

Clinician stakeholder priorities for improving the management of non-traumatic wrist disorders in the UK: a nominal group technique study

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Citation:

MITCHELL, Thomas, MALLETT, Ross, MCLEAN, Sionnadh, HAMILTON, Nick, DEAN, Benjamin and PEAT, George (2026). Clinician stakeholder priorities for improving the management of non-traumatic wrist disorders in the UK: a nominal group technique study. *BMJ Open*, 16 (10): e118301. [Article]

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BMJ Open Clinician stakeholder priorities for improving the management of non-traumatic wrist disorders in the UK: a nominal group technique study

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To cite: Mitchell TGC, Mallett R, McLean S, *et al.* Clinician stakeholder priorities for improving the management of non-traumatic wrist disorders in the UK: a nominal group technique study. *BMJ Open* 2026;**16**:e118301. doi:10.1136/bmjopen-2026-118301

► Prepublication history and additional supplemental material for this paper are available online. To view these files, please visit the journal online (<https://doi.org/10.1136/bmjopen-2026-118301>).

Received 12 February 2026
Accepted 16 September 2026



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ABSTRACT

Introduction Increasingly detailed investigation confirms that the best management of those with non-traumatic wrist disorders (NTWD) remains elusive, and considerable potential for improvements to care exists. This study aimed to use a modified virtual nominal group technique (vNGT) to facilitate clinician stakeholder discussions to create consensus statements and recommend priorities for future improvements in the management of NTWD in the UK.

Methods We created knowledge-gap topic areas and developed statements to reflect these. Preliminary ranking, silent reflection and idea generation occurred prior to the workshop. Two 2-hour vNGT workshops were conducted (n=8 and n=7; specialist hand therapists (8), first contact practitioners (2), generalist secondary care physiotherapists (2), wrist and hand specialist orthopaedic surgeons (2), specialist rheumatology physiotherapist) during which five nominal questions were discussed to create consensus statements (November 2025). Ranking of statements from all activities occurred 1 week following completion of the final workshop.

Results Direction was given for key components of assessment noting that specific diagnosis should be attempted, and de Quervain's tenosynovitis should be considered a distinct entity to grouped NTWD. Where specific diagnosis was deemed unattainable, a transition to a non-specific approach was recommended. Participants emphasised the importance of considering patient's lived experience and functional goals when informing management decisions. Prognosis and self-management strategies should be prioritised, avoiding either over-investigation for non-specific problems or generic management for distinct treatable conditions.

Conclusions UK-based clinician stakeholders, predominantly from secondary care, developed consensus-based priority statements regarding future improvements for the management of people with NTWD. Competing clinician perspectives were found regarding diagnostic specificity, resulting in apparently contradictory consensus priorities and highlighting underlying divisions in how NTWD are conceptualised and managed.

INTRODUCTION

Demand to improve the care offered for people with non-traumatic wrist disorders

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ This study used a modified virtual nominal group technique, combining structured discussion and anonymous voting to facilitate consensus generation among clinicians from diverse professional backgrounds.
- ⇒ The development of workshop materials and consensus questions was informed by preceding scoping reviews, guideline audits, survey findings and qualitative research.
- ⇒ The multi-stage design incorporated pre-workshop reflection, workshop discussion and post-workshop ranking to support considered stakeholder input.
- ⇒ A key limitation was the inability to recruit patients or carers, resulting in consensus statements derived solely from clinician perspectives.
- ⇒ Participants were predominantly secondary care clinicians and had limited ethnic diversity, which may reduce the transferability of the findings to other stakeholder groups and healthcare settings

(NTWD) was identified through stakeholder consultation and reflects the scarcity of resource to guide best practice found from mapping both published and grey literature.¹ NTWD, which include ganglion, instabilities, carpal osteoarthritis, wrist pain and tendinopathies, lack well-established care pathways and guidelines,² compared with traumatic wrist conditions,^{3–6} carpal tunnel syndrome^{7–9} and conditions of the hand and fingers.^{5,10} Several recent studies employing various methods have pointed to substantial variation both in methods used to reach diagnosis for common NTWD and in low specificity and sensitivity of clinical tests.^{11–16} While a recent Delphi study of Dutch hand surgeons, hand therapists and rheumatologists recommended several aspects of history-taking and physical examination for the assessment of undifferentiated wrist complaints, the authors were unable to endorse the numerous special tests suggested

