

## Original Article

## Development of a patient decision aid on post-vasectomy semen analysis for vasectomized men



## Développement d'un outil d'aide à la décision sur le spermogramme post-vasectomie pour les hommes vasectomisés

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## ABSTRACT

**Introduction:** Clinical practice guidelines recommend that vasectomized men submit a semen sample for post-vasectomy semen analysis (PVSA) after the procedure. However, about one-third of men do not comply with this recommendation. Complying with PVSA appears to be a “difficult” decision according to the Ottawa Decision Support Framework. We created a Patient Decision Aid (PtDA) to help men decide whether to do a PVSA and assessed its acceptability and perceived utility.

**Methods:** A multidisciplinary committee developed the PtDA, applying international standards through an iterative process. Content was based on literature on the determinants of compliance with PVSA and vasectomy effectiveness statistics retrieved from *Vasectomie Québec*, the largest vasectomy clinic in Canada. We conducted two 11-item surveys of men vasectomized in five vasectomy clinics located in the Province of Quebec, Canada to assess the PtDA acceptability and perceived utility.

**Results:** The PtDA includes a description of the PVSA, vasectomy success/failure probabilities, reasons reported for doing a PVSA or not, and resources to help with decision-making. In both surveys ( $n = 28$  and  $78$ ), participants found the tool to be acceptable overall. More than 90% found it easy to understand and helpful for evaluating the advantages and disadvantages of options and deciding which option to choose. More than 95% of men reported that the language and statistics were easy to understand.

**Conclusion:** Vasectomized men considered the PtDA on PVSA as acceptable and useful for deciding whether to do a PVSA.

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## R É S U M É

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**Introduction:** Les lignes directrices de pratique clinique recommandent que les hommes ayant eu une vasectomie fournissent un spermogramme post-vasectomie après la chirurgie. Cependant, environ un tiers des hommes ne suivent pas cette recommandation. Selon le cadre de soutien à la décision d'Ottawa, se conformer au spermogramme semble être une décision « difficile ». Nous avons créé un outil d'aide à la décision (OAD) pour aider les hommes à décider s'ils souhaitent ou non faire un spermogramme, et nous avons évalué son acceptabilité et son utilité perçue.

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**Méthode:** Un comité multidisciplinaire a élaboré l'OAD en appliquant des normes internationales selon un processus itératif. Le contenu était basé sur la littérature portant sur les déterminants de la compliance au spermogramme ainsi que sur les statistiques d'efficacité de la vasectomie obtenues auprès de Vasectomie Québec, la plus grande clinique de vasectomie au Canada. Nous avons mené deux enquêtes de 11 questions auprès d'hommes ayant eu une vasectomie dans cinq cliniques situées dans la province de Québec, au Canada, afin d'évaluer l'acceptabilité et l'utilité perçue de l'OAD.

**Résultat:** L'OAD comprend une description du spermogramme, les probabilités de succès ou d'échec de la vasectomie, les raisons rapportées pour effectuer ou non un spermogramme, ainsi que des ressources pour aider la prise de décision. Dans les deux enquêtes ( $n = 28$  et  $78$ ), les participants ont jugé l'outil globalement acceptable. Plus de 90 % l'ont trouvé facile à comprendre et utile pour évaluer les avantages et les inconvénients des options et pour décider laquelle choisir. Plus de 95% des hommes ont indiqué que le langage et les statistiques étaient faciles à comprendre.

**Conclusion:** Les hommes ayant subi une vasectomie ont jugé l'OAD sur le spermogramme acceptable et utile pour décider s'ils allaient ou non effectuer un spermogramme.

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## 1. Introduction

Vasectomy is a permanent contraceptive method used by men and couples who do not wish unplanned pregnancies to occur. This simple surgical procedure involves the occlusion of the vas deferens to prevent sperm from passing into ejaculatory ducts and mixing with other seminal fluids during ejaculation. Vasectomy is, however, not effective immediately after the procedure. Although no sperm are found after two weeks in the semen sample of some vasectomized men, sperm may be observed in semen sample for many months after vasectomy despite effective vas occlusion. [1] To account for this variability, clinical practice guidelines from North America [1,2] and Europe [3–6] recommend prescribing a semen analysis two to four months after vasectomy. Post-vasectomy semen analysis (PVSA) evaluates parameters associated with fertility, assessing whether the vasectomy was successful or not [1].

