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## ABSTRACT:

**Introduction:** Low health literacy can inhibit patients' understanding of radiation therapy (RT) procedures. An objective of this research was to develop training to educate Australian radiation therapists (RTTs) about tools that support low health literacy patients, namely plain language and the Teach Back method (TBM). Perceptions, clinical use of these tools and confidence levels (pre and post training) in occupational scenarios were evaluated.

**Method:** RTTs attended two workshops one week apart. Three anonymous surveys (before the first workshop, immediately after the second and three months post workshops) were completed. Quantitative analysis included weighted sum averages of confidence levels and chi-square analysis.

**Results:** At baseline, 56% of participants had heard of 'health literacy', 93% 'plain language', while 26% knew about TBM. Confidence levels increased after the workshops, with improvement of confidence demonstrating significance ( $p < 0.05$ ) in 3/7 scenarios. The use of 'plain language' assessed on the third survey during every interaction was higher than that anticipated by participants on the second survey (46% vs 39%), while the TBM was utilised less (0% vs 23%).

**Conclusion:** Radiation therapists' confidence and use of alternative tools to improve patient understanding improved after attending training.

**Implications for Practice:** Ongoing encouragement using alternate communication methods are recommended to assist with strengthening patient outcomes.

## INTRODUCTION

Communication, within the cancer care setting, is particularly challenging as most patients have significant informational needs<sup>(1)</sup>. Prerequisites for successful interactions include the provision of adequate information, and that the information is believed, understood, remembered and actioned by patients<sup>(2)</sup>.

Whilst fundamental communication training within health care may include active listening and verbal/non-verbal communication methods<sup>(3)</sup>, the concept of patient centred care and communication<sup>(4)</sup> has driven an introspective review of communication training<sup>(5)</sup>. The inference of improved patient understanding through knowledge directly effecting beliefs, attitudes and outcomes is demonstrated by communication technique interventions driving efficiencies, accuracy and patient compliance<sup>(6, 7)</sup>.

When health professionals communicate effectively, patient anxiety levels are reduced, and satisfaction is increased<sup>(8)</sup>. Information provision within radiation therapy rely primarily on verbal methods<sup>(9, 10)</sup>. Thus, improving radiation therapists (RTTs) communication skills will benefit the patient as RTTs can better assist with meeting both treatment needs and providing elements of physical and emotional comfort<sup>(11, 12)</sup>.

Strategies addressing health literacy<sup>(13-16)</sup> are prevalent in all areas of health care. Health literacy is defined as how people make decisions and take action about health, using their capacities and knowledge<sup>(17)</sup>. Low health literacy levels around the world are reported as 28.7% in the European Union<sup>(18)</sup>, 42% in the UK<sup>(19)</sup> and 60% in Australia and Canada (60%)<sup>(17, 20)</sup>. Patients with limited health literacy may find it difficult to understand aspects of their treatment, possibly leading to increased anxiety and poor quality of life<sup>(21)</sup>. Koay et. al.<sup>(16)</sup> states, there is more of a focus on health literacy in medical disciplines other than cancer, and exploration of predictors of limited health literacy with the cancer patient cohort is required to identify disadvantaged patients. Gansler et. al.<sup>(22)</sup> reported that respondents from a USA sample population survey endorsed up to four of five misconceptions regarding cancer and its treatment that could affect diagnosis and adherence to treatment. Health care professionals are now responsible for reducing the burden of low health literacy and encouraging a health literate environment<sup>(23)</sup>. Limited published data on health literacy within the medical radiation science community necessitates the need to provide specific information to RTTs to address and alleviate the issue of health literacy<sup>(14)</sup>.

Health care professionals can find it difficult to estimate patient's literacy levels, making communication potentially difficult<sup>(24)</sup>. Early recognition of common signs of limited health literacy by RTTs will allow for additional processes to be followed to improve overall patient benefit due to a more personalised and adapted interaction<sup>(14)</sup>. Patient recall of information within given timeframes is cited as a barrier for patients following medical instructions<sup>(25)</sup>. McGuire<sup>(25)</sup> states that patients' immediate recall of medical information may be 25% at best, and after one month this declines to between

11-13%. If patients initially have a good understanding of the information, they may find it easier to recall instructions when required.