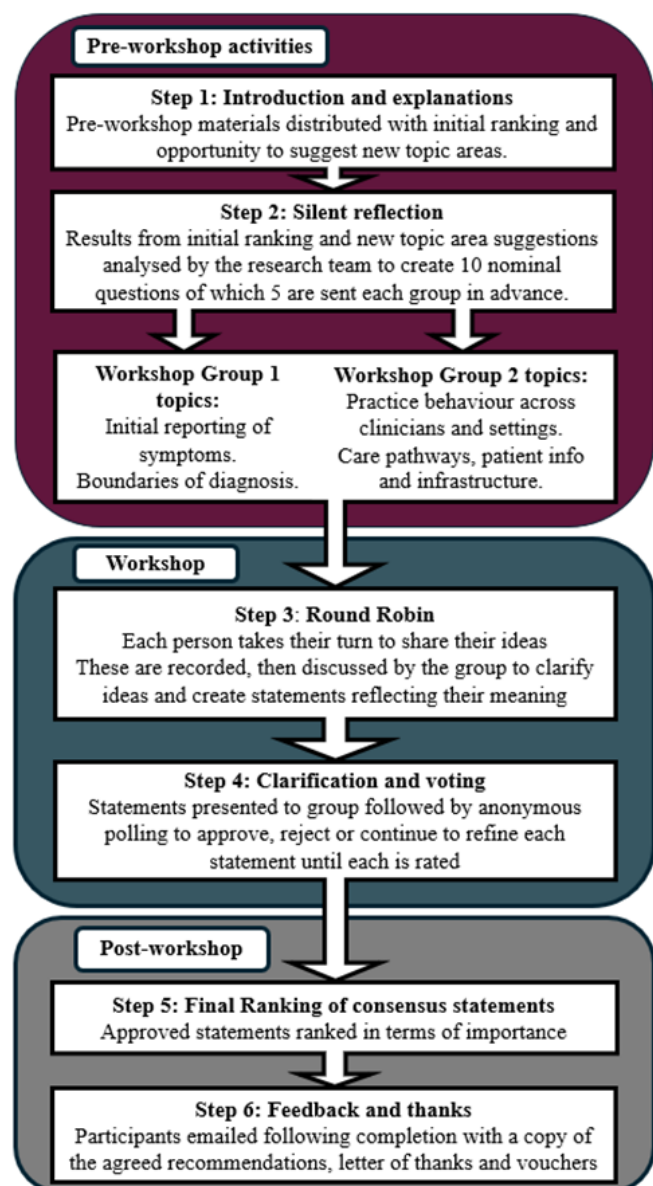


Figure 1 Schematic depiction of the multi-stage virtual nominal group technique workshop.

by the expert panel owing to the limited evidence for their diagnostic accuracy.¹⁷ This lack of consensus in diagnostic assessment is matched by the wide variety of conservative management strategies reported in the literature^{1 12 18 19} indicating that the best management for NTWD is elusive across the patient journey.

In the absence of robust evidence to guide clinical decisions as found with NTWD, approaches based on collective judgement have been recommended to achieve consensus.²⁰ Future healthcare provision development is advised to adopt a person-centred care model in the NHS long-term plan²¹ and to be led by stakeholder groups involving people with lived experience of care.^{22 23} Accordingly, reaching consensus between stakeholders to identify priority areas in NTWD management frames

opportunities for clinicians, researchers and special interest groups to improve care.

To this end, a virtual nominal group technique (vNGT) was selected. This method provides a highly structured approach that supports equality in the presentation and generation of ideas from diverse stakeholders.^{24 25} It is suited to identifying problem areas, exploring solutions and establishing priorities and was familiar to the research team. As an established adaptation of in-person methods, vNGT^{26 27} overcomes geographic and logistical barriers. Its selection was also driven by increased flexibility in scheduling, efficient voting procedures and overall cost-effectiveness. Furthermore, the virtual setting enhances inclusivity by allowing participants of different backgrounds and experiences to engage more freely, further mitigating the subtle conformity pressures of a traditional in-person meeting.^{26 27}

The aim of this study was to use a modified vNGT to facilitate clinician stakeholder groups in creating consensus statements and recommend priorities for future improvements in the management of NTWD in the UK.

METHODS

Our original intention was to include patients with lived experience of NTWD and their carers alongside healthcare professionals and commissioners. To support this, a dedicated patient recruitment strategy was implemented. Recruitment materials were developed in accordance with guidance from the Centre for Ethnic Health Research and included 'call for participant' posters and flyers distributed across four NHS primary and secondary care centres following local approval. A social media campaign using LinkedIn, X and Instagram was also conducted to raise awareness of the study and encourage participation. Despite these efforts, no patients consented to participate; consequently, the final stakeholder group comprised clinicians only.

