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Co-design of a patient education booklet on Direct Oral Anticoagulant medicines and elicitation of patient perspectives

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Abstract:

Introduction: Direct Oral Anticoagulants (DOACs) are high-alert medications requiring structured patient education to mitigate safety risks and reduce preventable harm during Venous Thromboembolism (VTE) management. The National VTE Clinical Programme (NCP-VTE) in Ireland identified a critical need for a standardised patient medicines information resource that is tailored to the specific needs of VTE patients.

Aim: To co-design a patient education booklet on DOAC medicines and explore VTE patient perspectives on the booklet and DOAC medicines education.

Method: This study utilised an expert panel consensus methodology for booklet development, and artefact elicitation-based focus groups to explore patient perspectives and experiences. A multidisciplinary panel, including eight clinicians and a patient partner, devised the booklet content with iterative reviews conducted by clinical stakeholders. Subsequently, the developed booklet was used as an elicitation artefact for focus groups with VTE participants who are currently taking DOACs, to explore patient experiences and perceptions.

Results: The booklet contains essential patient safety information including risk-stratified side-effects and associated actions. Thematic analysis of focus group transcripts identified three major themes: the presence of complex and evolving medicines information needs subsequent to a clot event, a desire for practical, actionable medication management advice, and a nuanced view of medication risks that was characterised by active development of individual risk management practices.

Conclusion: Incorporating multidisciplinary expertise, external stakeholder review, and structured patient feedback enabled development of a patient education booklet that participants regarded as useful and accessible. Focus group participants described complex and evolving medicines information needs following VTE, emphasised the value of practical medication-management guidance, and outlined active approaches to managing medication-related risk. These findings suggest that patient education resources should support both medicines safety and broader recovery following VTE.

Keywords: Direct Oral Anticoagulants (DOACs), patient education, patient safety, venous thromboembolism, deep vein thrombosis, pulmonary embolism, recovery.

Impact statements:

This study has generated a co-designed patient education booklet on DOAC medicines, developed through multidisciplinary collaboration and patient involvement.

The patient education booklet has a strong focus on medication safety and includes risk-stratified side-effects and associated actions for patients.

Qualitative findings support the adoption of approaches to medicines information in VTE patients that supports both medication safety and recovery more broadly subsequent to VTE events.

1. Introduction:

Anticoagulant therapy for the treatment and prophylaxis of Venous Thromboembolism (VTE) is complex and associated with both substantial benefits and risks. Direct Oral Anticoagulants (DOACs) are internationally identified as high-alert medicines which continue to be a key medication safety priority [1]. Recognising and mitigating risk of harm from DOACs requires an evidence-based approach to anticoagulation management and patient education [2–7]. International guidelines and quality standards recommend hospitals should build patient education requirements on DOACs into medication management processes to ensure patients are provided with appropriate medicines education [5–7].

Patients who have experienced VTE events may experience further challenges when engaging with medicines education regarding anticoagulant medicines. Patients who have experienced VTE events report navigating fear of recurrence, uncertainty, distress, and disruption to their lives following a frequently unexpected and life-threatening medical emergency [8,9]. For this cohort of patients, medicines education occurs within the context of complex psychological and physical recovery [10]. However, little research has been conducted with this group to consider how they experience, interpret or use anticoagulant-related medicines information.

In Ireland, a national Venous Thromboembolism (VTE) Clinical Programme (NCP-VTE) was established by the Health Service Executive (HSE). The primary aim of NCP-VTE is to provide governance for the prevention and management of VTE across Irish hospitals and community settings. One of the core objectives of NCP-VTE is to support patients in physical and psychological recovery following a VTE event, including the provision of dedicated education materials [4].

A multidisciplinary patient information panel was convened within the programme to provide and promote patient education on priority topics regarding VTE. The panel prioritised the need for standardised, patient education material on oral anticoagulants as high-alert medicines , including a national patient education booklet on DOAC medicines informed by clinician expertise, patient perspectives and principles of clear communication [4].

The panel prioritised exploring VTE survivors' perspectives on the DOAC education booklet, and on their experiences of DOAC medicines information following a VTE event. This study thus also aimed to examine how the process of medication information interacts with the lived experience of individuals recovering from potentially traumatic and life-changing VTE events.