Australian RTTs have limited access to programs that seek to develop their communication skills therefore they may benefit from training to enable them to better respond to patients' concerns<sup>(26)</sup>. In-house communication skills training workshops were developed in which RTTs were exposed to the health literacy training concepts of using plain language<sup>(17)</sup> and the teach-back method<sup>(17)</sup>. Plain language is referred to as grammatically correct language including complete sentence structure and accurate word usage at the 12-14 year age level. The teach-back method is asking the patient to repeat back in their own words what they need to know or remember, as a method to check for understanding<sup>(17)</sup>.

This study aimed to evaluate the radiation therapist confidence in their communication skills before and after attending communication skills training workshops. Knowledge, perceptions and use of the plain language and teach-back communication methods were also assessed.

## **METHODS**

### **ETHICAL APPROVAL**

Ethical approval was granted from the Hunter New England Human Research Ethics Committee (HNEHREC Reference No: 17/12/13/5.03).

### **STUDY PARTICIPANTS**

All 37 radiation therapists employed at either the XXX Centre or XXX Care Centre within the XXX District, XXX, were eligible to participate in the study. Inclusion criteria included attendance at two health literacy training workshops delivered as part of their in-service education program. Thirty-five RTTs attended the first workshop, with 33 RTTs participating in both workshops.

### **HEALTH LITERACY WORKSHOPS**

#### **Development of Workshops**

The training consisted of two 1-hour workshops. Two RTTs trained in communication skills facilitated each workshop. The first workshop included two groups (each consisting of 11 radiation therapists) at one site and one group of 13 at the other. The second workshop consisted of six separate sessions of five to six people. The second workshop was scheduled at least one week after the first workshop providing time for new communication skills to be practised. An open and inclusive discussion was encouraged by facilitators enabling sharing of personal communication experiences.

#### **Content of Workshops**

The purpose of the first workshop was to:

- Introduce the concept of health literacy and national statistics on low health literacy
- Define plain language, provide verbal and written examples and integrated examples

- Introduce the teach-back; scientific evidence and historical background and use with examples (Table 1)

During the second session, concepts from the first workshop were revisited, and participants were then invited to:

- Individually convert commonly used communication terms and acronyms into plain language (Table 2)
- In pairs, use plain language to explain information required for a breast cancer patient undergoing their first day of treatment
- In groups of three, use both plain language and teach-back method to role-play one of three typical radiation therapy scenarios.

### **SURVEY DESIGN**

Three surveys were developed to measure changes over time (Figure 1). The surveys were paper-based, anonymous and linked through a unique code generated by each participant. Participant demographics were collected during Survey 1.

Survey 2 obtained initial thoughts and perceptions of workshop content. The third and final survey was administered at a time that allowed RTTs to adapt and implement the communication techniques.

Surveys were primarily divided into two components: questions on self-reported confidence and questions relating to knowledge and experience with health literacy, plain language and teach-back communication methods (Figure 2). The questions on confidence (Table 3) utilised a five-point Likert scale ranging from 'not confident' to 'very confident' and were tested and confirmed for validity. Survey design was adapted from that used by Halket et al.<sup>(27)</sup>, and this was reviewed by three radiation therapists for content validity, clarity of content and internal consistency. Questions examined specific knowledge and perceptions at specific timepoints; baseline knowledge before the workshops, the anticipated frequency of use of introduced techniques after the workshops and finally the actual use of the techniques including any actual or perceived barriers when implemented for three months. Table 4 details the questions on plain language across all three surveys. Similar questions concerning the teach-back method were also asked. Participants indicated a frequency of use with a five-point scale ('Never (0%)', 'Seldom (25%)', 'Occasionally (50%)', 'Frequently (75%)' or 'Always (100%)'). Open-ended questions allowed for written responses by participants.

### **DATA ANALYSIS**

Summary statistics including counts and weighted sum average (WSA) of the Likert scales were calculated allowing the ranking of confidence between the clinical scenario and across the three time points. The WSA was calculated by giving 'Very Confident' a score of 5 and 'Not Confident' a score of 1. Chi-square analysis was conducted to determine if there were statistical differences (tested at a p-value of 0.05) in confidence between the three time points.

### **RESULTS**

This paper focuses on the quantitative analysis of responses. A forthcoming paper will report on qualitative analysis of perceived barriers to using the different communication methods and ultimately provide recommendations for effective health literacy training.