Research design

The vNGT study was designed and reported with reference to ACCurate Consensus Reporting Document (ACCORD) guidelines for consensus methodology²⁰ (online supplemental section 1). Modifications to the standard vNGT included a multi-stage approach where preliminary ranking, silent reflection on nominal questions and idea generation occurred prior to the virtual workshop (figure 1) as advocated by Potter (2003).²⁶ Recruitment was followed by pre-workshop tasks and ranking, the workshop itself and follow-up tasks. Qualtrics (Qualtrics, Provo, UT) was used for preliminary and post-workshop ranking, and Microsoft Teams (V.25306.804) was used as the platform for the vNGT workshop, exploiting its functionality as a presentation tool, discussion vehicle and polling application. A trial to troubleshoot materials and voting methods occurred 2 weeks prior to the workshops.

Research team

The research team was led by TM, a physiotherapist and PhD candidate; BD, a surgeon and academic; and NH,

RM and SM, all academics familiar with consensus and design-led methods. GP served as the Director of Studies. All team members contributed to writing the article. No pre-publication of the protocol was made.

Pre-workshop activities

Knowledge-gap topic area and statement development

The initial statements of importance and topic areas were synthesised from knowledge gaps identified in previous studies (online supplemental section 2).^{1 2 13 28 29} The four knowledge-gap topic areas were ‘initial reporting of symptoms’, ‘boundaries of diagnosis’, ‘practice behaviour across clinicians and settings’ and ‘care pathways and patient information’, with 23 statements created for preliminary ranking (online supplemental section 3). Hemingway AI (Hemingway Editor) was used to check all materials to highlight complex sentences and suggest alternatives using plain language set at reading age 11.

Preliminary ranking

Pre-workshop information, including key literature summaries, an explanatory video, knowledge-gap topic areas and statements, was distributed to participants using a Qualtrics portal link. Initial ranking of statements was performed using a 9-point Likert scale. Those reaching a high level of agreement (defined as >70%) were approved as either of high importance (7–9), neither important nor unimportant (4–6) or not important (1–3), allowing a narrowing of discussion in the workshop. Statements not reaching approval were discarded. 70% was an arbitrary figure used in comparable studies.^{24 27}

Nominal question preparation

Statements where no consensus was reached from preliminary ranking were taken forward for further analysis alongside new suggestions from the group. The research team synthesised these to create 10 nominal questions,

with five questions sent to each workshop group 1 week prior to their workshop (online supplemental section 4). Participants were encouraged to perform silent reflection on these questions before attending their respective workshops.

Virtual nominal group technique workshop

Two 2-hour vNGT workshops were conducted (21 and 26 November 2025). Five nominal questions were presented to each group and discussed using a structured round-robin process, whereby each participant was given an opportunity in turn to contribute ideas before open group discussions (figure 2). RM facilitated the session, and TM introduced the nominal questions, recorded statements from the round robin and created the polls. Following the discussion of each question, the group clarified ideas and refined statements reflecting the points raised. Statements were then put to an anonymous yes/no ballot requiring >70% approval to be accepted as a consensus statement. An additional question was asked to both groups regarding what name best represents the group of non-traumatic wrist conditions described with suggestions discussed and recorded. Workshops were audio-recorded and auto-transcribed.

Post-workshop activities

Owing to time constraints within the virtual sessions, a change from the protocol was made where the final ranking of importance for approved consensus statements and naming of NTWD was conducted following the workshops using a ranking poll hosted by Qualtrics. This protocol deviation was undertaken to provide participants with adequate opportunity to reflect on the statements without time pressure, thereby promoting informed decision-making and strengthening the representativeness of the resulting consensus. All participants

