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Olling, Karina; Stie, Mette; Winther, Bodil; Dahl Steffensen, Karina

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The impact of a Patient Decision Aid on Shared Decision Making behaviour in oncology care and pulmonary medicine - A field study based on real life observations.

Karina Olling¹, Shared Decision Making Specialist, BScN

Mette Stie^{2, 3}, Nursing Specialist, MScN, PhD student

Bodil Winther², Nursing Specialist, MScN

Karina Dahl Steffensen^{1, 2, 3}, Professor, Medical Doctor, PhD

¹Centre for Shared Decision Making, Lillebaelt Hospital, Vejle, Denmark

²Department of Oncology, Vejle Hospital, Vejle, Denmark

³Institute of Regional Health Research, Faculty of Health Sciences, University of Southern Denmark, Odense, Denmark.

Corresponding author:

Karina Olling
Shared Decision Making Specialist, BScN
COO, Centre for Shared Decision Making
Lillebaelt Hospital
Beriderbakken 4
7100 Vejle
E-mail: karina.olling@rsyd.dk
Phone: +45 79 40 91 77

Running Head:

The impact of a PtDA on SDM behaviour

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Abstract

Objective

A patient decision aid (PtDA) is often developed and evaluated to support shared decision making (SDM) and a patient centred approach. In this study a PtDA template was developed to support two different preference sensitive decisions; adjuvant therapy for breast cancer and diagnostic work-up for lung cancer. The aim of the study was to explore whether a PtDA improved SDM and supported a patient centered approach from an observational point of view.

Methods

Real life observations were conducted using the validated observational instrument OPTION 12.

Three nurses conducted observations of consultations in two different clinical settings.

The study consisted of a baseline cohort (phase 1) and an intervention cohort (phase 2). In phase 1, standard consultations were observed. Subsequently, the PtDA was introduced and in phase 2, consultations with the clinician using the PtDA were observed.

Results

Twenty-nine observations were conducted in phase 1 and 24 in phase 2. Using a PtDA increased the overall OPTION score significantly ($p < 0.0001$), both in decisions on adjuvant treatment for breast cancer and on diagnostic work-up of lung cancer.

Items in the OPTION instrument regarding systematic conversation to obtain SDM had a higher increase of scores compared to items regarding a patient centered approach.

Conclusion

Real life observations and the use of a validated observational tool provided comprehensive knowledge as to how a PtDA affects SDM in consultations. Applying a PtDA resulted in a significant overall increase of SDM behaviour in decisions on adjuvant treatment after breast cancer surgery and diagnostic work-up in case of a small suspicion of lung cancer. In conclusion, the PtDA supports SDM in consultations independently of type of decision and department.

1. Introduction

The Danish healthcare system aims to provide patient-centred care placing the patient's needs, wishes and preferences at the heart of clinical decision making. Thus, shared decision making (SDM) should be the norm of any clinical practice [1-4]. SDM is a process in which clinicians and patients work together to select tests, treatments, management, or support packages based on clinical evidence and patient preferences. Hence, SDM involves the provision of evidence based information about options, outcomes, and uncertainties together with decision support counselling and a system for recording and implementing patient preferences [5]. In other words, evidence based knowledge and patient preferences, values and wishes is a cornerstone in SDM, and research shows that SDM improves patient confidence and coping skills, provides them with greater comfort with the decision and increases participation in decisions [6].

Still, SDM is not yet routinely applied in daily clinical practice. It appears that achieving SDM requires a new approach by healthcare professionals as well as patients. It seems that patients often suppress their needs to avoid burdening the healthcare professionals [7], and Berry, L. et. al. illustrate how patients are often reluctant to assert their interests and preferences in the presence of clinicians. Especially in decisions about treatment or care for serious illness such as cancer, many patients are susceptible to the "hostage bargaining syndrome". This may manifest as understating a concern and asking for less than desired or needed [8]. Hence, capturing patient preferences and achieving SDM can be very difficult. Concurrently, studies show that especially in critical and life threatening situations such as cancer care patients prefer to be involved to some degree in healthcare decisions [9].

Many healthcare professionals report barriers to SDM such as lack of skills, lack of adaptation to clinical systems, and lack of decision support [10]. A review suggests that healthcare professionals may be screening *a priori*, i.e. select the patients they believe would prefer or benefit from SDM [11]. These barriers indicate that patient-centered care is not fully implemented. This is of great concern considering the fact that literally listening to the patients and viewing them as experts in their life situations combined with the medical knowledge of the healthcare professional improves the quality of care and the patients' quality of life and well-being [12, 13].

Several Patient Decision Aids (PtDAs) have been developed to support the process of patient-centered care and SDM. The PtDAs are evidence based interventions designed to help people make informed and deliberated choices among healthcare options [14, 15]. Compared to standard care PtDAs (in various forms) can contribute to a higher degree of patient participation, improved knowledge and understanding of and expectations about healthcare outcomes [5, 16]. Furthermore PtDAs contribute to more accurate risk perceptions, reduced decisional conflict, greater comfort with decisions, better treatment adherence, improved confidence and coping skills, improved health behaviour and more appropriate service use [5, 16]. A Cochrane review further showed that PtDAs applied in clinical encounters improved patients' knowledge of their options, they felt better informed and were clearer about what mattered to them [16]. Joseph-Williams et. al. [17] showed that PtDAs often facilitate a dialogue between the patient and the clinician about what matters to the patient– the nub of SDM. In that sense PtDAs improve patient-centered care and SDM. Studies show, however, that although PtDAs may support the process of SDM, they do not replace communication skills, and the attitude of the clinician is still essential for the level of SDM [18, 19].