### **RESPONSE RATES**

The response rate for Survey 1 was 77% (27/35), Survey 2 was 88% (29/33), and Survey 3 was 55% (18/33). A total of 40% (13/33) surveys could be matched across all surveys.

### **DEMOGRAPHIC DATA**

Summary demographics are presented in Table 5. Eleven (40.7%) participants reported no communication skills training in their University program and eleven (40.7%) reported none during their employment. Ten (37.1%) participants did not recall having any previous communication skills training.

### **HEALTH LITERACY**

Survey 1 revealed that 56% of respondents had heard of the term health literacy before attending the workshops. In response to the question "How much radiation therapy information is remembered incorrectly by patients?" only 4% correctly identified "75% of information"<sup>(25)</sup> (Figure 3).

### **CONFIDENCE IN COMMUNICATING WITH PATIENTS**

#### **Survey One**

The lowest level of confidence was 'somewhat confident' in five of the seven scenarios (Table 6). The WSA values for each question ranged from 2.70-3.41, with an overall average WSA of 2.98. Two questions shared the highest WSA scores, these were Question 1 and Question 3. The question representing the lowest WSA ranking was Question 4.

#### **Survey Two**

Results from this survey demonstrated increases above baseline in all scenario questions (Table 6). The WSA ranged from 3.03 - 3.62 with overall average increasing by 12% to 3.33. The question with the highest WSA analysis was Question 1 and the lowest was Question 2.

#### **Survey Three**

The highest WSA score of 3.67 was for question 3 relating to approachability and openness for interactions. The question representing the scenario that participants felt least confident was Question 5. The WSA average was 3.27, a slight (2%) decrease from Survey 2.

#### **Comparison between Survey 1 and Survey 2**

Due to similar participants replying to both surveys, all participant data was used for analysis. The WSA demonstrated increases above baseline in all questions (Table 6). There were significant improvements in confidence to three scenarios (Question 4 ( $\chi^2=9.35$ ,  $p=0.025$ ), Question 6 ( $\chi^2= 11.81$ ,  $p=0.008$ ) and Question 7 ( $\chi^2= 9.35$ ,  $p=0.025$ )).

### **Comparisons with Survey 3**

As only 13 participants completed all three surveys, the data from the 13 common datasets were used (Table 7). Analysis with baseline revealed participants were significantly more confident in only one clinical scenario (Question 6 ( $\chi^2= 8.43$ ,  $p=0.038$ )).

Comparison on the WSA between Surveys 2 and 3 revealed improvement for two questions (Q3, Q6); two questions remained the same (Q1, Q2) and confidence was reduced for three questions (Q4, Q5, Q7). However, no scenario revealed a statistically significant difference in confidence (Table 7).

### **KNOWLEDGE AND USE OF COMMUNICATION METHODS**

At baseline, a large proportion (93%; 25/27) of participants indicated recognition of plain language. Four of these participants indicated they always used it and the remainder stated they used it most of the time.

However, the teach-back method was not well known with only 26% (7/27) being familiar with the terminology, with three participants stating that they had previously used this method.

To allow comparison in the use of communication methods, Survey 2 asked, '*how often would you anticipate utilising plain/teach-back language when talking to patients about their care in general?*' Survey 3 asked, '*how often do you utilise plain/teach-back language when talking about their care in general?*' Figure 4 illustrates the results of the anticipated frequency (Survey 2) and the actual frequency (Survey 3) of using these methods. More radiation therapists actually used the plain language method in every interaction (Survey 3: 46% (6/13)) than they anticipated (Survey 2: 39% (5/13)). There were no (0) participants actually using the teach-back method in every interaction after implementation compared to 23% who indicated they anticipated using it.

## **DISCUSSION**

### **Health Literacy**

Results from this study revealed that 56% of RTTs had heard of the term 'health literacy' before the workshops. This is in line with study results reported by Coelho, where 50% of staff demonstrated awareness of the term, at a regional cancer centre in Canada<sup>(20)</sup>.

