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The "self-treatment of wounds for venous leg ulcers checklist" (STOW-V Checklist V1.0): Part 1—Development, pilot and refinement of the checklist

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Abstract

Patients who have chronic wounds such as leg ulcers should be active participants in their treatment and care. This participation may include self-treatment of the wound which involves the patient cleaning the wound, applying and removing wound dressings, and/or applying and removing compression therapy. The aim of the study was to develop a Checklist to assist nurses to appraise the conduct of wound treatment when undertaken by the patient. A three-phase mixed methods study was conducted. A systematic and evidence-based approach to developing and using structured observations for the study of health behaviour guided the process of developing, piloting and refining the Checklist. The resulting "Self-Treatment of Wounds for Venous Leg Ulcers Checklist" (STOW-V Checklist V1.0) can assist the nurse to evaluate the conduct of key self-treatment behaviours in the areas of equipment and workspace, hand hygiene, wound dressing removal, skin care, wound cleansing and debridement, wound assessment, wound dressing application, and compression therapy application. The growing recognition that patients can benefit when involved in care, the need to enact self-management because of COVID-19, and the ever present competition for healthcare funding and resources are compelling reasons for patients, care providers, and healthcare services to afford the self-management approach, and associated interventions such as self-treatment, greater consideration. It is recommended that the STOW-V Checklist is used with patients in a shared-care model, with nurses and other healthcare professionals providing supervision and oversight of self-treatment practices whenever this is feasible and acceptable to the patient.

KEYWORDS

checklist, chronic wounds, leg ulcers, patient participation, self-management, self-treatment

Key messages

- self-treatment of wounds involves the patient cleaning the wound, applying and removing wound dressings, and/or applying and removing compression therapy
- using a systematic and evidence-based approach, a Checklist was developed to assist nurses to appraise the conduct of wound treatment when undertaken by the patient
- the resulting "Self-Treatment of Wounds for Venous Leg Ulcers Checklist" (STOW-V Checklist V1.0) can assist to evaluate the conduct of key self-treatment behaviours and should be used with patients in a shared-care model
- the growing recognition that patients can benefit when involved in care and the need to enact self-management because of COVID-19 are compelling reasons to consider self-treatment as an approach to care

1 | INTRODUCTION

Patients who have chronic wounds such as leg ulcers should be active participants in their treatment and care.[1] This participation may include self-treatment of the wound, which we define as the patient cleaning the wound, applying and removing wound dressings, and/or applying and removing compression therapy.[2] This publication reports the first of two studies arising from a program of research that (a) developed a checklist to assist healthcare professionals to appraise the conduct of wound treatment when undertaken by patients who have venous leg ulcers and (b) which assessed the reliability of the checklist.[3]

2 | BACKGROUND

Engaging patients in self-management is standard practice in many areas of healthcare and can be particularly effective for management of chronic health conditions.[4] Emphasis on promoting self-management by those who have chronic wounds has increased over recent decades in line with the growing recognition that patients should be actively involved in their management and care and the potential benefits of this involvement to the patient, care provider and healthcare system.[1]

Implementation and evaluation of specific interventions to facilitate self-management by people who have chronic wounds have been reported. These have included for example an evaluation of an e-learning education program to improve self-management of chronic disease risk factors (such as nutrition and exercise) and venous leg ulcer specific factors such as adherence to compression therapy,[5–8] and case study research reporting lifestyle counselling and goal setting interventions.[9]

Self-treatment of wounds is another intervention for people who have chronic wounds. Self-treatment aligns theoretically with Orem's model of self-care which promotes adaptation to one's environment and optimal personal independence.[10] The relevance of self-treatment of wounds to the nursing profession and to the nursing workforce (which provides the bulk of wound treatment interventions) is evident. The presence of COVID-19 has led to accelerated interest in self-treatment as a solution to the limitations that have arisen with respect to providing direct professional care during the pandemic.

There is emerging evidence that self-treatment of wounds can be preferable and acceptable from the patient's perspective. Our research conducted in Australia and Wales (n = 113) is, to our knowledge, the first reported to have directly investigated and described this approach to wound care. We identified that patients self-treat for mostly positive reasons including to be independent and to do wound treatment at a time that suits.[11] Participants reported completing most of the tasks required for self-treatment (those associated with cleaning the wound, wound assessment, and application and removal of dressings and compression) and spending considerable time doing so, on average of 24 minutes on each occasion.[11] It should be noted that sometimes patients must self-treat, for example when unscheduled treatment is required (for example when dressings fall off unexpectedly), and when professional services are not available to patients (because of barriers such as geographical location and cost).