2. Aim:

This study aimed to co-design a patient education booklet on DOAC medicines and use this document to elicit and explore VTE survivor perspectives on the role of medicines education in VTE, and to iteratively refine the design and content of the booklet.

3.Methods:

Development of the patient education booklet:

The co-design process for the booklet employed an expert panel consensus methodology. This involved iterative cycles of development, review, feedback, and refinement, by a multidisciplinary expert panel. A co-design framework was adopted, incorporating structured input from a patient partner to ensure the material was patient-centred, and aligned with plain English standards[11,12].

A multidisciplinary patient information panel comprising nine members, including two Chief Hospital Pharmacists, two Consultant Haematologists, four Advanced Nurse Practitioners in thrombosis, and a patient partner with lived experience of VTE, co-developed the booklet. Panel members represented diverse geographical, disciplinary, and clinical perspectives and met monthly between June 2023 and March 2024 to determine the scope and prioritise patient information needs for adults prescribed DOACs following VTE. A consensus-based process was used to develop content, with recommendations informed by panel expertise and reviewed by the patient partner. The draft booklet subsequently underwent iterative review by national clinical and medication safety stakeholders, with feedback incorporated through further panel review.

Patient Focus Groups:

Three focus groups were facilitated during June 2026. A total of 10 participants were included: 5 males and 5 females. Each Focus Group was facilitated by FS (Lead Facilitator; male) and co-facilitated by AP (female); who recorded field notes. Two focus groups had three participants, and one focus group had four participants. FS is an academic pharmacist with extensive community pharmacy experience, and AP is a clinical pharmacist with extensive experience in the hospital pharmacy setting. Both FS and AP are trained and experienced qualitative researchers. Participants were informed that both facilitators were Pharmacists. Participants were informed the DOAC booklet was developed by a HSE national group of clinicians but were not informed who the authors of the booklet were. Participants were advised the research project aim was to elicit patient feedback and experiences to improve the provision of medicines information to patients taking DOAC medicines.

Participants were recruited through purposeful self-selection sampling via existing patient partnerships and panel member clinicians. Participation in the focus groups was advertised via poster on the Irish Heart Foundation website and displayed in national Hospital Clinics by research panel members. Inclusion and exclusion criteria for the study are detailed in Table 1.

Participation in the focus group was voluntary and subject to written informed consent. In recognition of the time and patient expertise being contributed to this study, patient participants received an honorarium in the form of a €30 voucher.

A semi-structured topic guide was developed based around use of the developed booklet as an elicitation artefact to explore the experiences and perspectives of participants[13]. The content involved introducing the booklet to patients and then exploring patient perceptions, satisfaction, experiences, and suggestions for improvement. This topic guide was pilot tested with volunteer participants and iteratively refined prior to the focus groups being conducted. Each focus group was conducted online via Microsoft Teams and lasted 60 minutes.

Focus groups were audio-recorded and transcribed. Transcripts were reviewed by participants prior to analysis. Sample size was adjudged as adequate based on the principles of information power, with the study addressing a focused research question using a highly specific participant group, generating rich data through facilitated focus groups, and employing in-depth inductive thematic analysis [14]. The six-step approach used by Braun and Clarke was used to ensure the approach demonstrates rigour: Data familiarisation, generation of initial codes, searching for themes, reviewing themes, defining and naming themes and reporting themes [15,16]. Developed themes were sent by email to focus group participants for member checking and amended where suggested by participants.

Iterative design improvements for the booklet were developed by content analysis of transcripts. The Consolidated Criteria for Reporting Qualitative Research (COREQ) was used as a Framework for reporting qualitative research [17].

4. Ethics Approval:

This study was performed in line with the principles of the Declaration of Helsinki. Approval for the research focus groups was granted by the Research Ethics Committee of the Royal College of Surgeons in Ireland on 31/03/2026 (REC 202512021).

5. Results:

Patient Education Booklet:

The digital booklet was launched nationally by the NCP-VTE in July 2025 and made accessible for patients and clinicians to access on the HSE website. Hard copies of the booklet were subsequently launched in January 2026 for order by hospital clinicians [4.] A copy of the booklet is available in the supplementary material.

Patient Perspectives:

Thematic Analysis:

Thematic analysis generated three key themes with related sub-themes. The three themes were: medicines information journey, actionable ongoing self-management advice, and risk perception. The themes with accompanying sub-themes are outlined in Table 2.