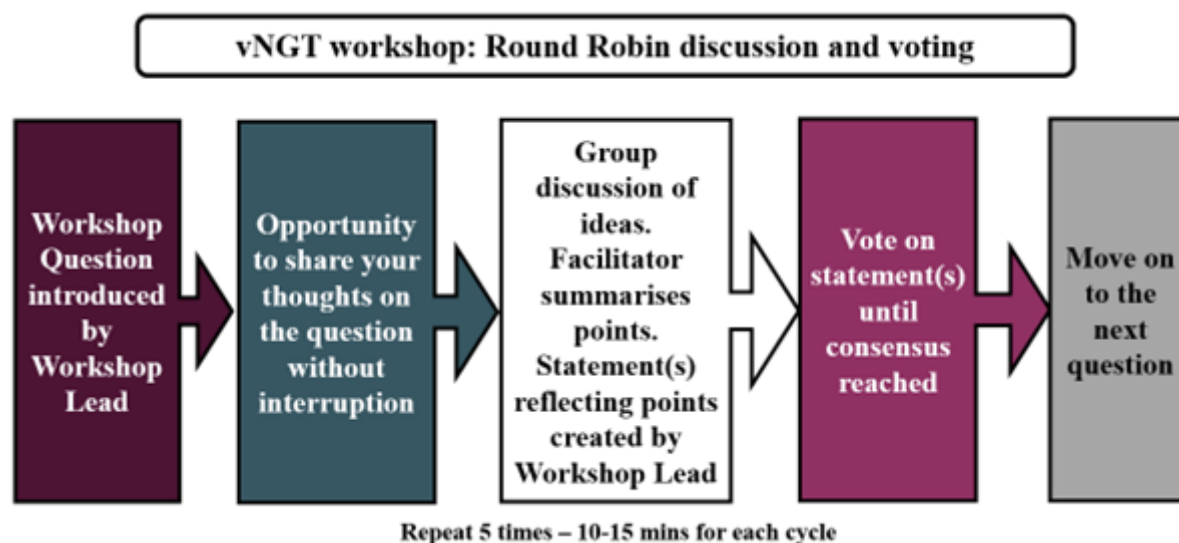


Figure 2 Schematic depiction of vNGT round robin discussion and consensus voting. vNGT, virtual nominal group technique.



ranked the importance of all statements agreed from both groups. Following completion of both workshops, all approved consensus statements were collated and distributed to all participants for final ranking. Consequently, the final prioritisation was undertaken by the full stakeholder group rather than separately by workshop. This approach was intended to provide a common basis for ranking statements generated across multiple domains; however, participants were not exposed to all workshop discussions and therefore ranked some statements without access to the full context in which they were generated. All candidates were sent a copy of the stakeholder-derived consensus statements, a letter of thanks and compensation vouchers 10 days following final ranking.

Patient and public involvement

No patients or the public were involved in the design, conduct, reporting or dissemination plans of our research. Patients and carers were part of a mixed stakeholder group involved in the identification of key questions of importance which motivated this research.¹

Nominal group technique participants

Recruitment strategy

A target of 10–12 stakeholders was in keeping with other vNGT studies.^{24 26 27} Recruitment materials were developed to encourage a diverse spectrum of participants in line with the Centre for Ethnic Health Research's toolkit for increasing the participation of black, Asian and minority ethnic communities in health and social care research.³⁰ Recruitment followed two strands to ensure the inclusion of both care providers and care receivers.

1. Healthcare professionals and commissioners: these participants were approached if they had previously registered their willingness to be involved from preceding studies. A snowballing sampling strategy, using recommendations from initial participants, was employed as a secondary measure to reach the target number.
2. Care receivers (patients): attempts to attract stakeholders who are or have been recipients of care for NTWD were made via 'call for participant' posters and flyers distributed in the waiting rooms of four NHS and secondary care centres (with internal research review board permission) and through a social media campaign using LinkedIn, X and Instagram (online supplemental section 5).

RESULTS

19 candidates consented for the project and completed the pre-ranking of the consensus statements, with 17 offering demographic information. 16 committed to one of the workshop dates, but a participant was unable to attend at the last minute. All 15 participants who attended the vNGT workshops completed the final ranking of statements. Participants were comprised of specialist hand therapists (n=8), first contact practitioners (FCPs, n=2), generalist secondary care physiotherapists (n=2), wrist

and hand specialist orthopaedic surgeons (n=2) and a specialist rheumatology physiotherapist (n=1).

The sample was predominantly female (n=9), and 13 had care responsibilities, including joint or sole care of a child and one for a person aged >65. The ethnic background of the group was white British (n=13) or British Asian (n=2).

The final statements that received approval from stakeholders are displayed in [tables 1–4](#), detailing the stage where consensus was reached (prefix Q_ for pre-workshop and W_ for workshop), the level of importance reached, mean ranking and final rank, in each domain. Only two statements had >70% approval as 'neither important nor unimportant', and none reached agreement for 'not important'. The results for rejected statements from pre-ranking and the workshops can be viewed in online supplemental section 6 with individual-level data. Rejected statements failed to receive >70% approval from the yes:no ballot, with lack of approval related to the content of the statement or its wording.

[Table 1](#) displays stakeholders' top priorities emphasising a thorough, detailed history and taking time to understand the impact of the wrist condition on their ability to live their life (Ranks 1 and 2), the importance of the use of touch in the physical examination (Ranks 3, 5 and 6). Lower-ranked priorities were the use of special tests to narrow down the clinical picture and gain an impression of non-specific features (Ranks 7 and 8) and standard physical examination like measuring range of movement and muscle strength using equipment (eg, grip tester).

[Table 2](#) displays the priority statements regarding the boundaries of diagnosis for NTWD. A striking finding within Domain 2 was that the consensus process generated apparently contradictory positions. Participants supported retaining de Quervain's tenosynovitis as a distinct diagnostic entity while recognising that diagnostic boundaries are often unclear, coexisting presentations are common and non-specific management may be appropriate when diagnostic certainty is lacking. A non-specific approach was recommended for all cases where established diagnostic criteria are absent and red flags have been screened.