Of particular concern, was our finding that more than one third of our study participants (n = 76, 67.3%) were not supervised when they started self-treatment and the majority (n = 90, 80%) reported that they were not regularly supervised during the wound episode.[12] Very few of our study participants (n = 6, 5.3%) had received

structured and targeted education from a healthcare provider to support their self-treatment practice. We concluded that our sample was, for the most, underprepared to self-treat and lacked adequate ongoing professional oversight of their self-treatment practice.

Solutions are required to address the personal, service delivery, system and economic burden of chronic wounds such as leg ulcers and innovative approaches to healthcare will help to meet the current and future needs of patients who have chronic wounds and their care providers. The shift toward optimising patient involvement in wound care, the presence of COVID-19, finite healthcare resources and the growing economic impact of chronic wounds both locally and internationally, are valid reasons to consider self-treatment of wounds as an approach to care.

To enable effective self-treatment of chronic wounds, it is imperative that patients know how to self-treat, be able to undertake the required tasks and be monitored as closely as is possible and acceptable to the patient. When appraising the conduct of self-treatment, it is important to identify the self-treatment activities that are and that are not conducted, and then where intervention (in the form of patient education, support, and monitoring) is required. Evidence-based, validated instruments to appraise the conduct of wound treatment are lacking, although one study has reported the content validity of an instrument to support nurses to provide care to individuals with skin lesions.[13]

The aim of the study reported in this publication was to develop a "Self-Treatment of Wounds for Venous Leg Ulcers Checklist" (hereafter referred to as the "STOW-V Checklist") to assist nurses to appraise the conduct of chronic wound treatment when undertaken by the patient. The objectives of the study were to (1) develop the content of the STOW-V Checklist, (2) pilot the STOW-V Checklist and (3) refine the STOW-V Checklist in preparation for reliability testing.

3 | METHODS

A three-phase mixed methods study was conducted. Phase one involved development of the content of the STOW-V Checklist, phase two was a pilot of the STOW-V Checklist and phase three involved refinement of the STOW-V Checklist in preparation for reliability testing. The study was approved by the University of Melbourne Human Research Ethics Committee (reference number 1441445) and the Melbourne Health Human Research Ethics Committee (reference number 2017096).

A "checklist" was selected on account of the benefit of this type of clinical tool in the provision of healthcare and wound management more specifically. For example, checklists can ensure that all relevant tasks are flagged for assessment (and memory of what to assess is not relied on therefore errors are minimised), and tasks are standardised and performed in an appropriate order.[14] The development of an effective and evidence-based checklist has the potential to ensure that evidence is translated to practice and patient outcomes are optimised.

3.1 | Phase 1: Development of the content of the STOW-V Checklist

A process for developing and using structured observations for the study of health behaviour described by Bentley and colleagues[15] informed the development of the STOW-V Checklist. This involved generating a list of potential Key Behaviours through review of the literature, discussion with key stakeholders, refining selected behaviours into a structured observation format, defining the Key Behaviours and development of item ratings.[15] Principles for formatting of clear and effective medical checklists were used.[16] The Checklist was developed in the English language.

3.2 | Phase 2: Piloting the STOW-V Checklist

The process described by Bentley and colleagues[15] also informed the piloting of the STOW-V Checklist. This involved developing a field guide, conducting observations, completing the Checklist, cleaning and analysing the data, and considering the results[15] with respect to further refinement of the Checklist.

The STOW-V Checklist was piloted by author SK with a purposefully selected sub-group of a convenience sample that had first completed a survey ($n = 113$) and then subsequently an in-depth interview ($n = 25$) regarding their conduct of and experiences when self-treating chronic wounds.[2,11,17,18] Participants with venous leg ulcers were sought and were required to be currently self-treating according to our definition of the patient cleaning the wound, applying and removing wound dressings, and/or applying and removing compression therapy. These patients did not receive any education regarding self-treatment as part of the research.

One structured observation of the participant self-treating their wound was undertaken to appraise the conduct of self-treatment according to the Checklist. Observations were undertaken in the home setting. Participants were requested to not commence wound

treatment until the observer arrived. The researcher did not assist with the wound treatment or provide direction or advice during the observation. A digital wound image was taken and the STOW-V Checklist was completed in paper form immediately following the observation of the wound treatment. Notes were made to record information about the interactions that participants had with objects and the environment, the degree of ease and proficiency demonstrated while self-treating, any unexpected practices, and the observers experience completing the Checklist. Data were entered into IBM SPSS Statistics for Mac (Version 22.0. Armonk, NY: IBM Corp) and the analysis involved generation of descriptive statistics.