Theme 1: Medicines Information Journey

The theme of the medicines information journey captures how participants engaged with medicines information over time, encompassing both challenges within the current information environment and the dynamic nature of information needs following VTE.

Existing Medicines Information Environment

Participants had broadly positive responses to the new booklet in comparison to the existing information environment that they were currently navigating. Several participants expressed a preference to use the information in the booklet compared to the information provided in the medicine pack Patient Information Booklet (PIL) and other existing patient-facing, written medicines information sources.

"I found it (the booklet) quite, I found the whole thing, the look and feel of it was very much user friendly. And it made me think that if there was a QR code on my packet of medicine I'd use that much more than the booklet in the pack. This just, you have to unfold it and unfold it and unfold it. Whereas this, it gives you a lot of information in a very easy to consume way." P2

The existing medicines information environment appeared to have resulted in some confusion for patients. Participants expressed uncertainty regarding practical aspects of medicines safety related to existing medicines information environment. Patients in particular expressed uncertainty regarding food and medicines interactions, and interactions between DOACs and topical anti-inflammatory medicines.

"Yeah, you mentioned their Rivaroxaban tablets with food, but that doesn't apply to every dose, right? I don't necessarily know if I can take it with or without food. I'm not 100% sure on that. That's what I've learned from my own, not research, what I've like in support groups and that, but maybe that could be clarified." P3

"Do you know one that I just thought of is, do you know you say don't use diclofenac? Like, yeah, but a lot of people use diclofenac for injuries at our age for osteoarthritis, like they're piling it on. So, like, I don't know, there's kind of mixed messaging when I looked online about it and whether I should use it or not I'm still not sure." P10

Dynamic Medicines Information needs:

Participants described a dynamic relationship to medicines information during both the acute and chronic phase of their recovery and identified that their needs change and evolve. A common experience was an inability to engage medicines information immediately post VTE event, and a need to revisit medicines information at a later point in recovery.

"Oh yeah, personally I think it (the booklet) should be given straight away. I was given nothing leaving the hospital. I had to do to research myself, and I think anybody that suffers a life-changing event like clots should be given more information leaving the hospital." P1

"Well, I think it covers mostly, the lot of what you need to know on your first initial exit from hospital. It's only later that you really start to take it all in. At the time, I was just, I was so out of it and exhausted, it really didn't sink in until maybe a month or two after I left." P9

"It's like, it's a hugely traumatic event. You go through a life-threatening situation like that. And I think the psychological impact hits at a much later stage when you've had a chance to process." P3

Participants suggested that clear medicines information is useful for patients newly prescribed DOACs but also as an ongoing resource for patients on longer-term DOAC treatment.

"Well, I suppose obviously for someone who's initially going on a DOAC, it would be useful then. But I mean, it's a great resource to have for, I think, all of us that have been on it a while now. I think it would very good, but especially for people who are new to it. And even like again, I learned so much today that I didn't know. So, you know, I think we could all use it." P 4

This ongoing information need was expressed as a design preference for hard copy medicines information that can be readily accessed as the patient continues their recovery journey.

"Age and generation are important. So, it (the booklet) goes somewhere in the house. So, I think everyone who's probably has this happen to them is in some kind of level of post-traumatic stress. And imagining at times they're getting this again. So, they, you know, having accessible information is important. Any by accessible, I mean print form." P10

"And that's why it's handy to have the booklet, because at least if you had a side effect, you could check it straight away. So yeah, we need to keep reading this stuff over again, and if you have a hard copy, then you can look back at it in your own time. You know, if you read it, you don't take it all in anyway." P7

Theme 2:

Actionable ongoing self-management advice

Participants identified the provision of practical actions that readers can take, and the provision of tangible tools that patients could use they can use as key aspects of medicines information

surrounding DOAC usage as a medicine information priority and related this to their own individualised medicines management practices.

Participants identified actionable suggestions to support the ongoing medical, psychological and practical aspects of managing DOAC therapy when recovering from a VTE event. This included practices such as wearing a medical alert bracelet, using medication adherence aides such as physical medicine adherence aids and phone reminders, support for ongoing engagement with medical testing requirements, engagement with family members, and support for psychological aspects of medicines management and VTE recovery.