Research is sparse as to whether a PtDA facilitates communication between clinician and patient to engage SDM. The aim of this study was, from an observational point of view, to explore whether a PtDA improved SDM and supported a patient centered approach.

2. Methods and Materials

Real-life observations including a validated observational tool were chosen to obtain comprehensive understanding of the subject matter in connection with decisions on adjuvant treatment and diagnostic work-up. Focused observations as described by Spradley [20] were conducted focusing primarily on the degree of SDM by using the OPTION scale [21]

2.1 Setting

A PtDA template had previously been developed and two different prototypes designed to support SDM in the choices of adjuvant therapy for breast cancer and diagnostic work-up for lung cancer, respectively. The template was tested according to the systematic model described by Coulter, A. et. al [22]. First, an alpha test with patients, relatives and healthcare professionals was performed

to test usability, acceptability and comprehensibility of the template. The alpha test showed that the template was adaptable to other clinical settings without impairing its quality [23].

Simultaneously, beta testing was performed in a real world setting to test feasibility of the PtDA template. The beta test included patients who were consulted according to usual practice (beta test phase 1). To test feasibility and to investigate to what extent the PtDA improved SDM, it was applied in the second phase of the beta test, and validated quantitative questionnaires were used to evaluate the results [24]. The PtDA template is described elsewhere [23, 25].

Observations were performed in two different departments. (1) The Department of Oncology with patients required to decide whether to accept or decline adjuvant treatment of early breast cancer, a choice highly dependent on the patient's attitude towards survival rates, side effects, long term consequences, and quality of life. (2) The Department of Internal Medicine where the decision concerned the extent of diagnostic work-up in a fast track lung cancer pathway for patients referred by their general practitioner on a small suspicion (1-2%) of lung cancer. The choices were to undergo several diagnostic procedures carrying a risk of complications or restricting the diagnostic work-up to limited procedures such as follow-up CT scans or no further action [23, 26].

The two departments were slightly different in terms of the clinicians' education, experience and knowledge of SDM. At the Department of Oncology the involved clinicians had previously participated in educational sessions on SDM and were all involved in the development of the PtDA. At the Department of Internal Medicine, the clinicians participated in a one-day course on communication and SDM. Due to other clinical functions only a few of them ended up being part of the intervention cohort. Therefore, doctors planned to see patients in the phase 2 intervention cohort received half an hour of introduction to SDM and the PtDA beforehand.

Clinicians had the possibility to refuse having an observer in the room, if they believed this would affect the consultation negatively. Moreover, the patient had the possibility to refuse an observer present. Three registered nurses with clinical and oncological experience and knowledge of research conducted the observations in the two departments.

2.2 Study design

The study included a baseline cohort (phase 1) and an intervention cohort (phase 2). (Figure 1)

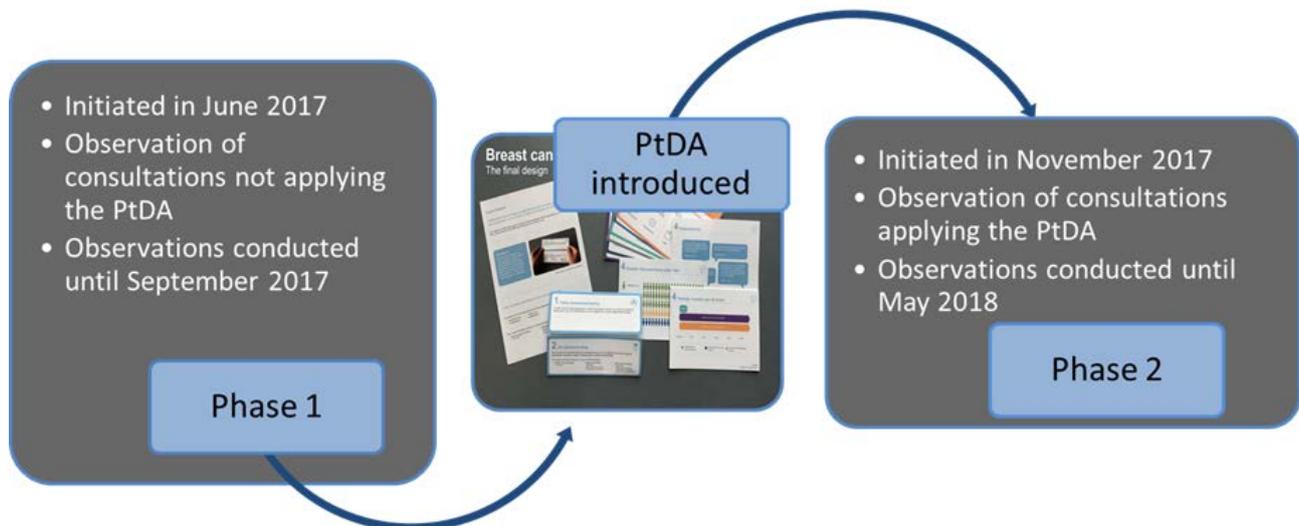


Fig 1 The study included a baseline cohort (phase 1) and an intervention cohort (phase 2).

One nurse performed an observation of the consultation and rated the degree of SDM according to the OPTION scale. The consultation was audio recorded. A second nurse listened to the recording and rated the consultation independently according to the OPTION scale. The second nurse was blinded to the ratings by the nurse observing the consultation. All nurses took turns in conducting observations and listening to the recordings.