Vasectomized men may be advised to abandon other contraceptive methods when a PVSA on a fresh sperm sample shows 100,000 or less non-motile sperm/mL or, on a mailed sample, not showing any sperm [1–3,5,6]. When an effective vas deferens occlusion technique is used, about 95% of vasectomized patients will be declared sterile at the time of the first PVSA on a fresh sample [1]. Patients not declared sterile are required to undergo additional tests before they are advised to abandon the use of other contraceptive methods [1]. The procedure will be considered a failure when motile or numerous sperm are still observed in the semen sample six months after the vasectomy. In this case, it is advised to redo the vasectomy [1]. However, failure rarely happens (< 0.5%) when an effective vas occlusion technique is performed [1].

Although PVSA is routinely prescribed by physicians who perform vasectomies, a significant proportion of men do not comply. A review by the American Urology Association of six large cohorts, typical of clinical practice in North America, showed that about 66% (range: 55–71%) of vasectomized men submit at least one sample for PVSA [1]. In a large retrospective cohort study conducted in the United Kingdom, higher compliance was seen among vasectomized men advised to submit their sample by mail (80%) compared to those required to submit a fresh sample (59%) [7]. Requesting that the semen sample be submitted a longer time after vasectomy decreases compliance [8]. Almost all patients who comply with PVSA submit their semen sample within six months following the vasectomy [9,10].

Reasons invoked by vasectomized men for not complying with PVSA include negligence, procrastination, trust in the vasectomy procedure, and trust in the vasectomy provider [9,11,12]. Additionally, men who are older than 50, those who have three or more children, and those using another method of contraception are less likely to comply [9,12–14]. These reasons and factors suggest that vasectomized men value differently the decision to do the PVSA or not. They also reflect a lack of information and knowledge about PVSA, potential risks and benefits of the options (to do the PVSA or not), and effectiveness of vasectomy [15]. Such unmet decisional needs may affect the quality of the decision [15].

Considering on one hand the routine prescription of the PVSA based on strong recommendations from clinical practice guidelines, and, on other hand, the low risk of failure of the procedure and the low compliance with PVSA, complying with PVSA appears to be a “difficult” decision according to the Ottawa Decision Support Framework (ODSF) [15]. To ensure that decisions are informed and value-based, the ODSF emphasizes that the decisional process of patients should be accompanied by appropriate support, such as Patient Decision Aids (PtDA) [15]. To our knowledge, there is currently no PtDA to help vasectomized men decide to do a PVSA or not. Our study aimed to develop such a tool and assess its acceptability and perceived utility among vasectomized men.

## 2. Methods

### 2.1. Design of the PtDA Prototype

The design of the PtDA was based on the ODSF [15] and previous experience in PtDA development in vasectomy practice [16,17]. Its development and reporting followed the systematic process proposed by the International Patient Decision Aid Standards (IPDAS) [18]. We partnered with *Vasectomie Québec*, the largest provider of vasectomy services in Canada with over 5000 vasectomies performed yearly, to assist in developing and assessing the tool acceptability and perceived utility.

We assembled a multidisciplinary steering committee to develop the prototype of the PtDA. The committee included members of the research team (HTK, SD, ML), seven vasectomy providers (three from *Vasectomie Québec* and four from other vasectomy clinics in the province of Quebec), and three PtDA experts from the Canada Research Chair in Shared Decision-Making and Knowledge Mobilization from Université Laval, Quebec City, Canada. Seven members of the committee have personally faced the decision to do a PVSA or not in the past, providing the patient's perspective. The committee advised on the scope, content, format, and evaluation of PtDA. We extracted reasons reported by vasectomized men for choosing to do PVSA or not from the literature [9,11,12,19,20]. The tool development underwent two rounds of the iterative process illustrated in Fig. 1.

### 2.2. Acceptability and perceived utility of the PtDA

We conducted two surveys among men aged 18 and above, who were vasectomized for the first time, to assess the acceptability and perceived utility of the PtDA. The first survey, testing the first version of the PtDA, was administered to 28 patients from *Vasectomie Québec*, and the second, testing the second version of the PtDA, to 78 men from five vasectomy clinics in different regions of the province of Quebec (including *Vasectomie Québec*). In both rounds of testing, nurses solicited volunteers to complete a self-administered anonymous paper-based questionnaire given along with a copy of the PtDA right after the vasectomy. Participants consulted the PtDA and completed the questionnaire in

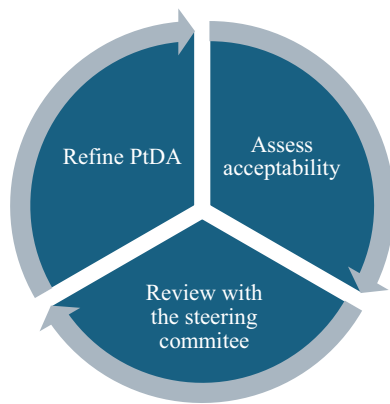


Fig. 1. Iterative process for the development of the PtDA on PVSA for vasectomized men in Quebec in 2022.

the waiting room during the required 15-min resting period after vasectomy.