The priority statements for Domain 3 that reached consensus as being important are presented in [table 3](#). Across clinicians and settings, practice behaviours were prioritised, which placed greatest importance on patient values, holistic care and function-driven progression. The subsequent ranking reflects relative prioritisation among approved statements and should not be interpreted as indicating that the lower-ranked statements were considered unimportant or unsupported.

Across Domain 3, stakeholders consistently prioritised person-centred assessment and management. Statements relating to understanding what clinician stakeholders perceived to matter most to patients, assessing meaningful change using patient-important outcomes and ensuring that progression through care pathways reflected symptom severity and functional impact received

Table 1 Priority statements for Domain 1: initial reporting of symptoms

Statement	Stage consensus was reached	Level of importance	Mean rank	Final rank
Q7_1. Clinicians should allow opportunities for the person to express a thorough, detailed history of their symptoms	Initial rating	Important	1.5	1
Q7_2. Clinicians should take time to understand the impact of the wrist condition on the person's ability to live their life (eg, daily activities, work and leisure).	Initial rating	Important	3.3	2
W1_6. Clinicians should recognise that physical examination, including palpation where appropriate, can serve a communicative function by helping patients feel their concerns have been heard and thoroughly assessed.	Workshop	Important	4.4	3
Q7_8. Clinicians should ask the person to demonstrate or perform the activity that typically provokes their symptoms.	Initial rating	Important	4.7	4
W1_2. Clinicians should perform a physical examination using some form of touch component.	Workshop	Important	4.9	5
W1_1. Clinicians should attempt to identify the exact location of pain through verbal and touch-based assessment.	Workshop	Important	5.5	6
W1_7. Clinicians should use special tests to narrow down the clinical picture towards a diagnosis.	Workshop	Important	5.9	7
W1_8. Clinicians should use special tests to gain an impression of non-specific features such as irritability, fear of movement and feel of the joint.	Workshop	Important	6.7	8
Q7_4. Clinicians may consider measuring the range of movement available in the wrist joint.	Initial rating	Neither important nor unimportant	8.2	9
Q7_5. Clinicians may consider testing muscle strength or weight bearing using equipment (eg, a grip tester or weighing scale).	Initial rating	Neither important nor unimportant	9.9	10

the highest rankings. Conversely, the Rank 8 statement relating to specialist investigations received lower priority.

The roles of primary care in providing holistic assessment to allow triage and in offering simple management, education, signposting and reassurance were agreed as important (Ranks 2 and 7, respectively). Grounding clinical management from understanding what patients want related to their functional needs (Rank 5), using patient-reported outcome measures to assess meaningful change (Rank 6), and to reserve advanced diagnostic tests for specialists in higher levels of the care pathway, were also important.

Priority statements for Domain 4: care pathways and patient information emphasise the need for better resources and a collaborative approach (table 4). It was

agreed that current care guidelines and patient information materials lack the information needed to guide the best treatment, necessitating more investment in developing these tools, and that developing these new guidelines should involve a system-wide stakeholder approach (Rank 2).

Suggestions for the most suitable term to describe this cluster of non-traumatic wrist conditions were gathered in the workshops and ranked as part of the post-workshop activities. The group preferred 'non-traumatic wrist impairment' (Rank 1), closely followed by 'nontraumatic wrist disorder' (table 5). We note that the preferred term emerged from stakeholder ranking rather than deliberate alignment with international classification of functioning, disability and health terminology³¹ and therefore



Table 2 Priority statements for Domain 2: boundaries of diagnosis for NTWD.

Statement	Stage consensus was reached	Level of importance	Mean rank	Final rank
W2_1. A specific diagnosis allows a narrative to engage, educate about the condition and understand the shared decision-making options open to the patient.	Workshop	Important	1.8	1
Q8_5. De Quervain's tenosynovitis is a distinct condition and shouldn't be mixed with the general categories of non-specific wrist problems.	Initial rating	Important	1.8	
W2_3. A non-specific approach should be used in cases where there are no established diagnostic criteria and red flags have been screened.	Workshop	Important	2.4	3
NTWD, non-traumatic wrist disorders.				

should not be interpreted as equivalent to their definition of impairment.

DISCUSSION

A notable finding of this study was the coexistence of competing perspectives regarding diagnostic specificity within clinical reasoning. Clinicians endorsed both the importance of pursuing specific diagnoses where possible and the appropriateness of non-specific management approaches when diagnostic certainty is lacking. Rather than representing disagreement between stakeholders alone, these findings suggest that individual clinicians

may simultaneously hold competing beliefs about the role and value of diagnostic specificity. This internal tension reveals important fracture lines in clinical reasoning and raises the possibility that consensus methods may generate an appearance of agreement despite unresolved differences in the assumptions underpinning that agreement.