2.3 Data collection

Data were collected on the basis of the OPTION instrument, which is applicable for assessment of the extent to which clinicians implement SDM in consultations and involve patients in the decision making process before and after applying a PtDA. [21]. A 5-point scale is used to assess the existence of SDM communication behaviour or competence based on 12 items. Each item is rated according to the outline in Figure 2.

Score	Description
0	The behaviour is not observed
1	A minimal attempt is made to exhibit the behaviour
2	The behaviour is observed and a minimum skill level achieved
3	The behaviour is exhibited to a good standard
4	The behaviour is exhibited to a very high standard

Fig 2 Items in the OPTION instrument were rated according to the outline above.

Each item is rated on a scale from 0-4, 4 being the highest possible degree of SDM. The maximum rating in each consultation is 48 points.

Congruent with the OPTION manual [21], the potential index problems were thoroughly discussed and consensus was reached among the three nurses performing the observations.

To avoid any errors in translating the OPTION instrument the original English version was used. All three nurses were experienced in reading, writing and speaking the English language. Supporting the three nurses a consensus-manual in Danish was developed. The consensus-manual, was a thorough and systematic review of the OPTION manual, going through each item step by step, and consensus on keywords and elements in Danish of each question was reached. Two pilot consultations were audio recorded with the purpose of practising ratings and testing whether the perception of each item was similar among the three nurses.

In case of a major difference in ratings between the two raters, the study protocol prescribed that a third rating should be performed, before entering the rating into the database. This never occurred, since the inter-observer agreement was consistent in every case within a few points. The inter-rater reliability was tested with a simple comparison in SurveyXact, which showed no overall difference of the ratings.

Data were entered into SurveyXact (v7.1, Ramboell Consulting, Aarhus, Denmark). Furthermore, following data was registered; demographics of patients and doctors, rating made by observer or nurse listening to the recording, whether a recommendation was made by the clinician, type of treatment or examination offered to the patient, and decision made in relation to treatment or diagnostic work-up.

A statistician conducted all statistical analyses. Overall OPTION scores were compared using the Wilcoxon–Mann–Whitney two-sample rank-sum test (Mann-Whitney *U*-test). The statistician was blinded to the study groups. The remaining analyses were made using standardized tools in SurveyXact.

2.4 Ethical approval

All participating patients gave written and orally informed consent. The study was approved by the Regional Data Protection Agency of Southern Denmark. According to the Regional Committee on Health Research Ethics for Southern Denmark, this study did not need ethics approval.

3. Results

3.1 Participant characteristics

In total, 29 observations were conducted of consultations not using the PtDA, 16 at the Department of Oncology and 13 at the Department of Internal Medicine. Ten consultations were conducted by a female physician and 19 by a male physician. Of the 29 consultations, 12 of the patients were consulted by a senior physician and 17 by a younger physician. Twenty-five observations were conducted in the second phase using the PtDA, i.e. 15 and 10 at the Departments of Oncology and Internal Medicine, respectively. Ten consultations were conducted by a female physician and 15 by a male physician. Of the 25 consultations, 15 of the patients were consulted by a senior physician and 10 by a younger physician. The majority of female breast cancer patients make the gender distribution uneven with 19 women and 10 men in phase 1, and 18 women and 6 men in phase 2. The participants had different degrees of education and there was a wide distribution of age and social and employment status. Most patients were accompanied by a relative. There were no statistically significant differences in demographic data between the groups of phase 1 and phase 2 (Table 1).

3.2 Overall OPTION scores across groups

Using a PtDA increased the overall OPTION score, both in decisions about adjuvant treatment for breast cancer and diagnostic work-up in lung cancer (Fig. 3). On the 48-point scale a mean score of 12 (range 5-25) was obtained in consultations without the PtDA. Using the PtDA the mean score was 24.3 points (range 13-37). The distributions of scores in the two groups differed significantly

(two-sample Wilcoxon rank-sum (Mann-Whitney *U*-test), p -value $= < 0.0001$ two-tailed). There was no statistically significant difference between observer and audio ratings or the demographics of patients in the baseline and intervention cohorts.

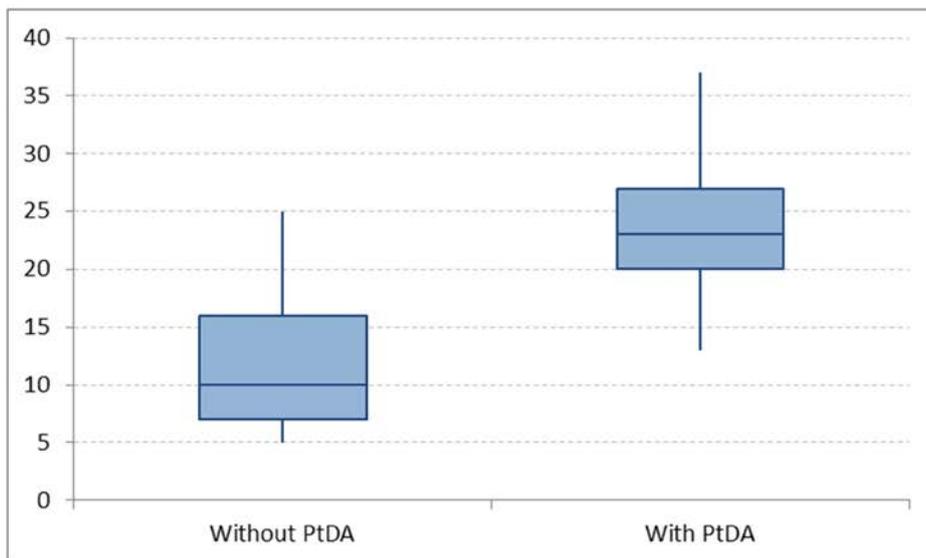


Fig 3 Box plot of OPTION scores across groups. Two-sample Wilcoxon rank-sum (Mann-Whitney *U*-test); p -value < 0.0001

3.3 OPTION scores – Department of Oncology

There was a large difference in OPTION scores depending on whether or not the PtDA was used during the decision making process of accepting or declining adjuvant treatment after curative breast cancer surgery as illustrated in Figure 4.