3.3 | Phase 3: Refinement of the STOW-V Checklist

The STOW-V Checklist was refined in preparation for further testing. This refinement was informed by the results of the above-mentioned pilot and a mixed method, descriptive explanatory study conducted with self-treaters of chronic wounds.[12] The aim of the latter was to investigate self-treatment of chronic wounds among people living in the community to inform the development of educational resources and support for this group. The objectives of the mixed-methods study were to describe the characteristics of people who self-treat chronic wounds in the community, determine the practices of people when they self-treat, and explore the effect of the wound and self-treatment on quality of life. The results of a survey conducted with 113 self-treaters from Australia and Wales[2,11] and in-depth interviews conducted with a sub-group of 25 Australian self-treaters[17,18] informed the refinement of the Checklist.

4 | RESULTS

4.1 | Phase 1: Development of the content of the STOW-V Checklist (content validity)

The content of the STOW-V Checklist was initially drafted by author SK a nurse researcher who had 20 years of nursing experience, 15 years of wound management experience, 12 years practicing in an advanced practice wound management role, related postgraduate qualifications at Masters level, and who was, at the time, a PhD candidate. The content of the Checklist was informed by the Standards for Wound Management[19] (which are now published as the Wounds Australia Standards for Wound Management and Prevention[20]). Although designed for use by healthcare professionals and services, the standards provided the best available evidence on which to base selection of self-treatment activities (which were labelled as "Key Behaviours") to be included in the Checklist. The intent to develop the STOW-V Checklist for use with patients who have venous leg ulcers in the first instance led to the inclusion of a section associated with compression therapy which drew on the principles and practices recommended in the Australian and New Zealand Clinical Practice Guideline for Prevention and Management of Venous Leg Ulcers.[21] This process resulted in development of draft Activity Areas (which may be considered the "domains" of the Checklist) and Key Behaviours (which may be considered the "items" of the Checklist).

Once the Activity Areas and Key Behaviours of the STOW-V Checklist were drafted consultation was undertaken informally within the professional networks of authors SK and NS. Further consultation occurred with a project advisory panel including four other experts (two wound nurse researchers with 20+ years combined wound management experience, an expert in qualitative and mixed methods research and consumer engagement, and a researcher with statistical expertise and experience informing the design and analysis of wound research). Consultation was also undertaken with consumer representatives, including one who co-authored a publication presenting patient and nurse perspectives on self-treatment.[22] The consumers perspective suggested the need to prioritise strategies to reduce wound pain, to promote effective maintenance of compression between dressing changes, and the need to be cognisant of wound treatment-related costs. Further to this point, our narrative review of the literature[12] identified a small number of studies (conducted mostly with acute wound self-treaters) which also suggested the need to prioritise infection control measures, including appropriate skin hygiene, wound cleansing and assessment of bacterial burden.

Our appraisal of the above-mentioned evidence and stakeholder consultation resulted in identification of nine relevant wound treatment Activity Areas; equipment storage, treatment workspace, infection control, removal of the dressing, treatment of the skin around the wound, cleansing of the wound, assessment of the wound, application of the wound dressing, and application of compression therapy. Key Behaviour items for each Activity Area were created resulting in a 45-item tool. Each of the 45 Key Behaviour items was supported by one of more of the above-mentioned evidence sources. The majority of items were principally supported by the wound management standards (34 items) and the venous leg ulcers guidelines supported two items. The remaining nine

items were supported by our literature review. One of the 45 Key Behaviours required adjustment for conduct by the self-treater, specifically conservative sharp wound debridement which was deemed by the research team to be unsuitable as a self-treatment activity given the associated training and safety factors. Debridement was alternatively represented by removal of debris using other methods.

We selected five discrete codes for each of the 45 Key Behaviours which represented whether or not the Key Behaviours had been (1) fully completed, (2) partially completed, (3) not completed, (4) not observed or (5) not applicable to the participant. This code structure was selected to enable testing of the applicability of each behaviour to each participant and to appraise whether or not fewer codes would be an appropriate consideration when refining the tool.

The best possible self-treatment outcomes were a "yes" or "not applicable" rating, as these represent either the Key Behaviour being conducted or not being applicable to the participant and therefore not required. Key Behaviours coded as "not seen" (for example behaviours occurring prior to the observation commencing) may have been fully performed, partially performed or not performed; however, this information was not collected.

We incorporated stakeholder feedback regarding the Key Areas and Key Behaviours (specifically relevance, potential ambiguity in statements and the comprehensiveness of the STOW-V Checklist overall) to enhance construct validity. The project panel were satisfied that the Checklist was adequately prepared for piloting, with the view to gaining further stakeholder feedback to enhance construct validity in the next phase of the initiative, specifically during a reliability study with nurse raters.[3] The project panel were satisfied that the content of the STOW-V Checklist as a whole was acceptable and that the content was assembled in a useable form (for the purpose of the pilot, in a paper based form designed in Microsoft Word).

4.2 | Phase 2: Piloting the STOW-V Checklist

A field guide, including the pilot version of the STOW-V Checklist and space to record text comments, was developed for use by the observer. The observer visited each potential participant in the home setting at a prearranged time to complete the observation. A total of 10 participants consented and agreed to be observed however two participants were deemed ineligible when it became apparent that the informal carer conducted the majority of the wound treatment.