"It's just maybe to put the annual blood test in bold, just to remind, because you're to get your annual blood test on for when you're on the DOACs might be nice just to highlight it in bold or underscore it." P1

"And I always think, like, it's not just the patient who's affected their family as well, and they want to, in many cases, well, tell me about that meds that you're on. So sometimes just having a booklet that can show to the other person is handy." P2

"So obviously this booklet isn't about providing psychological support, but I think it would be disingenuous not to include something to just say we appreciate when you're taking these sorts of meds, they're typically as a result of a significant event in your life and there are supports out there for you." P2

"So yeah, the other thing I just want to mention, medical alert bracelets, I think they're very important because if you became incapacitated, and you know, just to make paramedics or emergency doctors aware." P3

"Yeah, it would be a good idea to like that someone who is starting a DOAC, has never taken it before. I know I found it hard and like that when something does change or say you forget about your time and you're looking back wondering did you take it or not and then I've started using those boxes in the last month or so and it is handy." P5

Theme 3: Risk perception

Participant explained a nuanced conception of the risks associated with DOAC usage. They described both a clear sense of risk prioritisation but also described actively developing and employing individualised strategies to mitigate DOAC associated risks. Female participants in the focus groups also identified female specific risks and adverse events as currently underprioritized medicine information topics.

Prioritisation of risks

Participants had developed a strong sense of certain critical risks associated with taking DOAC. Participants particularly identified head injury and drug-drug interactions as critical risks requiring prioritisation in DOAC medicines information.

"Like it could potentially save a life, okay, because it may not be known to people, the risks of a significant blow to the head and the risks of suffering a bleed to the brain, so if it could be worded in a soft way, without scaremongering that, you know, if you do suffer significant trauma, it is advisable to call 999 or 112 or go to the hospital."P1

"Yeah, and maybe that could be extended down to the list of medicines that we shouldn't take, like aspirin, ibuprofen. You know, I mean, that could be highlighted as well in bold, maybe." P4

"Well, I was just told take paracetamol, that's your only guy. So, I was aware of it, but I mean, it's no harm, maybe not everyone is told that. " P1

Participants further described individualised strategies by which they actively managed risk. If doing physical activities and contact sports that may result in injury or bleeding, participants described increased awareness of location and proximity to emergency service. They also described actively involving pharmacists in their ongoing care as a crucial safety strategy.

"The thing that occurred to me there, since going on a DOAC, I'm probably more aware of where I'm doing certain activities. You're taking a calculated risk when you're doing some of the sports. It's just to maybe consider your proximity to medical services if you are going to be involved in contact sports ." P2

"You know, so I won't take anything off the shelf. I'll always go to the Pharmacist and ask them." P8

Patient groups: specific risk concerns

Female patients expressed a desire to see the risk of adverse events that affect women being more directly explored in DOAC patient information materials. This included effects on menstruation, as well as the risks associated with DOACs and pregnancy. They suggested more information could be provided on risks in pregnancy but also acknowledged this information may be more appropriate to be provided in an individual consultation rather than in a general DOAC booklet.

"There needs to be more education provided on that, because especially with Xarelto (Rivaroxaban), it really wreaks havoc with your menstrual cycle." P3

"I think it's just what the risks might be. So, it's saying, you know, don't take it, but is it a case that it's going to cause problems with the pregnancy? I'm guessing it is. So maybe let's just say that." P2

Suggestions for improvement:

Participants identified practical points for improvement to the design and content of the booklet as outlined in Table 3. These changes related to use of visual design to emphasise points of perceived importance, and the addition of design elements and content to enhance the utility and value of the booklet.

Discussion:

This study describes the development of a novel information booklet to support patients taking DOAC medicines. It explored the perspectives of patients on this booklet and also explored the medicines information needs of patients recovering from VTE events more broadly. Patients regarded the booklet as easy-to-use and useful, and the themes that emerged from thematic analysis suggest that patients recovering from VTE have complex medicines information needs that evolve over the course of their recovery journey. Taken together, our data suggest that appropriate medicines information after VTE can broadly support recovery as well as being crucial to medicines safety.

To our knowledge, this is among the first studies to combine co-design of a DOAC patient education resource with qualitative exploration of medicines information experiences during VTE recovery. It has generated a patient education booklet on DOACs developed using a co-design approach and informed by health literacy principles. Patient and clinician evaluation strengthens methodological rigour and represents a scalable methodology for patient education material development by integrating multi-professional expert consensus with qualitative patient partner evaluation.