The mean score increased significantly when applying the PtDA to the consultations. In phase 1 the mean score was 13.4 points (range 5-24) and in phase 2 it was 21.6 points (range 13-29) (Fig. 5); the score distributions in the two groups differed significantly (two-sample Wilcoxon rank-sum (Mann-Whitney *U*-test), p -value $= < 0.0005$ two-tailed)

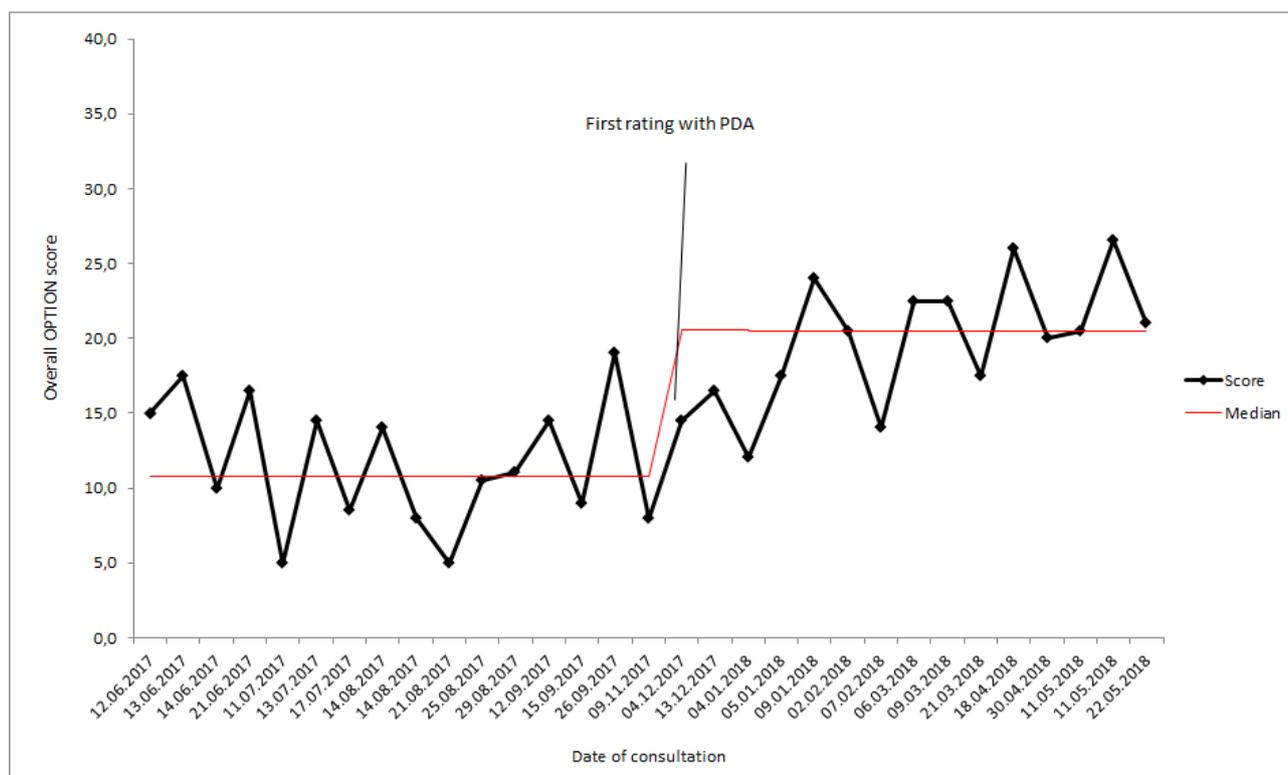


Fig 4 Department of Oncology, variation of scores in all consultations on the OPTION scale

The largest improvement from baseline was identified within specific items of the OPTION instrument. For example, in item 1 *“The clinician draws attention to an identified problem as one that requires a decision making process”* (an improvement of + 1.258 points) and in item 3 *“The clinician assesses the patient’s preferred approach to receiving information to assist decision making”* (an improvement of +3092 points) (Table 2)

A decrease in OPTION points after application of the PtDA was identified only in item 9 *“The clinician offers the patient explicit opportunities to ask questions during the decision making process”* (a decrease of -0.250 points). Before applying the PtDA, item 9 had the highest score of all items (2.250) (Table 2).

In items involving a patient centered approach to a high degree, the results were diverse. As described, item 3 resulted in the highest increase of OPTION points after addition of the PtDA. However, item 6 *“The clinician explores the patient’s expectations about how the problems are to be managed”* only showed a minor increase of points (mean before PtDA 1.250, increase of +

0.083 after PtDA) and item 7 “The clinician explores the patient’s concerns (fears) about how problems are to be managed” showed a decrease of points (mean before PtDA 1.438 points, decrease of 0.171 after PtDA) with the PtDA. Item 10 “The clinician elicits the patient’s preferred level of involvement in decision making” had an increase of 0.884 points after adding the PtDA but had the lowest score (0.316) of all 12 items before using the PtDA (Table 2). The scores of these items illustrate the challenge of patient centered care, which nevertheless improved overall when applying a PtDA in the consultation.