### **Confidence in Communicating with Patients**

Confidence levels of RTTs improved for all seven clinical scenarios, demonstrating that the communication skills covered within the workshops were particularly useful. Directly after the workshops RTT confidence significantly increased in talking to patients about non radiation therapy related information, interacting with difficult carers and speaking with unfamiliar patients. It is thought the increase in confidence in these interactions may have been due to the group discussion surrounding topics in these areas. The opportunity for RTTs to sit in a group and discuss their own experiences freely and how they manage, does not often present itself. The topic of dealing with difficult carers was a particular discussion point the facilitators wanted

to present, as it is one that arises occasionally and is potentially difficult to handle. Advice for a relative taking over interactions can be managed respectfully by acknowledging the carer “it is great you have bought along (insert carer). I usually start by talking with the patient and afterwards, it would be good to hear what you can add”.

Radiation therapists’ confidence in checking on the patients understanding of information given to them decreased over time. This was one of the key learning areas of the training. The decline in their confidence maybe due to either their hesitation in using new methods with patients or possibly having an uncomfortable interaction with a patient in the past and not wanting to replicate further interactions of that nature.

### **Knowledge and Use of Communication Methods**

Only 4% of RTTs from this study correctly identified the information statistic remembered correctly by patients. So, not only is the radiation therapist’s role challenging in ensuring patients’ full understanding of information, but also ensuring the understanding is remembered and actioned. Providing statistics on patient recall, along with low health literacy statistics, should be fundamental for all health care practitioners to know before engaging with and providing critical health information to patients.

Radiation therapists’ use of plain language at a higher frequency than anticipated was reassuring. It maybe that overall, they felt comfortable adjusting their language to improve patient understanding, which involved an element of a health literacy assessment of the patient. This practice was consistent with recommendations from Smith et al.<sup>(28)</sup> to assist radiation therapists with literacy assessment strategies.

The frequency of use of the teach-back method within this study was disappointing. This was contrary to a Canadian study<sup>(20)</sup> that indicated 75% of respondents assessed patient understanding always or often using this method, compared to 39% within this study. Further research into the barriers holding radiation therapists back from using this technique is warranted.

### **LIMITATIONS**

There were several limitations to this study. Notably, there was a small number of RTTs who completed the final survey. It is therefore difficult to ascertain if all participants completing the training would have the same thoughts and perceptions. The two cancer centres involved in the study are located in XXX XXX. Therefore, it is difficult to determine if the results of this study are generalisable to the wider radiation therapy population.

### **CONCLUSION**

Radiation therapist confidence in their communication skills improved after attending communication skills workshops. Learning health literacy, plain language and teach-back strategies has encouraged staff to utilise different methods to improve patient understanding. Outcomes included an improvement in implementation of plain language and to some degree teach-back. Improved confidence and integration of

different communication techniques into clinical practice confirmed the success of the workshops.

## REFERENCES

1. Gibon A-S, Merckaert I, Liénard A, Libert Y, Delvaux N, Marchal S, et al. Is it possible to improve radiotherapy team members' communication skills? A randomized study assessing the efficacy of a 38-h communication skills training program. *Radiotherapy and Oncology*. 2013;109(1):170-7.
2. Fallowfield L, Jenkins V. Effective communication skills are the key to good cancer care. *European Journal of Cancer*. 1999;35(11):1592-7.
3. Henderson A. *Communication for Health Care Practice*. Docklands, Victoria , 2019: Oxford University Press; 2019. 206 p.
4. Badaczewski A, Bauman LJ, Blank AE, Dreyer B, Abrams MA, Stein REK, et al. Relationship between Teach-back and patient-centered communication in primary care pediatric encounters. *Patient Education and Counseling*. 2017;100(7):1345-52.
5. McCormack LA, Treiman K, Rupert D, Williams-Piehotá P, Nadler E, Arora NK, et al. Measuring patient-centered communication in cancer care: A literature review and the development of a systematic approach. *Social Science & Medicine*. 2011;72(7):1085-95.
6. Halkett G, O'Connor M, Jefford M, Aranda S, Merchant S, Spry N, et al. RT Prepare: a radiation therapist-delivered intervention reduces psychological distress in women with breast cancer referred for radiotherapy. *British Journal Of Cancer*. 2018;118(12):1549-58.
7. Clover K, Oultram S, Adams C, Cross L, Findlay N, Ponman L. Disruption to radiation therapy sessions due to anxiety among patients receiving radiation therapy to the head and neck area can be predicted using patient self-report measures. *Psycho-Oncology*. 2011;20(12):1334-41.
8. Silverman J, Kurtz S, Draper J. *Skills for communicating with patients*. 2nd ed. Oxon UK: Radcliffe Publishing LTD 2005.
9. Williams R, Moeller L, Willis S. Barriers and enablers to improved access to health information for patients with low health literacy in the radiotherapy department. *Radiography*. 2018;24(Supplement 1):S11-S5.
10. Nouri SS, Rudd RE. Health literacy in the "oral exchange": An important element of patient-provider communication. *Patient Education and Counseling*. 2015;98(5):565-71.
11. Halkett GKB, Kristjanson LJ. Patients' perspectives on the role of radiation therapists. *Patient Education and Counseling*. 2007;69(1):76-83.
12. Williams AM, Irurita VF. Emotional comfort: The patient's perspective of a therapeutic context. *International Journal of Nursing Studies*. 2006;43(4):405-15.