The given questionnaires were adapted from the validated acceptability evaluation measure by the ODSF [21]. They included: (1) 11 items with a 5-point Likert scale (1 = strongly agree to 5 = strongly disagree) to assess the perceived usefulness and the acceptability of the PtDA components in terms of its length, information, and balance in presenting both options and (2) two open questions to share comments (Appendix 1). Following the initial assessment, the research team revised the tool to incorporate patient feedback and submitted the updated version to the steering committee for review. A second assessment was then conducted using the revised PtDA, after which further refinements were made until consensus was reached on the final version.

All data was collected on paper. They were transcribed to an Excel sheet and revised with source data before analysis. We had 18 (1.5%) missing data points out of 1177. These were excluded from the analysis. Responses to the open questions were analyzed using emerging themes. A coding framework was developed using an inductive method, where we systematically categorized key themes emerging from the data and grouped similar responses under common themes. All responses were reported categorically using frequencies and percentages, except for open questions, where we counted occurrences of the themes and reported them as frequencies. All statistical analyses were done using R. Studio version 2024.12.0467.

Since the anonymous surveys aimed at improving the quality of services provided to vasectomy patients, approval by an ethical review board was not required, as stated by the Canadian Tri-Council Policy on ethical conduct for human research [22].

### 3. Results

#### 3.1. Patient Decision Aid (PtDA)

We began the development of the PtDA in April 2022 and completed the final version in October 2022. The PtDA, entitled “*Le spermogramme post-vasectomie. Une décision qui vous appartient !*” (Post-vasectomy Semen Analysis. Your Decision!), is a one-page, back-and-front, colored paper document written in French (Fig. 2). The PtDA presents the specific decision to be made (to do a PVSA or not), the target audience (vasectomized men), and the intended purpose of the tool. It provides a detailed description of the PVSA procedures, including information on why and when the clinical practice guidelines recommend a PVSA. It also presents the probability of success and failure of vasectomy in *Vasectomie Québec* clinics, both numerically, using numbers out of 1000, and visually with an icon array.

The tool includes reasons for deciding whether to do the test or not. They are presented neutrally without favoring one option over the other. It also offers supplementary resources to support individuals in making an

informed and value-based choice. Finally, the PtDA features the date of the last update, the sources of funding, and the qualifications and affiliations of all authors of the PtDA.

#### 3.2. Acceptability and perceived utility of the PtDA

Table 1 presents the results of the first ( $n = 28$ ) and second ( $n = 78$ ) surveys. In both surveys, most participants agreed or strongly agreed that the information presented was easy to understand, to follow, and useful for deciding among the options. Most participants also agreed or strongly agreed that it helped in deciding whether to do the test or not, understanding the advantages and disadvantages of each option, judging what is most important to them, and being certain whether to do the test or not. Items on the presentation of information, such as the language used, size of letters and numbers, and statistics presented, were also positively rated. However, in the second survey, a lower (84%), although high, proportion of participants agreed or strongly agreed with the length of the tool.

Participants’ responses to the open questions are presented in Table 2. Most comments were positive in both surveys. In the first survey, 68% (19/28) of men commented what they liked and disliked. Nineteen (19) men made 27 positive comments. Most about simplicity, statistics presented, clarity, and specific information of the PtDA. Nine expressed reservations, mostly about the layout of information, the redundancy of some content, and not seeing the tool utility. We addressed these in a modified version and reassessed it. In the second survey, 68% (53/78) provided comments. Fifty-two (52) and 17 men mentioned aspects of the PtDA they liked and disliked, respectively. Among the 52 positive comments, clarity and statistics were again most frequently cited. Overall, the information was also appreciated. Some men considered that the tool was too long and provided too much information, while others reported not having enough information, namely on the consequences of unplanned pregnancy and access to PVSA.