The consensus statements derived from this vNGT study should be interpreted as clinician stakeholder perspectives, including clinician perspectives on patient priorities rather than direct patient views. These findings suggest clear priorities and reinforcement of person-centred approaches in the management of people with

Table 3 Priority statements for Domain 3: practice behaviour across clinicians and settings

Statement	Stage consensus was reached	Level of importance	Mean rank	Final rank
W3_8. What the patient values as the most important feature or symptom should be prioritised when assessing meaningful change.	Workshop	Important	2.5	1
W3_1. The role of primary care clinicians should provide holistic assessment to allow triage	Workshop	Important	2.8	2
W3_13. The progression through the care pathway should be primarily driven by the severity of the patient's symptoms, the duration of the problem and the extent of their functional limitation.	Workshop	Important	3.1	3
W3_10. The progression through the care pathway should be primarily driven by self-described reporting on whether the presentation is better, much the same or worse.	Workshop	Important	5.3	4
W3_5. Across all settings, management strategies should be grounded in understanding what the patient wants related to function and symptoms.	Workshop	Important	5.7	5
W3_9. The use of patient-reported outcome measures is suggested to assess meaningful change.	Workshop	Important	6.0	6
W3_2. Primary care clinicians should provide simple management, education with signposting to resources and reassurance when escalation is not indicated.	Workshop	Important	6.1	7
Q11_2. Advanced tests (MRI and ultrasonography) and detailed diagnosis should be reserved for specialists in the higher levels of care.	Initial rating	Important	6.6	8
Q11_3. / W2_6. The focus of care should be based on the patient's needs, rather than the clinician type or treatment location.	Initial rating and workshop (combined)	Important	6.9	9

Table 4 Priority statements for Domain 4: care pathways and patient information

Statement	Stage consensus was reached	Level of importance	Mean rank	Final rank
Q13_3. Current care guidelines and patient information materials lack the information needed to guide the best treatment. We must invest more in developing these tools.	Initial rating	Important	1.1	1
W4_1. A system-wide stakeholder approach should be taken to the creation of guidelines.	Workshop	Important	1.1	2

NTWD, holding implications for future research and clinical approaches. The consensus strongly advocated for the clinical encounter to be led by detailed history and understanding functional impacts (Domain 1, Ranks 1 and 2) ahead of the physical examination and special tests. Participants emphasised that clinicians should dedicate substantial time to listening and exploring the person's unique experience, directly aligning with the core tenets of person-centred care and reflecting a necessary move away from purely biomedical reasoning, advocated across non-traumatic MSK management by Lewis *et al.*³² Furthermore, the value of the physical examination is reframed: while touch and palpation are recommended, they are prioritised more as communication tools to allow reassurance (Domain 1, Rank 3) than as a method of reductive assessment (Domain 1, Rank 6). Special tests were seen as important, but the group rated these as lower priority and noted their non-specific communication value as well as their intended purpose (Domain 1, Rank 7 and 8). These findings may offer context to the results of the e-Delphi by Krastman *et al.*¹⁷ through framing components of assessment as aids to building therapeutic alliance, meeting expectations of a thorough examination and attending to the 'theatre' of the clinical encounter.

Table 5 Naming of grouped non-traumatic wrist disorders from post-workshop ranking

Suggested name from workshop attendees	Mean rank	Final rank
Q11_1. Non-traumatic wrist impairment	3.4	1
Q11_11. Non-traumatic wrist disorder	3.7	2
Q11_5. Non-specific wrist pain	5.1	3
Q11_6. Non-specific wrist symptoms	5.5	4
Q11_7. Non-specific wrist disorder	5.7	5
Q11_4. Mechanical wrist pain	6.4	6
Q11_2. General wrist impairment	6.6	7
Q11_13. Non-traumatic mechanical wrist disorder	6.7	8
Q11_12. Symptomatic wrist presentation of unknown pathology	7.9	9
Q11_3. Symptom-led wrist disorder	8.0	10
Q11_10. Sub-diagnostic wrist disorder	10.3	11
Q11_8. Sub-clinical wrist pain	10.5	12
Q11_9. Non-reductive wrist problem	11.1	13

This aligns with qualitative investigation into diagnostic uncertainty that indicates a shift where clinicians' professional fears of failing meet the patients expectations for a definitive label for some are greater than missing underlying pathology.³³ Therefore, the value of physical examination extends beyond 'objective' data collection.