13. Halverson JL, Martinez-Donate AP, Palta M, Leal T, Lubner S, Walsh MC, et al. Health Literacy And Health-Related Quality Of Life Among A Population-Based Sample Of Cancer Patients. *Journal of health communication*. 2015;20(11):1320-9.
14. Montgomery L. Supporting Radiation Therapy Patients with Limited Health Literacy. *Journal of Medical Imaging & Radiation Sciences*. 2015;46(1):102.
15. Schrauben SJ, Wiebe DJ. Health literacy assessment in developing countries: a case study in Zambia. *Health Promotion International*. 2017;32(3):475-81.
16. Koay K, Schofield P, Jefford M. Importance of health literacy in oncology. *Asia Pacific Journal of Clinical Oncology*. 2012;8(1):14-23.
17. Australian Commission on Safety and Quality in Health Care. *Health literacy: Taking Action to improve safety and quality*. Sydney; 2014.
18. Sorensen K, Pelikan J, Röthlin F, Ganahl K, Slonska Z, Doyle G, et al. Health literacy in Europe: Comparative results of the European health literacy survey (HLS-EU)2015.
19. Public Health England DoH. *Local action on health inequalities. Improving health literacy to reduce health inequalities*. 2015.
20. Coelho R. Perceptions and Knowledge of Health Literacy among Healthcare Providers in a Community Based Cancer Centre. *Journal of Medical Imaging and Radiation Sciences*. 2018;49(1):S11-S2.
21. Kugbey N, Meyer-Weitz A, Oppong Asante K. Access to health information, health literacy and health-related quality of life among women living with breast cancer: Depression and anxiety as mediators. *Patient education and counseling*. 2019;102(7):1357-63.
22. Gansler T, Henley SJ, Stein K, Nehl EJ, Smigal C, Slaughter E. Sociodemographic determinants of cancer treatment health literacy. *Cancer*. 2005;104(3):653-60.
23. Marquez LL, Ladd DL. Promoting Health Literacy: Finding Consumer Health Resources and Writing Health Materials for Patients. *Journal of Hospital Librarianship*. 2019;19(2):156-64.
24. Kripalani S, Weiss B. Teaching About Health Literacy and Clear Communication. *J GEN INTERN MED*. 2006(21):888-90.
25. McGuire Lisa C. Remembering What the Doxtor Said: Organisation and Adult's Memory for Medical Information. *Experimental Aging Research*. 1996;22:403-28.
26. Halkett G, O'Connor M, Aranda S, Jefford M, Merchant S, York D, et al. Communication skills training for radiation therapists: preparing patients for radiation therapy. *Journal of Medical Radiation Sciences*. 2016;63(4):232-41.
27. Halkett GKB, McKay J, Shaw T. Improving students' confidence levels in communicating with patients and introducing students to the importance of history taking. *Radiography*. 2011;17:55-60.
28. Smith SK, Zhu Y, Zhu D, M H, Milross CG, Taylor J, et al. Supporting patients with low health literacy: what role do radiation therapists play? . *Support Care in Cancer*. 2013;21(11):3051-61.

Tables

Table 1: Examples provided to radiation therapy staff learning the teach-back method

Examples of suggested explanations of the teach-back method to patients	“So I can be sure I have explained your first treatment session information clearly, could you please tell me what you need to remember?”
	“Before you go, I want you now to tell me what are the main instructions to prepare your bladder for treatment each day, just so I can be sure I have explained them correctly?”