### 4. Discussion

We developed an innovative PtDA to help vasectomized men decide whether to do a PVSA. Overall, the tool demonstrated good acceptability and perceived utility. Participants in both assessments rated highly its ease of being understood, the sufficiency of information for decision-making, its ability to convey the advantages and disadvantages of both options, and its usefulness in decision-making. To our knowledge, no other evaluation of acceptability and perceived utility of a PtDA on PVSA has been published. It would be difficult to compare our results with the evaluation of these parameters related to PtDAs created for other healthcare problems and decisions and assessed in different contexts in which patients were receiving the PtDA.

Our study has several strengths. We followed a robust process based on international standards [15,18] and our methodology included all 11 criteria recommended by IPDAS [18]. We emphasized evidence-based risk communication strategies shown to improve understanding and adaptability to individual health literacy [23]. Our sample for assessing the acceptability and perceived usefulness of the PtDA was larger than commonly reported in similar studies [24,25], which generally range from 15–25 participants. We used natural frequencies and percentages and incorporated icon arrays to communicate intuitively the risk of vasectomy failure/success [26]. Most participants reported that the statistics were easily understood, suggesting that our approach to complex statistical information was valuable to enhance comprehension. We also used a validated instrument [21] embedded in the ODSF to strengthen the reliability of our findings. Lastly, while our study does not establish whether the PtDA improves decision quality beyond its demonstrated acceptability and the positive opinions expressed by participants. It provides evidence-based information to vasectomized men and addresses a notable gap in the existing literature. Future research

# FAIRE OU NE PAS FAIRE LE SPERMOGRAMME?

## Une décision qui vous appartient!



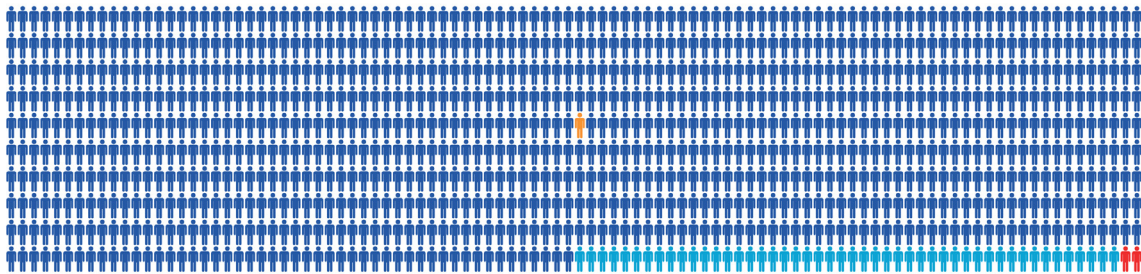
Après la vasectomie, vous n'êtes **pas stérile immédiatement**.  
On recommande habituellement de faire un spermogramme  
2 à 3 mois après la vasectomie pour confirmer le succès  
ou l'échec de l'opération.

Entretemps, vous devez utiliser un moyen  
de contraception efficace pour éviter le risque  
d'une grossesse « surprise » (non-planifiée).

Même si tous les hommes vasectomisés reçoivent une  
prescription pour faire le spermogramme, plusieurs  
décident de ne pas le faire.

**L'information suivante vous aidera à prendre cette décision (faire ou ne pas faire le spermogramme) selon ce que vous considérez être le plus important pour vous.**

Notez que les chiffres présentés ne s'appliquent pas si votre médecin vous a spécifiquement recommandé de faire le spermogramme post-vasectomie à cause d'une situation particulière liée à votre vasectomie.



**Quel est le risque d'échec  
chez 1000 hommes qui  
ont eu une vasectomie?**

On estime qu'il y a moins de 1 homme sur 1000, en orange (👤),  
au milieu, dont la partenaire aura une grossesse « surprise »  
au cours de sa vie même s'il a été déclaré stérile avec un  
spermogramme. On appelle ça une recanalisation tardive.

### Qu'est-ce qui se passe avec les autres?

**949** sur 1000, en bleu foncé (👤), seront stériles mais **pas avant 2 à 3 mois après la vasectomie**.

**48** sur 1000, en bleu pâle (👤), seront stériles, **entre 3 et 6 mois après la vasectomie**.

**2** sur 1000, en rouge (👤), auront un échec de la vasectomie (une recanalisation précoce).

Ils ne seront jamais stériles et seront à risque au cours de leur vie de causer une grossesse « surprise ».

Le risque d'échec est donc très faible, mais sans spermogramme,  
on ne peut pas savoir si on est tombé dans les **949** bleus foncés, stériles à 2-3 mois,  
les **48** bleus pâles, stériles entre 3 et 6 mois, ou les **2** rouges, les échecs.