A recommendation by the physician was made in 100% of consultations not using the PtDA. With application of the PtDA a recommendation was made in 86% of the consultations. This indicates that the use of a PtDA may make physicians at the Department of Oncology less eager to make a recommendation or patients less eager to ask for one.

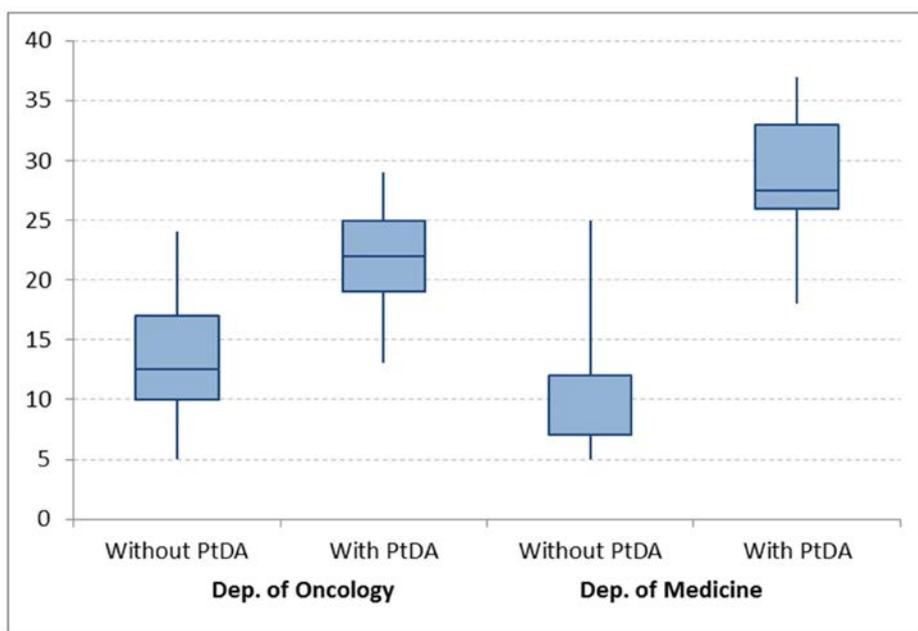


Fig 5 Box plots of OPTION scores in each group.

3.4 OPTION scores – Department of Internal Medicine

The score variation at the Department of Internal Medicine was large as shown in Figure 6. The median score increased from 6.5 to 27.5 points per consultation after introduction of the PtDA.

The mean score was 10.2 points (range 5-25) before applying the PtDA. After introduction of the PtDA, the mean score increased to 28.2 points (range 18-37) (Fig. 5). The distribution of scores in the two groups differed significantly (two-sample Wilcoxon rank-sum (Mann-Whitney *U*-test), *p*-value = <0.0001 two-tailed).