The use of the DOAC information booklet as an elicitation artefact was a valuable approach in this study. Indeed, use of document-elicited responses is a recognised qualitative research approach for generating deeper understanding of research participant perspectives by providing a tangible artefact around which discussion can be arranged [18,19]. In the current study, patients frequently went beyond discussing the design and content of the DOAC booklet but rather used it as a starting point to discuss wider experiences with VTE, DOAC treatment and experiences with healthcare. The DOAC booklet functioned as a vehicle through which participants could reflect upon and offer deep insights into their own experiences and facilitate access to beliefs and perspectives that may not have been visible in a conventional semi-structured interview [18,19]. Elicitation artefact- based qualitative approaches to enquiry are not currently commonly used in evaluating patient-facing medicine education materials, however our findings suggest that such methods can richly inform understanding of how patients interpret, contextualise and use medicines information in their own lives.

Patients in our study clearly described developing individualised strategies for both medicines management and risk management. Many of the approaches reported by participants align with recognised adherence supports for patients receiving DOAC therapy, including dosette boxes,

calendar systems, and alarm reminders, and align with patient reported self-management strategies [20–22], providing a rationale for incorporating such practical adaptation strategies into patient-facing medicines information. The importance of practical adherence support is further reflected in recommendations for the pharmaceutical care of patients prescribed DOACs [23]. These findings also align with emerging conceptualisations of medicines management that situate medication use within the broader context of disease self-management [24]. Similarly, patient descriptions of self -developed approaches for managing risk, such as considering availability of medical care when engaging in certain activities, also align with previously qualitative work where patients taking DOACs have characterised themselves as participating in the active management of bleeding risk [22]. Participant descriptions of adherence and risk management practices further support growing recognition of patients as crucial contributors to medicines safety [25] and as skilled and knowledgeable partners in the safe management of their medicines [26]. These considerations may provide a useful context for the further development of patient- facing resources for this cohort.

Indeed, practical actionable advice that is relevant to self-management was identified as a crucial medicines education need by participants in this study. This highlights a contrast between health professionals who viewed the status of DOACS as high-risk medicines and medicines safety as key education messages, and patients who appeared to value information that supports medicines management on a more practical level. This may relate to participants not considering medicines information support as being separate from the holistic recovery process as has been previously reported [20,21]. It may furthermore reflect the complexity of medication management as a process that can broadly impact a patient's life. It has been suggested that clinical trials may benefit with considering more closely the patient prioritised psychological and emotional endpoints of VTE treatment [27] and indeed our findings may suggest an approach to evaluation of patient- facing education materials that considers these aspects of self-management and recovery as well as more commonly used measures of knowledge and adherence [28,29].

A key finding from this study was the experience of patients of an evolving relationship to medicines information over the course of VTE recovery. Participants notably described limited capacity to engage with medicines education immediately subsequent to a VTE event and described a need to revisit information throughout the course of their recovery. Established guidelines indicate that medicines education is ideally a longitudinal and ongoing process [7]. Our findings however further emphasise the increasingly recognised role for ongoing DOAC medicines information in outpatient and primary care [24] and the value this has for patients [30]. Our findings further suggest that in addition to medication education, ongoing advocacy for patient engagement in care and monitoring is crucial in primary and community care settings. A central aspect to the evolving information needs of VTE patients, is the potential experience of trauma associated with an unexpected life-threatening and life-changing event. Clinicians caring for VTE survivors should be aware of trauma- informed approaches to pharmaceutical care; recognising potential for trauma, encouraging choice and empowerment, and adopting

health literacy informed communication approaches in recognition that capacity to engage with information may be limited in patients who have experienced trauma [31]. Indeed, our findings emphasise that adaptive, patient-centered approaches to medicines education with patients who have experienced a VTE is critical to patient safety and recovery.