[Continuer au verso](#)

Fig. 2. The Patient Decision Aid titled "Le spermogramme post-vasectomie. Une décision qui vous appartient !" developed for vasectomized men in Quebec in 2022.

Le spermogramme donne cette information. Ainsi, chez 949 hommes, un seul spermogramme fait 2 à 3 mois après la vasectomie permet de savoir que la vasectomie est efficace. Ces hommes et leur partenaire peuvent alors abandonner toutes les autres méthodes de contraception. Chez 48 hommes, ça prendra un ou deux autres spermogrammes à 6 semaines d'intervalle pour confirmer leur stérilité. Chez les 2 derniers, les spermogrammes montrent un échec de la vasectomie et on peut proposer de refaire l'opération.

### Qu'est-ce que ça demande de faire un spermogramme?

Le spermogramme est un test de laboratoire effectué sur un échantillon de sperme pour évaluer le nombre et la mobilité des spermatozoïdes.

Les instructions pour passer le spermogramme sont sur le site Internet de Vasectomie Québec au :

<https://vasectomie.net/la-vasectomie/apres-la-vasectomie/>

En gros, pour faire le spermogramme, il faut prendre un rendez-vous au laboratoire d'un hôpital (gratuit) ou dans un laboratoire privé (avec des frais). Il faut faire le prélèvement (une éjaculation) à la maison dans le pot donné lors de la vasectomie et l'apporter dans l'heure qui suit au laboratoire, ou le faire directement au laboratoire. On reçoit le résultat par téléphone quelques jours à quelques semaines plus tard.

### Pourquoi je choisirais de faire ou de ne pas faire le spermogramme?

Regardez les raisons qui vous feraient choisir de faire ou de ne pas faire le spermogramme et réfléchissez à ce qui est le plus important pour vous.

*Les deux options sont acceptables. C'est votre décision.*

!!**OUI**?!>

!!**NON**?!>

#### Raisons pour **faire** le spermogramme

- Je veux savoir si la vasectomie a été efficace
- Je veux savoir quand je serai stérile
- Je veux être le plus certain possible d'être stérile car une grossesse « surprise » serait une catastrophe :
  - Sur le plan financier
  - Sur le plan psychologique
  - Pour la santé de ma conjointe
- J'ai une autre raison personnelle de le faire

#### Raisons pour **ne pas faire** le spermogramme

- Je considère le risque d'échec de la vasectomie trop faible pour que ça vaille la peine
- Je trouve que faire le spermogramme est trop de trouble
- Je n'ai pas le temps de faire le spermogramme
- Une grossesse surprise ne serait pas une catastrophe car :
  - Ma partenaire et /ou moi accepterions la venue d'un nouveau bébé dans notre vie
  - Ma partenaire aurait un avortement
- J'ai une autre raison personnelle de ne pas le faire

### Je fais mon choix

Maintenant que vous avez revu et analysé l'information présentée et bien réfléchi à ce qui est le plus important pour vous, vous devriez être en mesure de prendre votre décision. Si vous hésitez encore, parlez-en avec votre conjointe, votre famille et vos proches. Si par la suite vous avez toujours des questions ou pensez avoir besoin d'aide pour prendre votre décision, vous pouvez nous contacter par courriel à :

[info@vasectomie.net](mailto:info@vasectomie.net)

À propos de cet outil d'aide à la décision | Cet outil d'aide à la décision a été créé et revu par Dr Michel Labrecque MD, PhD, Happy Tahirih Kampire MSc, Dr Souleymane Diabaté MD, PhD, Dr Jonathan Cloutier, MD, FRCSC, Dr Michel Dallaire MD, MSc et Dr Simon Plourde MD. Ms Happy Tahirih K. est boursière du fonds Michel-Labrecque en santé reproductive masculine de la Fondation de l'Université Laval. Les chiffres présentés proviennent de l'analyse de l'efficacité de la vasectomie observée chez plus de 4000 hommes vasectomisés par les médecins de Vasectomie Québec entre le 1 septembre 2020 et le 31 août 2021. Création: septembre 2022/prochaine mise à jour: septembre 2025. © Vasectomie Québec, 2022.

Fig. 2. (continued).

**Table 1**  
Results from the acceptability and perceived utility assessment among vasectomized men in the province of Quebec for the first and second version of the PtDA.