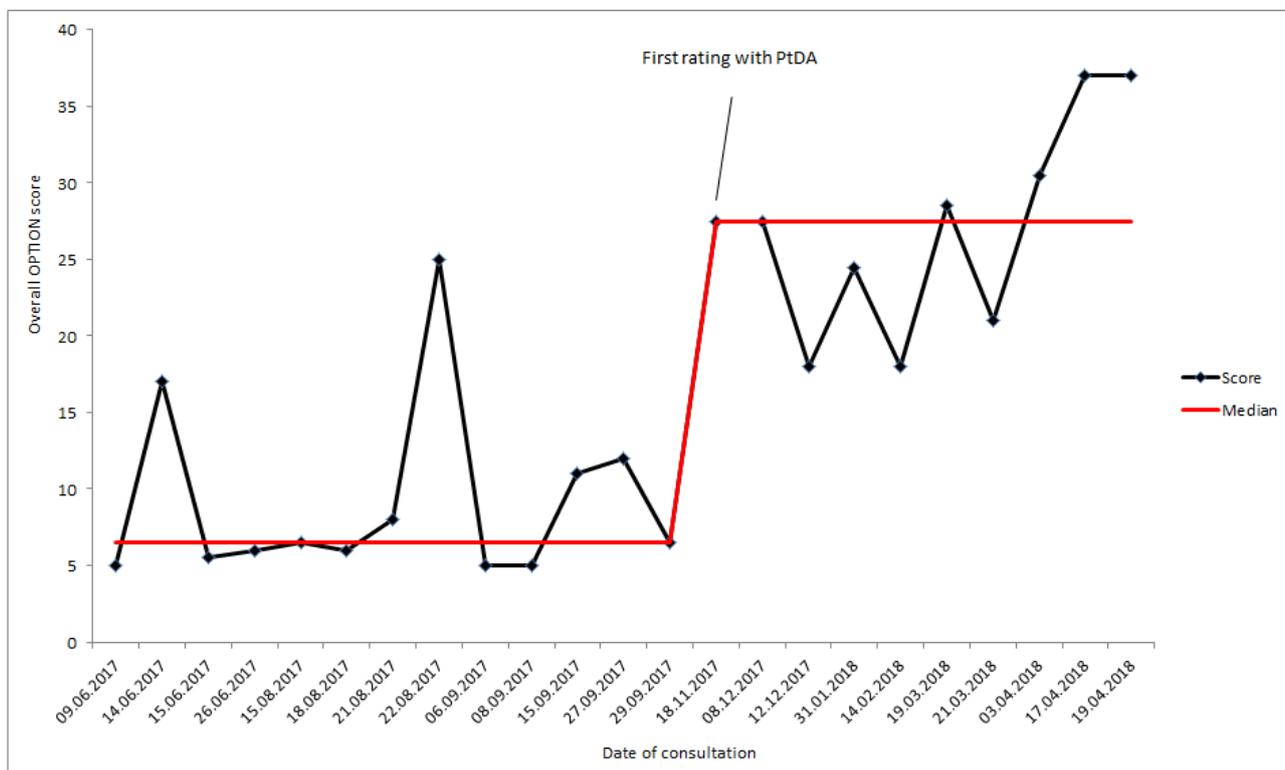


Fig 6 Department of Internal Medicine, variation of scores in all consultations on the OPTION scale

The most striking improvements were found in items 2 and 3. The score of item 2 *“The clinician states that there is more than one way to deal with the identified problem (equipoise)”* increased by 2.554 points after introduction of the PtDA. Item 3 *“The clinician assesses the patient’s preferred approach to receiving information to assist decision making”* increased the most of all (+3.082 points) (Table 3).

Item 10 *“The clinician elicits the patients preferred level of involvement in decision making”* had the lowest increase of all (+0.031 points). Also item 9 *“The clinician offers the patient explicit opportunities to ask questions during the decision making process”* had a low increase +0.0285 points. Similar to the Department of Oncology, this item had the highest score before adding the PtDA to the consultation at the Department of Internal Medicine.

Items involving and focusing on a patient centered approach had various results. Item 3 as described above was the highest scorer of difference between before and after introduction of the PtDA. Item 10 *“The clinician elicits the patients preferred level of involvement in decision making”* had the lowest score. Item 6 *“The clinician explores the patient’s expectations about how the problems are to be managed”* showed an increase of 1.331 points with the PtDA and item 7 *“The clinician explores the patient’s concerns (fears) about how problems are to be managed”* had a minor increase of 0.985 with the PtDA (Table 3).

A recommendation was made in 84% of consultations not using the PtDA. After adding the PtDA a recommendation was made in only 10% of the consultations. This indicates a potential effect of the PtDA when it comes to making recommendations or asking for recommendations.

3.5 Comparison of OPTION scores across departments

In nine of the 12 items in phase 1 the Department of Oncology scored higher or almost the same as the Department of Internal Medicine. In phase 2 applying the PtDA the Department of Internal Medicine had an identical or higher score than the Department of Oncology in 10 out of 12 items. As appears, the Department of Oncology scored higher in phase 1 and the Department of Internal Medicine did so in phase 2.

In both departments it seemed that the use of a PtDA may make physicians less eager to make a recommendation or patients less eager to ask for one.

4. Discussion and Conclusion

4.1. Discussion

In general, the results of this study show that applying a PtDA improves SDM in decisions on adjuvant treatment in early breast cancer and on the extent of diagnostic work-up in a fast track lung cancer pathway, although to a higher degree in the latter setting. This difference may be explained by the two different preference sensitive situations. The decision about diagnostic work-up evolves around patients with a risk of less than 2% of having lung cancer based on their symptoms [24]. The breast cancer patients have recently been diagnosed with early stage disease

and undergone curative surgery. The subsequent decision whether or not to receive adjuvant treatment to reduce the risk of relapse used to be made exclusively by the physician based on national, evidence based guidelines and a primary focus on survival rates. According to Legaré et. al. some of the barriers for healthcare professionals in performing SDM are “*Characteristics of the patient*” and “*Clinical situation*” [11]. The fact that the patients at the Department of Oncology had already been diagnosed with breast cancer could be the barrier and explain the larger increase of SDM behaviour at the Department of Internal Medicine after introduction of the PtDA. The decision at the Department of Oncology involves a potentially life threatening situation by deselecting the treatment. This may influence the physician in providing options, weighing the words used, and giving recommendations. As also described by Legaré [11] this illustrates that healthcare professionals tend to screen a priori as to which patients would prefer or benefit from SDM, which is of some concern, since physicians may misjudge patients’ desire for active involvement in decision making [27]. Moreover, a limitation to SDM can be the misunderstanding, both among clinicians and patients, that all responsibility of the decision is transferred to the patient, which may result in the patient feeling abandoned and left alone in a possible critical situation. That means, that practising SDM is a complex task, which should be balanced between respecting patients’ autonomy and providing support in the decision making process [28]

Another often reported barrier is “*We do it already*” [11]. In our study, the Department of Oncology had previously been trained in SDM and had therefore been working with the principles for some time . This is reflected in the baseline data (phase 1) with the physicians at the Department of Oncology having a much higher score than those at the Department of Internal Medicine, who only had been working with SDM for a short period of time. The “*We do it already*” barrier may therefore explain why the Department of Oncology did not increase their scores in phase 2 to the same extent as the Department of Internal Medicine.

In this study fewer recommendations were made in both departments after application of the PtDA. It was only registered whether a recommendation was made, not at what time during the consultation or whether it was made on request by the patient.

The compatibility of a recommendation with SDM has been a matter of discussion for quite some time. Clinicians may be less likely to present a balanced view of options when making a recommendation and patients may be less involved in the decision when a recommendation has been given [29]. In that sense, the fact that a recommendation was given in 86% of the cases on treatment for breast cancer suggests that the PtDA does not have great impact on recommendations. Nevertheless, Jacobsen et.al. find that timing and content of the recommendation are more important than whether or not a recommendation is given. Patients sometimes asks for a recommendation and if the clinician's recommendation is based on the patient's preferences, it can be helpful to the patient in being aware of what matters the most [30], which is congruent with the core elements of SDM. This is an area for further research and education of clinicians in SDM.