In the knowledge-gap topic area 'boundaries of diagnosis', the consensus group highlighted the clinical utility of both specific and non-specific diagnoses in NTWD, suggesting flexibility is required in clinical reasoning. The stakeholder-derived consensus statement that de Quervain's tenosynovitis should be distinct to NTWD (Domain 2, Rank 1) was approved from pre-workshop voting and was therefore not due for workshop discussion. However, some stakeholders contested the statement in the workshop as many de Quervain's cases were observed to display poor diagnostic boundaries, co-exist with other conditions and may benefit from non-specific management. A more nuanced statement was proposed to reflect this; however, fidelity to our stated methods mandated adherence to the previously approved statement. Domain 2 Rank 1 is therefore advised to be taken with acknowledgement of its contention, and the approach suggested by Domain 2 Rank 2, where a non-specific approach should be taken, established diagnostic criteria findings are unclear and red flags have been screened, is recommended by the authors for suspected cases of de Quervain's.

Participants attributed the primary value in attempting specific diagnosis to its contextual effects, such as reassurance, rather than the intrinsic diagnostic accuracy of the assessment measures themselves (Domain 2, Rank 1). This aligns with our previous qualitative and survey data^{13 28} suggesting that for clinicians, the utility of a diagnosis for NTWD may come more from its therapeutic role than its reductive precision. Crucially, clinician stakeholders emphasised prioritising what they perceived to be important to patients (Domain 3, Rank 1) and recommended self-described reporting of symptoms (Domain 3, Rank 4). The standard of 'meaningful change' should shift from traditional 'objective' measures (which although important were ranked low) to patient-reported functional and symptomatic improvements, suggesting moving toward alignment with the principles of patient-centred care advocated in the NHS Long-Term Plan.²¹ In either diagnostic paradigm, the clinician should provide a narrative including prognosis and self-management



strategies, well-regarded facets of high-value care recommended by Toibin *et al.*³⁴

Within the context of this study, a non-specific approach should not be interpreted as abandonment of diagnostic reasoning. Rather, participants viewed it as a pragmatic management strategy when serious pathology had been excluded, diagnostic remained elusive and care could be safely directed towards symptom management, function and self-management. Escalation to specialist investigation remained appropriate where symptoms progressed, red flags emerged, functional decline occurred or diagnostic uncertainty persisted.

Non-specific management appears to be a responsible clinical approach when established diagnostic criteria are lacking (Domain 2, Rank 3). A feature of the group discussion was the belief from some that good diagnostic criteria and resources to guide management for NTWD exist, and a non-specific approach should be reserved for when these methods failed. This view differs from the evidence provided through service evaluation, review articles and quality assessment of care pathways and patient-facing websites.^{1 13 29 35–37} Opinion pieces, review articles and primary research suggest that non-specific labelling and management allows clinicians to avoid giving inaccurate or anxiety-inducing labels, focusing instead on reassurance, pain science education and functional restoration.^{32 38–40 40} This approach relies heavily on identifying and excluding red flag conditions while assessing the irritability and functional impact of the presentation (Domain 1, Ranks 2 and 8). Management focuses on person-centred, non-specific adjuncts that are advocated as ‘high-value care’, including activity modification, simple exercises and education.^{39–41}

From a service delivery perspective, clinician stakeholders reached consensus that primary care should play an important role in holistic assessment, triage, simple management and reassurance (Domain 3, Ranks 2 and 7) supporting a stepped-care model where specialists are reserved for more complex cases (Domain 3, Rank 8). However, these findings should be interpreted with caution given the limited representation of primary care clinicians within the stakeholder group, particularly the Domain 3, Rank 8 statement, which could be seen as pejorative towards those in generalist settings. However, the co-existence of these priorities across domains suggests a lack of clarity for stakeholders and points to underlying ‘fracture lines’ in clinical reasoning, a divergence noted in previous examination of current clinical practice for NTWD through survey and qualitative studies.^{13 28} Most importantly, the top ranking of Domain 4 highlights an urgent and significant gap; there is an immediate need for updated, comprehensive care guidelines and patient information developed collaboratively across all stakeholders. Despite the urgent need for consistent, evidence-based management, the vNGT did not achieve consensus on which body should be responsible for developing these resources through group discussion; however, future work on grouped condition

management should use the term ‘non-traumatic wrist impairment’.

Strengths and limitations

This study was built on rigorous systematic searches of the literature^{1 2 13 28 29} undertaken in preceding review articles in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews guidelines.⁴² The creation of knowledge-gap topic areas and preliminary statements drew on the mapping exercise against mixed-stakeholder questions of importance from our first review article. Updating this in light of new knowledge from our survey and qualitative studies allowed the domains of interest and statements to be rooted in stakeholder priorities. The engagement of participants was gratifying with excellent response rates to all parts of the vNGT and low drop-out rates.