Item	Strongly disagree			Disagree			Neither			Agree			Strongly agree			
	Version 1		n (%)	Version 2		n (%)	Version 1		n (%)	Version 2		n (%)	Version 1		n (%)	
	n	(%)		n	(%)		n	(%)		n	(%)		n	(%)		
I find the information presented in the tool easy to understand	0	(0)	0	(0)	0	(0)	2	(3)	7	(25)	19	(24)	20	(71)	57	(73)
There is enough information in the tool to help me decide whether to do the semen analysis or not	0	(0)	2	(3)	1	(1)	0	(0)	9	(32)	17	(22)	18	(64)	58	(74)
The tool allows me to understand the advantages and disadvantages of doing semen analysis or not	0	(0)	0	(0)	0	(0)	1	(1)	9	(32)	16	(21)	18	(64)	59	(77)
The tool allows me to judge what is most important to me among the advantages and disadvantages of doing the semen analysis or not	0	(0)	0	(0)	1	(4)	3	(4)	2	(3)	7	(25)	25	(32)	19	(68)
The tool helps me to know if I am sure of my decision to do the semen analysis or not	0	(0)	0	(0)	1	(4)	1	(1)	5	(6)	10	(36)	16	(57)	45	(58)
It's easy for me to follow the information presented in the tool	0	(0)	0	(0)	0	(0)	2	(3)	2	(3)	10	(36)	14	(18)	17	(61)
I think the length of the tool is adequate	0	(0)	0	(0)	0	(0)	5	(7)	7	(9)	10	(36)	26	(35)	37	(49)
I understand the language used in the tool	0	(0)	0	(0)	0	(0)	2	(3)	9	(32)	17	(22)	18	(64)	57	(75)
I can easily understand the statistics presented in the tool	0	(0)	0	(0)	0	(0)	1	(1)	2	(3)	9	(33)	17	(22)	18	(67)
I think the size of the letters and numbers is adequate	0	(0)	0	(0)	0	(0)	1	(1)	3	(4)	13	(46)	25	(33)	14	(50)
I consider the tool to be useful for deciding whether to have a semen analysis	0	(0)	0	(0)	1	(4)	1	(1)	5	(7)	8	(29)	25	(33)	18	(64)

**Table 2**

Responses of vasectomized men in the province of Quebec on what they liked and did not like in the first and second version of the Patient Decision Aid on post-vasectomy semen analysis.

Responses of participants	Patient decision aid	
	Version 1	Version 2
	n	n
What I liked		
Simple	7	4
Statistics including icon array	5	14
Clear	4	16
Specific information	3	10
Information layout	4	6
Short	3	-
Easy to understand	1	2
Concise	0	2
Confirms decision (to do)	0	3
What I did not like		
Redundancy	2	-
Information layout	4	3
Utility	2	3
Too much information	0	3
Too long	0	4
Not enough information	-	4
Other	1 <sup>a</sup>	-

<sup>a</sup>“I came here with the firm intention of having a semen analysis after my vasectomy. However, when I look at the statistics section, I see that there is no advantage for me to have a semen analysis. The risk is the same (pregnancy) which leaves me perplexed” (n = 1).

could expand on these findings to assess whether this decision aid improves key quality measures for vasectomized patients and enhances shared decision-making in male reproductive health care.

The study also has limitations. Firstly, PtDA may not be for all patients, as a few participants questioned the utility of the tool in the comments. Studies have shown, similarly to our study, that a minority of patients do not wish to participate in shared decision-making concerning their healthcare and wish to be dictated what to do by their healthcare providers [27,28]. Secondly, the adequacy of the length of the PtDA was rated poorly compared to other items by a minority (7% and 16%) of participants in our assessments. The wording of our statement allowed two possible interpretations. Patients could have perceived the document as either too long or too short. Comments shared by patients about PtDA length and amount of information were conflicting. Some participants cited that it was too long or too detailed, while others felt it lacked sufficient information. Lastly, the effectiveness of vasectomy probabilities cited in the PtDA are those compiled by vasectomy surgeons from *Vasectomie Québec* to ensure that the information was relevant to their population. [29]. These probabilities might not apply to other vasectomy services using vasectomy occlusion techniques, which have different effectiveness risks [1].

**5. Conclusion**

To our knowledge, we developed the first PtDA for vasectomized men deciding whether to do a PVSA. The PtDA was perceived as acceptable and useful in the population survey. The design and content of the tool can easily be adapted to other clinical settings offering vasectomy services, ensuring flexibility to meet different contexts. Further research is necessary to assess the effect of the PtDA versus usual care on key decision quality measures such as decision conflict and knowledge, to ascertain its impact.