In both clinical settings of our study the PtDA especially improved SDM in relation to the clinician's assessment of the patient's preferred approach to receiving information. Since patient preferences are a cornerstone in person-centered care [13], the PtDA would expectedly facilitate this aspect. On the other hand, only little improvement was identified concerning the clinician's ability to explore the patient's expectations (or ideas) about how problems are to be managed. The encouragement of the patient to ask questions (item 9) and the exploration of the patient's concerns (fears) (item 7) only improved slightly or decreased. This indicates that the PtDA only to a low extent makes the clinicians literally listen to their patients and view them as experts in their lives. As described by Thorne et.al. a PtDA may support the process of SDM, but it does not replace communication skills and the attitude of the clinicians, which is also congruent with Legaré et al's "*skills trump tools, but attitudes trump skills*" [18, 19]. Thus, improved SDM is not achieved by applying a PtDA, exclusively. It requires communication skills and a person-centered approach with clinicians interested in listening to the patients and viewing them as experts.

Eliciting the patient's preferred level of involvement in decision making only improved slightly (item 10) although this improvement is of great importance. In a Danish study on breast cancer patients it turned out that the patients were not made sufficiently aware that they were taking part in a decision making process with the possibility to choose between different treatments. They felt that the healthcare professional presented a specific treatment course, which they needed to accept and follow [31]. Also, many cancer patients are reluctant to assert their interests

and preferences leading to a feeling of “hostage bargaining syndrome” [8]. Thus, even a slight improvement in eliciting the patients’ preferred level of involvement in decision making will make a difference.

The principal enabler of SDM is having informational needs met at an appropriate level for the individual [32]. Although in our study the PtDA helped the clinician assess the patients’ preferred approach to receiving information, it is unclear whether the information needs were actually met. On the other hand, this result cannot be isolated from other relevant factors. Information provision alone is insufficient for SDM. Patients need support to feel capable of acquiring and understanding information about the available options and they must value their personal knowledge as a contribution to SDM. Patients need information and power to participate in SDM and power imbalance between patients and clinicians should be redressed [32, 33]. However, it was not within the scope of this study to investigate whether PtDA brings power to the patients.

The limitations of the study should be noted. A randomized controlled trial would have been ideal but we were concerned that the approach to patients in phase one would have been compromised, as blinding the physician wouldn’t be possible due to the nature of SDM. By letting phase one run before the PtDA phase we hoped to minimize any influence of SDM in phase one. Also, this study was a subset of a bigger study, with a similar sequential approach, as this seemed as the most pragmatic approach.

The observations were conducted in two different clinical settings, which in principle make the results incomparable. The clinicians of the two departments had not received the same amount of SDM training and thus had different competencies in SDM communication. This is a strength as well as a limitation to the study. On the one hand, since it can be difficult to compare the results. On the other hand, the results of the study show that the PtDA improves SDM behaviour regardless of the skills of the clinicians or the amount of SDM training. It is unclear how these aspects have affected the results of the study, but we did find similar trends of improved SDM in the two departments indicating that the PtDAs lead to a higher degree of SDM independent of the clinical setting and that the PtDA served as a “Trojan horse” in both clinical settings. This should be

taken into consideration in the future preparation of clinicians for the use of a PtDA. Research into the complexity of what works, when improving SDM, is warranted.

We observed the consultations using the validated OPTION scale, which is instrumental in keeping focus on the degree of SDM. Improving SDM is a complex accomplishment and a more holistic approach aiming at understanding the consultations as a whole would have helped us gain deeper insight into the matter. This would have required more consultations as well as interviews with the clinicians and patients.

The effect of the observers, if any, on the consultations is unclear. Their presence during the consultation makes them participants to some degree and hence, the observed consultations were not performed in their natural settings [20]. The observers were experienced oncology nurses and *insiders* of the cultural society of the Department of Oncology, which may have made them unaware of the tacit knowledge that exists in every culture, e.g. how health professionals communicate with patients.

Although our results show that the PtDA improved SDM as measured by the OPTION scale, it is unclear how the improvement affects the patients. What does an improvement of 2 or 3 points within one item feel like to the patients? In order to gain a more comprehensive understanding of how the PtDA affects consultations and SDM, the exploration of patient experiences is relevant.

4.2. Conclusion

Real life observations and the use of a validated observational tool allowed us to gain knowledge of how a PtDA affects SDM in consultations in two different clinical settings with two different preference sensitive decisions. The PtDA improved SDM behaviour and promoted a patient centred approach in decisions about adjuvant treatment for breast cancer and diagnostic work-up of patients with a small suspicion of lung cancer.

Application of the PtDA supported the clinician in practicing SDM, especially when communicating pros and cons and making the patient aware that a decision was to be made.

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The patient centred approach was affected positively to some degree by application of the PtDA, and exploring the patient's concerns, fears, expectations and questions is an important area to be skilled in to reach the core of SDM, namely what matters most to the patient.