A major limitation was the absence of patient/care receiver participants that weakens the consensus by excluding this vital perspective and remains a point of reflection. From the lack of patient participants, statements relating to patient values, meaningful outcomes and person-centred care should be interpreted as clinician perspectives on these concepts rather than direct representations of patient views. The sample was made from predominantly secondary care and specialist composition, which may have introduced a subtle bias toward specific diagnostic skills, as these are core elements of specialist training, despite the consensus ultimately favouring a holistic approach. The predominance of specialist hand therapists within the stakeholder group may have influenced prioritisation of statements regarding diagnostic reasoning, non-specific management approaches, physical examination and service design. Consequently, the findings should be interpreted as reflecting the perspectives of this stakeholder group rather than all professions involved in NTWD management.

The demographic data show a predominance of white participants from professional background, many of whom had caring responsibilities, indicating that our attempts to increase diversity of the sample were unsuccessful. Findings are UK-centric and influenced by the NHS model, including the role of FCPs and primary care triage. Transferability to healthcare systems with different referral pathways and service structures should therefore be considered with caution.

The observed disagreement regarding diagnostic specificity, which resulted in somewhat conflicting stakeholder-derived consensus statements, must be interpreted alongside the lead authors’ bias and implicit knowledge of the field. The researcher’s role in shaping the statements suggested by participants during the workshops may have influenced the consensus process. However, these contradictions are consistent with previous findings and highlight weaknesses in consensus methodology; conversely, in areas of high complexity and uncertainty such as NTWD, the process risks generating a ‘false certainty’ that may be both clinically unhelpful and potentially misleading.

This necessitates a cautious application of these findings, recognising them as a reflection of stakeholder priorities within a landscape of clinical uncertainty rather than as absolute clinical truths.

CONCLUSION

Underlying fracture lines in clinician reasoning regarding diagnostic specificity in NTWD have been identified. Clinician stakeholders simultaneously endorsed the pursuit of specific diagnoses where possible and the use of non-specific management approaches when diagnostic certainty was lacking, suggesting individual clinicians may hold competing perspectives on the role of diagnostic specificity. This tension highlights unresolved differences in how NTWD are conceptualised and managed, suggesting that consensus methods may mask important differences in the rationale underpinning agreement. Despite these differences, clinician stakeholders consistently prioritised person-centred approaches including attention to functional impact, prognosis, self-management, exclusion of serious pathology and appropriate referral when required. However, these findings should be interpreted as clinician perspectives and viewed as a starting point for future improvement efforts, given the absence of patient stakeholders and the predominance of secondary care clinicians within the sample. There is an immediate need for collaboratively developed clinical pathways, care guidelines and patient information resources for NTWD.

Recommendations for further investigation

Greater understanding of the role of primary care and self-management for NTWD is indicated given most MSK conditions are diagnosed and effectively managed in primary care.²³ Both our sample group and the literature about NTWD were imbalanced toward secondary care, which may create undue influence of secondary care and specialist reasoning in the field. The consensus group prioritised the creation of new guidelines and patient-facing resources, and this warrants resource and attention. Other opportunities include comparing outcomes between a non-specific approach based on time and severity measures versus specific management approach related to reductive reasoning for NTWD.

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Contributors TM conceived the study, designed the protocol, obtained regulatory approvals, coordinated participant recruitment, conducted data collection, analysed

and interpreted the data and drafted the manuscript. RM, NH, SM, BD and GP contributed to study design and methodological development. RM, NH, SM, BD and GP provided supervision and critical interpretation of the findings. All authors contributed to the development and refinement of the workshop materials and study procedures, critically revised the manuscript for important intellectual content, approved the final version for publication and agree to be accountable for all aspects of the work. TM is the guarantor.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient and public involvement Patients and/or the public were not involved in the design, or conduct, or reporting, or dissemination plans of this research.

Patient consent for publication Not applicable.

Ethics approval This study involves human participants and was approved by NHS East of England - Cambridge South Research Ethics Committee (19 September 2025; 25/EE/0179). No pre-publication of the study protocol was made. Informed consent was obtained online (Qualtrics, Provo, UT) from all participants prior to their involvement in the study. Participants gave informed consent to participate in the study before taking part. A voucher of £75 was provided to participants (the amount equivalent to NIHR guidance for half-day contribution rate for public contributors at the time of the study). All data were anonymised, and participants were offered the option of choosing a name for use in workshop sessions. No personal introductions or mention of professional background were made in the workshops.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. Additional data are available upon reasonable address to the Principal Investigator.

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