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## Disclosure of interest

The authors declare that they have no competing interest.

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## Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at <https://doi.org/10.1016/j.fjurol.2025.102948>.

## References

- [1] Sharlip ID, Belker AM, Honig S, et al. Vasectomy: AUA guideline. *J Urol* 2012;188:2482–91, doi:<http://dx.doi.org/10.1016/j.juro.2012.09.080>.
- [2] Zini A, Grantmyre J, Chow V, Chan P. Update - 2022 Canadian Urological Association best practice report: vasectomy. *Can Urol Assoc J* 2022;16:E231–6, doi:<http://dx.doi.org/10.5489/auaj.7860>.
- [3] Dohle G, Diemer T, Kopa Z, et al. European Association of Urology Working Group on Male Infertility. European Association of Urology guidelines on vasectomy. *Eur Urol* 2012;36:276–81, doi:<http://dx.doi.org/10.1016/j.acuroe.2012.08.012>.
- [4] Faculty of Sexual & Reproductive Healthcare (FSRH). Clinical Guidance: Male and Female Sterilisation. London, UK: FSRH; 2014 [<https://www.fsrh.org/Public/Public/Documents/cec-ceu-guidance-sterilisation-cpd-sep-2014.aspx>]. Accessed May 7, 2025].
- [5] Hupertan V, Graziana JP, Schoentgen N, et al. Recommandations du comité d'andrologie et de médecine sexuelle de l'AFU concernant la prise en charge de la vasectomie. *Prog Urol* 2023;33:223–36, doi:<http://dx.doi.org/10.1016/J.PUROL.2022.12.014>.
- [6] Hancock P, Woodward BJ, Muneer A, Brown JCK. 2016 Laboratory guidelines for postvasectomy semen analysis: Association of Biomedical Andrologists, the British Andrology Society and the British Association of Urological Surgeons. *J Clin Pathol* 2016;69:655–60, doi:<http://dx.doi.org/10.1136/JCLINPATH-2016-203731>.
- [7] Atkinson M, James G, Bond K, Harcombe Z, Labrecque M. Comparison of postal and non-postal post-vasectomy semen sample submission strategies on compliance and failures: an 11-year analysis of the audit database of the Association of Surgeons in Primary Care of the UK. *BMJ Sex Reprod Health* 2021;1–6, doi:<http://dx.doi.org/10.1136/bmjsex-2021-201064> [Published online].
- [8] Lombardi CV, Lang J, Han W, et al. Balancing post-vasectomy adequate sperm clearance with patient compliance: time to rethink? *Uro* 2024;4(4):214–27, doi:<http://dx.doi.org/10.3390/URO4040015>.
- [9] Labrecque M, Hamel JF, Prévost JF, Warren L. Pourquoi les vasectomisés ne se présentent-ils pas au spermogramme post-opératoire ? [Why don't vasectomized patients undergo post-operative sperm analysis?]. *Can Fam Physician* 1989;35:1781–5.
- [10] Mahdi M, Hammad MAM, Abou Chawareh E, Almuhaideb M, Yafi FA. Adherence to American Urological Association (AUA) vasectomy guidelines: a systematic review of current practice among healthcare providers. *Int J Impot Res* 2025;2–5, doi:<http://dx.doi.org/10.1038/s41443-025-01023-8>.
- [11] Smucker DR, Mayhew HE, Nordlund DJ, Hahn WK, Palmer KE. Postvasectomy semen analysis: why patients don't follow-up. *J Am Board Fam Pract* 1991;4:5–9, doi:<http://dx.doi.org/10.3122/JABFM.4.1.5>.
- [12] Bradshaw A, Ballon-Landa E, Owusu R, Hsieh TC. Poor compliance with postvasectomy semen testing: analysis of factors and barriers. *Urology* 2020;146–51, doi:<http://dx.doi.org/10.1016/J.UROLOGY.2019.10.026> [Published online February 1, 2020].
- [13] Christensen RE, Maples DC. Postvasectomy semen analysis: are men following up? *J Am Board Fam Pract* 2005;18:44–7, doi:<http://dx.doi.org/10.3122/JABFM.18.1.44>.
- [14] Duplisea J, Whelan T. Compliance with semen analysis. *J Urol* 2013;189:2248–51, doi:<http://dx.doi.org/10.1016/j.juro.2013.01.062>.