Table 2: Examples of contextual radiation therapy jargon translated into plain language

Fraction	A single radiation treatment session
Erythema	Reddening of the skin in the treatment area
Skin apposition	When the position of the machine is at the same angle as the skin surface in all directions
Set-up	Treatment position
Reproducible	Ability to position you exactly the same every day
Toxicities	Side effects that can make you sick
Rotate/rotation	Rolling you into the correct treatment position
Bolus	Material added to the skin to trick the radiation into depositing the radiation closer to skin surface

Table 3: Survey questions common across all three surveys requesting an estimate of confidence (questions adapted from Halkett et al.(2010) with permission from the corresponding author)

Question	Clinical Scenario
1.	How confident are you in your ability to listen and understand patients in your first interaction?
2.	How confident are you the patient has listened and understands you?
3.	How confident are you that you are approachable and open for interactions with patients?
4.	What level of confidence do you have when discussing information not necessarily related to the RT procedure with the patient?
5.	How confident are you about checking to see that information given by you was received accurately by the patient?
6.	How confident do you feel about interacting with a patient carer who could be difficult?
7.	How confident are you answering questions from a patient you are unfamiliar with e.g. having treatment on another machine?

Table 4 Plain language questions from surveys 1, 2 and 3

Survey 1	Have you heard of the term “plain language” within healthcare
	When interacting with patients, <i>how often</i> would you utilise plain language when talking about their care?
Survey 2	Between the first and second workshop, did you practice using plain language with any patients? If yes, how often.
	After the communication workshops, <i>how often</i> would you anticipate utilising plain language when talking to patients about their care?
	Do you think there are any potential barriers preventing you from using plain language within your communication methods with patients?
Survey 3	When interacting with patients, <i>how often</i> do you utilise plain language when talking about their care?
	Do you think there are any potential barriers preventing you from using plain language within your communication methods with patients?
	Have you noticed any improvements in how patients understand and retain information since implementing plain language into your communication skills?
	Has the plain language techniques you have adopted, allowed for better quality and more efficient interactions with patients when it comes to information giving?

Table 5: Participants demographics by total for Site 1 and Site 2.

Participant Demographics	Site 1 N=8	Site 2 N=19	Total N=27
<b>Gender</b>			
Male	0 (0%)	3 (15%)	3 (16%)
Female	7 (88%)	15 (80%)	16 (84%)
Other	1 (12%)	1(5%)	0 (0%)
<b>Age</b>			
22 - 30	3 (38%)	10 (37%)	7 (37%)
31 - 40	4 (50%)	11 (41%)	7 (37%)
41 - 50	1 (12%)	5 (19%)	4 (21%)
51 - 60	0 (0%)	1 (4%)	1 (5%)
60+	0 (0%)	0%	0 (0%)
<b>Employment Status</b>			
Full-time	6 (75%)	18 (67%)	12 (63%)
Part-time	2 (25%)	9 (33%)	7 (37%)
<b>Years practising as a radiation therapist</b>			
Less than 5 years	2 (25%)	7 (26%)	5 (26%)
5 - 9	2 (25%)	5 (19%)	3 (15%)
10 - 14	0 (0%)	5 (19%)	5 (26%)
15 - 19	3 (38%)	5 (19%)	2 (11%)
20 -24	1 (12%)	3 (11%)	2 (11%)
25+	0 (0%)	2 (7%)	2 (11%)
<b>Highest Qualification</b>			
Doctorate	0 (0%)	0 (0%)	0 (0%)
Masters	1 (12%)	3 (13%)	2 (11%)
Degree	7 (88%)	22 (88%)	15 (79%)
Diploma	0 (0%)	2 (13%)	2 (11%)
<b>Communication Skills Training at University</b>			
Yes	3 (38%)	11 (41%)	8 (42%)
No	5 (62%)	16 (59%)	11 (58%)
<b>Communication Skills Training during employment</b>			
Yes	6 (75%)	11 (41%)	5 (26%)
No	2 (25%)	16 (59%)	14 (74%)

Table 6: Participants' level of confidence across the three surveys for ALL participants