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Table 1 Demographic characteristics of participants					
	Adjuvant therapy for breast cancer		Diagnostic work-up for lung cancer		<i>p</i> for difference between groups with and without PtDA
	Without PtDA	With PtDA	Without PtDA	With PtDA	
	(n=16)	(n=15)	(n=13)	(n=10)	
Age in years					0.34 ⁱ
20-29	0	0	0	1	
30-39	0	0	1	0	
40-49	4	3	4	3	
50-59	3	5	5	2	
60-69	5	2	2	2	
70-79	3	4	0	1	
80-89	0	1	1	1	
90-99	1	0	0	0	
Gender					0.37 ⁱⁱ
Male	0	0	10	6	
Female	16	15	3	4	
Social status					0.50 ⁱⁱ
Married/Cohabiting	12	11	10	8	
Single	4	4	3	2	
Children living at home					0.34 ⁱⁱ
Yes	13	11	6	3	
No	3	4	7	7	
Highest level of education					0.31 ⁱ
High School	5	1	3	2	
College	0	0	0	0	
Skilled worker	3	7	5	5	
University undergraduate degree	7	5	4	2	
University graduate degree	1	2	1	1	
Employment status					0.31 ⁱ
Full time	3	6	7	4	
Part time	2	1	1	0	
Retired	10	7	2	6	
Sick leave	1	1	0	0	
Unemployed	0	0	3	0	
Did relatives participate in the consultation?					0.49 ⁱⁱ
Yes	13	11	10	8	
No	3	4	3	2	

ⁱ Mann-Whitney *U* test

ⁱⁱ Fisher's exact test

Table 2 – Department of Oncology		Points without PtDA					Points with PtDA					Diff.		
Item	SDM behaviour	0	1	2	3	4	Mean	0	1	2	3		4	Mean
1	The clinician draws attention to an identified problem as one that requires a decision making process.	6	6	4	0	0	0.875	0	3	7	5	0	2.133	+ 1.258
2	The clinician states that there is more than one way to deal with the identified problem ('equipoise').	3	8	3	1	1	1.313	1	5	4	4	1	1.933	+ 0.620
3	The clinician assesses the patient's preferred approach to receiving information to assist decision making.	1 2	2	2	0	0	0.375	0	0	2	4	9	3.467	+ 3.092
4	The clinician lists 'options', which can include the choice of 'no action'.	0	1 0	5	1	0	1.438	0	3	5	7	0	2.267	+ 0.829
5	The clinician explains the pros and cons of options to the patient (taking no action is an option).	0	1 4	0	2	0	1.250	0	5	6	2	2	2.067	+ 0.817
6	The clinician explores the patient's expectations (or ideas) about how the problem(s) are to be managed.	5	6	3	0	2	1.250	2	6	7	0	0	1.333	+ 0.083
7	The clinician explores the patient's concerns (fears) about how problem(s) are to be managed.	3	9	1	0	3	1.438	4	6	3	1	1	1.267	- 0.171
8	The clinician checks that the patient has understood the information.	5	9	2	0	0	0.813	3	8	4	0	0	1.067	+ 0.254
9	The clinician offers the patient explicit opportunities to ask questions during the decision making process.	0	0	1 3	2	1	2.250	0	4	8	2	1	2.000	- 0.250
10	The clinician elicits the patient's preferred level of involvement in decision-making.	1 2	3	1	0	0	0.316	5	5	2	3	0	1.200	+ 0.884
11	The clinician indicates the need for a decision making (or deferring) stage.	8	5	2	1	0	0.750	6	4	4	1	0	1.000	+ 0.250
12	The clinician indicates the need to review the decision (or deferment).	5	4	4	2	1	1.375	2	4	2	7	0	1.933	+ 0.558

Table 3 – Department of Internal Medicine		Points without PtDA						Points with PtDA						
Item	SDM behaviour	0	1	2	3	4	Mean	0	1	2	3	4	Mean	Diff.
1	The clinician draws attention to an identified problem as one that requires a decision making process.	3	8	2	0	0	0.923	0	0	4	4	2	2.800	+ 1.877
2	The clinician states that there is more than one way to deal with the identified problem ('equipoise').	5	5	3	0	0	0.846	0	1	1	1	7	3.400	+ 2.554
3	The clinician assesses the patient's preferred approach to receiving information to assist decision making.	9	3	1	0	0	0.385	0	1	1	3	5	3.467	+ 3.082
4	The clinician lists options, which can include the choice of no action.	2	7	3	1	0	1.230	0	1	2	3	4	3.000	+ 1.770
5	The clinician explains the pros and cons of options to the patient (taking no action is an option).	1	9	1	1	1	1.385	0	1	3	2	4	2.900	+ 1.515
6	The clinician explores the patient's expectations (or ideas) about how the problem(s) are to be managed.	8	2	2	0	1	0.769	1	1	6	0	2	2.100	+ 1.331
7	The clinician explores the patient's concerns (fears) about how problem(s) are to be managed.	7	4	2	0	0	0.615	2	1	6	1	0	1.600	+ 0.985
8	The clinician checks that the patient has understood the information.	4	9	0	0	0	0.692	1	4	4	1	0	1.500	+ 0.808
9	The clinician offers the patient explicit opportunities to ask questions during the decision making process.	1	4	7	1	0	1.615	0	4	8	2	1	1.900	+ 0.285
10	The clinician elicits the patient's preferred level of involvement in decision-making.	12	1	0	0	0	0.769	2	8	0	0	0	0.800	+ 0.031
11	The clinician indicates the need for a decision making (or deferring) stage.	10	2	1	0	0	0.308	0	1	5	3	1	2.400	+ 2.092
12	The clinician indicates the need to review the decision (or deferment).	3	4	5	0	1	1.385	0	0	5	4	1	2.600	+ 1.215