- [15] Stacey D, Légaré F, Boland L, et al. 20th Anniversary Ottawa Decision Support Framework: part 3 overview of systematic reviews and updated framework. *Med Decis Making* 2020;40:379–98, doi:<http://dx.doi.org/10.1177/0272989X20911870>.
- [16] Labrecque M, Paunescu C, Plesu I, Stacey D, Légaré F. Evaluation of the effect of a patient decision aid about vasectomy on the decision-making process: a randomized trial. *Contraception* 2010;82(6):556–62, doi:<http://dx.doi.org/10.1016/j.contraception.2010.05.003>.
- [17] Baldé A, Légaré F, Labrecque M. Assessment of needs of men for decision support on male sterilization. *Patient Educ Couns* 2006;63(3):301–7, doi:<http://dx.doi.org/10.1016/j.pec.2006.04.010>.
- [18] Wittman HO, Maki KG, Vaissou G, et al. Systematic development of patient decision aids: an update from the IPDAS Collaboration. *Med Decis Making* 2021;41:736–54, doi:<http://dx.doi.org/10.1177/0272989X211014163>.
- [19] Thompson B, Macgregor JE, MacGillivray I, Garvie WHH. Experience with sperm counts following vasectomy. *Br J Urol* 1991;68(3):230–3, doi:<http://dx.doi.org/10.1111/J.1464-410X.1991.TB15312.X>.
- [20] Diederichs J, McMahon P, Tomas J, Muller AJ. Reasons for not completing postvasectomy semen analysis. *Can Fam Physician* 2019;65(9):e391–6.
- [21] O'Connor AM, Cranney A. User manual—Acceptability. Ottawa, Ontario: Ottawa Hospital Research Institute; 1996 [modified 2002]. [https://decisionaid.ohri.ca/docs/develop/User\\_Manuals/UM\\_Acceptability.pdf](https://decisionaid.ohri.ca/docs/develop/User_Manuals/UM_Acceptability.pdf). Accessed May 07, 2025.
- [22] Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council. Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans. TCPS 2. Ottawa, ON: Government of Canada; 2018 [Accessed May 07, 2025]. [https://ethics.gc.ca/eng/policy-politique\\_tcps2-eptc2\\_2018.html](https://ethics.gc.ca/eng/policy-politique_tcps2-eptc2_2018.html)].
- [23] Richter R, Jansen J, Bongaerts I, Damman O, Rademakers J, van der Weijden T. Communication of benefits and harms in shared decision making with patients with limited health literacy: a systematic review of risk communication strategies. *Patient Educ Couns* 2023;116:107944, doi:<http://dx.doi.org/10.1016/J.PEC.2023.107944>.
- [24] Peate M, Meiser B, Friedlander M, et al. Development and pilot testing of a fertility decision aid for young women diagnosed with early breast cancer. *Breast J* 2011;17:112–4, doi:<http://dx.doi.org/10.1111/J.1524-4741.2010.01033.X>.
- [25] Wakefield CE, Watts KJ, Meiser B, et al. Development and pilot testing of an online screening decision aid for men with a family history of prostate cancer. *Patient Educ Couns* 2011;83(1):64–72, doi:<http://dx.doi.org/10.1016/J.PEC.2010.05.025>.
- [26] Stacey D, Lewis KB, Smith M, et al. Decision aids for people facing health treatment or screening decisions. *Cochrane Database Syst Rev* 2024;1:CD001431, doi:<http://dx.doi.org/10.1002/14651858.CD001431.pub6>.
- [27] Levinson W, Kao A, Kuby A, Thisted RA. Not all patients want to participate in decision making. A national study of public preferences. *J Gen Intern Med* 2005;20:531–5, doi:<http://dx.doi.org/10.1111/J.1525-1497.2005.04101.X>.
- [28] Driever EM, Stiggelbout AM, Brand PLP. Patients' preferred and perceived decision-making roles, and observed patient involvement in videotaped encounters with medical specialists. *Patient Educ Couns* 2022;105:2702–7, doi:<http://dx.doi.org/10.1016/J.PEC.2022.03.025>.
- [29] Diabaté S, Arellano M, Dallaire M, Plourde S, Labrecque M. Occlusive effectiveness of open-ended no-scalpel vasectomy with mucosal cautery and fascial interposition: a descriptive study. *Asian J Androl* 2025;16:3–4, doi:<http://dx.doi.org/10.4103/aja202517>.