of normative and informational social influences upon individual judgment. J Abnorm Soc Psychol. 1955; 51:629–36.
4. Schultz PW, Nolan JM, Cialdini RB, Goldstein NJ, Griskevicius V. The constructive, destructive, and reconstructive power of social norms. Psychol Sci. 2007; 18:429–34. [PubMed: 17576283]
5. Goldstein NJ, Cialdini RB, Griskevicius V. A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. J Consum Res. 2008; 35:472–82.
6. Budescu DV, Weinberg S, Wallsten TS. Decisions based on numerically and verbally expressed uncertainties. Journal of Experimental Psychology: Human Perception and Performance. 1988; 14(2):281–94.
7. Karelitz TM, Budescu DV. You say 'probable' and I say 'likely': improving interpersonal communication with verbal probability phrases. J Exp Psychol Appl. 2004; 10(1):25–41. [PubMed: 15053700]
8. Wallsten TS, Budescu DV, Rapoport A, Zwick R, Forsyth B. Measuring the vague meanings of probability terms. J Exp Psychol. 1986; 115(4):348–65.
9. Berry DC, Raynor DK, Knapp P, Bersellini E. Patients' understanding of risk associated with medication use. Drug Safety. 2003; 26(1):1–11. [PubMed: 12495359]
10. Knapp P, Raynor DK, Berry DC. Comparison of two methods of presenting risk information to patients about the side effects of medicines. Qual Saf Health Care. 2004; 13:176–80. [PubMed: 15175486]
11. Fagerlin A, Wang C, Ubel PA. Reducing the influence of anecdotal reasoning on people's health care decisions: Is a picture worth a thousand statistics? Med Decis Making. 2005; 25(4):398–405. [PubMed: 16061891]
12. Zikmund-Fisher BJ, Ubel PA, Smith DM, Derry HA, McClure JB, Stark A, et al. Communicating side effect risks in a tamoxifen prophylaxis decision aid: The debiasing influence of pictographs. Patient Educ Couns. 2008; 73(2):209–14. [PubMed: 18602242]
13. Feldman-Stewart D, Brundage MD, Zotov V. Further insight into the perception of quantitative information: Judgments of gist in treatment decisions. Med Decis Making. 2007; 27:34–43. [PubMed: 17237451]

14. Waters EA, Weinstein ND, Colditz GA, Emmons KM. Reducing aversion to side effects in preventive medical treatment decisions. J Exp Psychol Appl. 2007; 13(1):11–21. [PubMed: 17385998]
15. Price M, Cameron R, Butow P. Communicating risk information: The influence of graphical display format on quantitative information perception – accuracy, comprehension and preferences. Patient Educ Couns. 2007; 69:121–8. [PubMed: 17905553]
16. Zikmund-Fisher BJ, Fagerlin A, Ubel PA. Improving understanding of adjuvant therapy options by using simpler risk graphics. Cancer. 2008; 113(12):3382–90. [PubMed: 19012353]
17. Stata Statistical Software. 11. College Station, Texas: Stata Corporation; 2009.
18. Moxey LM, Sanford AJ. Communicating quantities: a review of psycholinguistic evidence of how expressions determine perspectives. Appl Cogn Psychol. 2000; 14:237–55.
19. Sanford AJ, Moxey LM. New perspectives on the expression of quantity. Curr Dir Psychol Sci. 2003; 12:240–3.
20. Cialdini RB. Crafting normative messages to protect the environment. Curr Dir Psychol Sci. 2003; 12:105–9.
21. Thaler, RH.; Sunstein, CR. Nudge: Improving Decisions about Health, Wealth, and Happiness. New York: Penguin; 2008.
22. Nakao MA, Axelrod S. Numbers are better than words. Verbal specifications of frequency have no place in medicine. Am J Med. 1983; 74(6):1061–5. [PubMed: 6859055]
23. Mazur DJ, Hickam DH. Patients' preferences for risk disclosure and role in decision making for invasive medical procedures. J Gen Intern Med. 1997; 12(2):114–7. [PubMed: 9051561]
24. Mazur DJ, Hickam DH. Patients' interpretations of probability terms. J Gen Intern Med. 1991; 6(3):237–40. [PubMed: 2066829]
25. Brun W, Teigen KH. Verbal probabilities: ambiguous, context-dependent, or both? Org Behav Human Decis Process. 1988; 41(3):390–404.
26. Merz JF, Druzdzel MJ, Mazur DJ. Verbal expressions of probability in informed consent litigation. Med Decis Making. 1991; 11(4):273–81. [PubMed: 1766330]

Table 1

Proportion of Respondents Choosing to Add Chemotherapy to Hormonal Therapy, Study 1 (Numerical Social Norms)

	Low Social Norm	**Baseline: No Norm**	**High Social Norm**
Proportion of other women described as taking both chemotherapy and hormonal therapy	“15% of women”	—	“60% of women”
% Choosing to Add Chemotherapy in the 5% Benefit Condition	34.0	45.4	53.9
χ^2 test vs. No Norm Condition	P=0.002	—	P=0.02
% Choosing to Add Chemotherapy in the 1% Benefit Condition	25.1	26.9	38.7
χ^2 test vs. No Norm Condition	P=0.59	—	P<0.001

Notes: N = 2,238

Table 2

Proportion of Respondents Choosing to Add Chemotherapy to Hormonal Therapy, Study 2 (Verbal Social Norm)

	Low Social Norm	**Baseline: No Norm**	**High Social Norm**
Proportion of other women described as taking both chemotherapy and hormonal therapy	"A few women"	—	"Most women"
% Choosing to Add Chemotherapy in the 5% Benefit Condition	44.4	46.1	48.9
χ^2 test vs. No Norm Condition	P=0.65	—	P=0.44
% Choosing to Add Chemotherapy in the 1% Benefit Condition	26.6	26.6	35.9
χ^2 test vs. No Norm Condition	P=1.00	—	P=0.008

Notes: N = 2,154