Participants' level of confidence across the three surveys for ALL participants																		
Question	Very Confident			Reasonably Confident			Moderately Confident			Somewhat Confident			Not Confident			Weighted Sum Average (WSA)		
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
1	12	18	10	14	11	8	1	0	0	0	0	0	0	0	0	3.41	3.62	3.56
2	4	4	1	19	22	17	3	3	0	1	0	0	0	0	0	2.96	3.03	3.06
3	12	15	12	14	14	6	1	0	0	1	0	0	0	0	0	3.41	3.52	3.67
4	6	10	3	10	17	13	8	2	2	3	0	0	0	0	0	2.70	3.28	3.06
5	4	10	2	14	15	14	9	3	2	0	1	0	0	0	0	2.81	3.17	3.00
6	5	10	5	12	18	12	9	0	1	1	1	0	0	0	0	2.78	3.28	3.22
7	6	13	7	12	15	10	7	1	1	2	0	0	0	0	0	2.81	3.41	3.33
Average WSA																2.98	3.33	3.27

S1 = Survey 1 (n=27); S2 = Survey 2 (n = 29); S3 = Survey 3 (n = 18)

Table 7: Participants' level of confidence across the three surveys for the 13 common participants

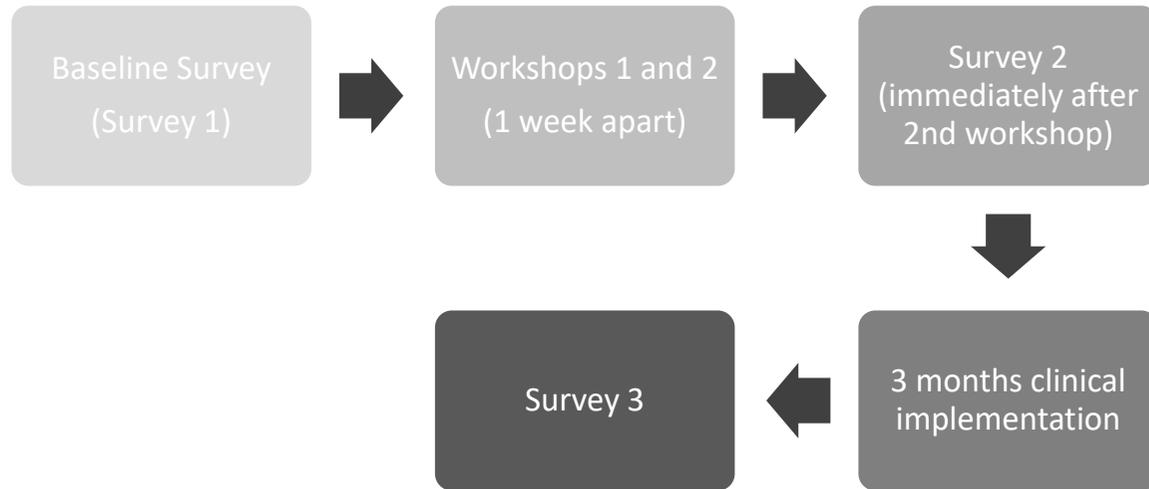
Question	Very Confident			Reasonably Confident			Moderately Confident			Somewhat Confident			Not Confident			Weighted Sum Average (WSA)		
	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3	S1	S2	S3
1	5	6	6	7	7	7	1	0	7	0	0	0	0	0	0	3.31	3.46	3.46
2	1	1	0	9	11	13	3	1	13	0	0	0	0	0	0	2.85	3.00	3.00
3	5	5	8	7	8	5	1	0	5	0	0	0	0	0	0	3.31	3.38	3.62
4	2	3	1	4	9	10	5	1	10	2	0	0	0	0	0	2.46	3.15	2.92
5	1	3	1	5	8	10	7	2	10	0	0	0	0	0	0	2.54	3.08	2.92
6	2	2	4	3	11	8	7	0	8	1	0	0	0	0	0	2.46	3.15	3.32
7	1	2	4	5	11	8	5	1	8	2	0	0	0	0	0	2.38	3.31	3.23
Average WSA																2.75	3.21	3.21

Figure 1: Timing of surveys and workshops.

Figure 2: Estimates of information incorrectly remembered by patients.