Several limitations should be considered when interpreting the findings of this study. First, selection bias may have influenced the composition of the expert panel, and the content of the booklet ultimately reflect the consensus and decisions of those involved, which may not encompass all clinical perspectives or practices. Second, the patient participants recruited to the focus groups may not be representative of the wider population of patients receiving DOAC therapy. As participation was voluntary, recruitment bias is possible, with participants potentially having greater interest in, engagement with, or confidence in discussing medicines information than the broader patient population. Likewise, because the focus groups were conducted online the perspectives of more vulnerable patients with lower digital or health literacy levels may not be captured in this study. Similarly, although our focus group methodology allowed for the drawing out of rich shared experience, social desirability biases may have impacted responses in this group setting with participants potentially less likely to report low levels of knowledge, understanding or adherence. Health literacy was not assessed using a validated instrument in this study. As perceptions of the booklet's accessibility, comprehensibility, and usefulness may be influenced by health literacy, this represents a potential confounder in the interpretation of participant feedback. Finally, this study was not designed to evaluate patient comprehension, medication adherence, behavioural change, or clinical outcomes in real-world settings, and therefore no conclusions can be drawn regarding the impact of the booklet on these outcomes.

6. Conclusion:

The booklet provides essential information for patients including adherence, missed-doses, drug interactions, DOAC-specific food requirements, monitoring, pregnancy, and risk-stratified side- effects with recommended actions. Thematic analysis identified key themes and sub-themes including medicines information journey, dynamic medicines information needs, ongoing self-management advice, prioritisation of risks, risk-management strategies, and risks of DOACs in females. This co-designed booklet provides a standardised resource to support patients and clinical staff and enhance medication safety across healthcare settings. This study provides patient-centred considerations for future versions, and international publications of DOAC education materials.

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Author contributions:

- Planning & design of booklet: all authors excluding FS.
- Planning and design of the Focus Groups: AP and FS conceived the research design.
- Investigation: AP and FS completed the research investigation process.
- Writing: AP completed the draft manuscript writing; FS completed review and editing of the manuscript.
- All co-authors meet the criteria for authorship, all reviewed and contributed critical revisions to the manuscript and approved the final version.

Consent to participate:

Informed consent was provided by each individual participant included in this study.

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Tables and Figures

Table 1 – Focus group participant Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Adult out-patient aged 18 years and over	Under 18 years of age
Taking a DOAC* prescribed for a Venous Thromboembolism (VTE) event **	Prescribed a DOAC for an indication other than a VTE event
Willing and able to provide informed consent for participation	Unwilling or unable to provide informed consent for participation
Willing and able to participate in a 60-minute MS-Teams based focus group.	Unwilling or unable to participate in a 60-minute MS-Teams based focus group.

**DOAC includes Apixaban, Dabigatran, Edoxaban, Rivaroxaban*
***VTE event includes but not limited to: Deep Vein Thrombosis (DVT), Pulmonary Embolism (PE), Cerebral Venous Sinus thrombosis (CVST).*

Table 2: Themes and sub-themes:

Themes:	Sub-themes:
Medicines information journey	Existing medicines information environment
	Dynamic medicines information needs
Actionable ongoing self - management advice	
Risk perception	Prioritisation of risks
	Active risk- management strategies
	Patient groups: specific risk concerns

Table 3: Participants' suggestions for improvement to the booklet:

	Participant feedback:	**Supporting quotes:**
Visual Design:	**Participants expressed satisfaction with:**	
	Information presented in bullet points	"I think it's very self-explanatory, and it's a bullet, which is good, not too wordy." P4
	Emboldening salient points	"The emboldened piece of letting your pharmacist know you're on an anticoagulant is a good thing." P5
	Colour-coded side-effects	" I like your green, amber and red." P6
	Use of images	"I think it's really important to have it illustrated to make it attractive." P10
Suggestions for content inclusion:	Participants suggested adding a summary box with critical education points summarised.	"I think your booklet is really good. The only thing is, you want a kind of highlight box in case people are not going to go through the text, but you know they might just look at the highlight boxes. You know, where you get your critical messages through." P10
	Participants suggested inclusion of an integral patient alert card to the booklet	"Or even if you had a card that you could clip off, you know. Detach at the end and just tell you that." P7
	Participants suggested inclusion of mental health support referral advice	"I was put on a DOAC and given no support. So obviously this booklet isn't about providing psychological support, but I think it would be disingenuous not to include something to just say we appreciate when you're taking these sorts of meds, they're typically as a result of a significant event in your life and there are supports out there for you." P2

Supplemental Material 1: Direct Oral Anticoagulant Patient Information Booklet

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- NVTEPDirectOralanticoagulantPIL.pdf