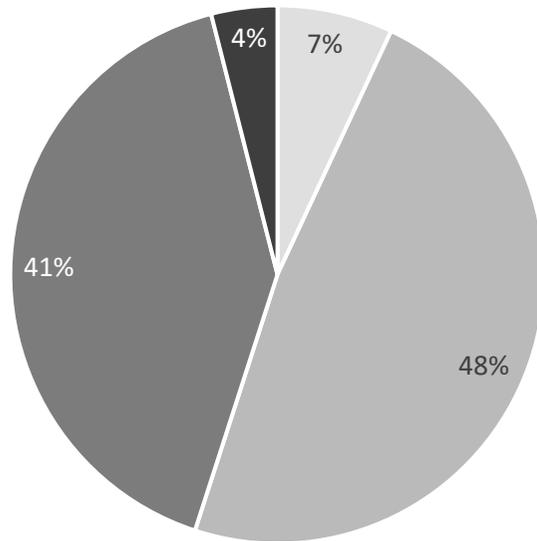
Figure 3: Combined results of anticipated and actual of using plain language and the teach-back method

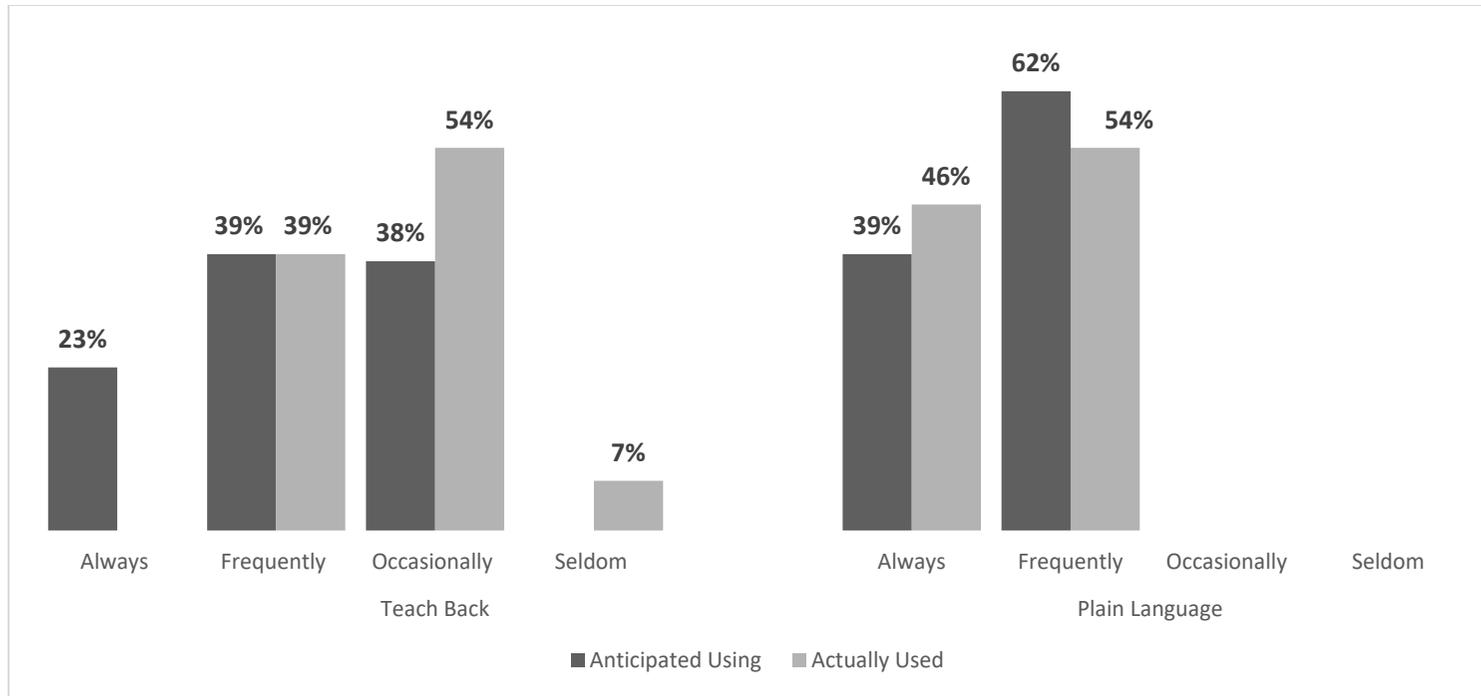
Figure 4: Flow diagram demonstrating relationship of topics across all surveys



Information incorrectly remembered by patients

■ 10%   ■ 25%   ■ 50%   ■ 75%





# Radiation Therapist Health Literacy Training