The eight participants were English speaking and 67 years of age on average (minimum 53, maximum 81 years, SD = 8.18). There was an equal representation of female participants (n = 4) and male participants (n = 4). The majority of the participants (n = 5) had only one wound and all participants (n = 8) had a lower leg wound. The duration of the wounds was on average 52 weeks (minimum 5, maximum 156 weeks, SD = 45.97). None of the wounds displayed overt signs of infection at the time of observation and none were being treated for infection. The time usually spent by the participant conducing wound treatment was on average 104 minutes per week (minimum 10 minutes, maximum 158 minutes, SD = 64.64). The dressing frequency varied, with daily, second daily, three times each week, and twice weekly represented in the sample. Table 1 displays the characteristics of the sample.

The STOW-V Checklist results were tabulated and a total score of 40 for each of eight Checklist Areas was calculated to provide an overall impression of how well each of the areas was conducted by the sample. The number of participants who scored "yes", "partial", "no", "not seen" or "not applicable" for each of the 45 Key Behaviours is shown in Table 2. The responses shaded in darker grey indicate the positive and desirable item outcomes ("yes" or "not applicable").

The areas for which the sample performed best through worst were *application of compression therapy* (35/40), *treatment workplace* (33/40), *application of dressing* (32/40), *removal of dressing* (30/40), *equipment storage* (28/40), *infection control* (24/40) *treatment of skin around wound*, (17/40), *assessment of wound* (15/40), and *cleansing of wound* (12/40). The number of participants conducting each Key Behaviour item was found to vary within each STOW-V Checklist Area.

The total score for the *compression therapy* area was the highest; however, most participants (n = 6, 75%) were not using compression and therefore in most cases the related Key Behaviour items were not applicable. Scores in the *treatment workplace* area were high for all items. In the *application of dressing* area, participants handled the dressings appropriately, however five of the eight participants used a primary dressing that did not address the wound symptoms according to the observer's assessment. A number of Key Behaviours were not seen in the *removal of dressing* area, (as the dressings had been removed before the observation) so while scoring high overall, this area may have scored higher had the related observations been possible. The result for the *equipment storage* area was affected by a number of items that were not applicable to some participants.

Variability was noted in the lower four scoring STOW-V Checklist Areas also. In the *infection control*

TABLE 1 Participant characteristics

	Gender	Age	Wound duration (weeks)	Anatomical location	Wound aetiology	Time treating wound (minutes)
1	Female	53	64	Medial malleolus	Venous disease	5 minutes twice weekly (10 minutes weekly)
2	Female	61	156	Anterior gaiter, medial malleolus	Venous and lymphatic disease	45 minutes every second day (157.5 minutes weekly)
3	Male	66	16	Foot	Diabetes related foot wound	15 minutes every second day (52.5 minutes weekly)
4	Female	64	52	Bilateral anterior malleolus, medial malleolus	Venous disease	50 minutes 3 times a week (150 minutes weekly)
5	Female	81	5	Medial malleolus	Venous disease	15 minutes twice a week (30 minutes weekly)
6	Male	72	70	Medial malleolus	Venous disease	15 minutes every day (105 minutes weekly)
7	Male	75	50	Anterior gaiter	Venous disease	30 minutes every day (210 minutes weekly)
8	Male	64	6	Anterior gaiter	Skin tears, hx venous disease	60 minutes twice weekly (120 minutes weekly)

area, there were no partial scores, suggesting that participants washed their hands appropriately, even if not at all required intervals. In the *treatment of the skin around the wound* area, all participants had a soap free cleanser, however, only three were observed to use it. Few participants removed dry skin and the availability and use of a moisturiser was not the norm with only two participants conducting this Key Behaviour. In the area of *assessment for infection*, most participants commented on wound exudate and looked for signs of infection, however only two participants leaned toward the wound to take a closer look. None of the participants took an objective measurement of the wound size or appearance (for example a wound image or measurement of length and width). The Key Behaviours conducted in the *cleansing of the wound* area were generally ineffective in the observer's opinion. While the best-attended item was rubbing the wound bed to clean it, this was only effective in removing debris for two of the four participants that conducted this activity.

The field notes documented by author SK during the study identified considerations with respect to ease and proficiency when conducting wound treatment and unexpected perspectives and practices. Most of the participants (n = 6, 75%) needed to stretch to reach the wounds. Participants were noted to improvise, one using a back scratcher to pull the dressing up the leg and over the wound and another using a walking stick to apply tubular bandage in a similar manner. Several of the participants (n = 3, 38%) could not clearly see some or all of their wounds because the wounded areas extended to the posterior aspect of the leg. An additional participant reported not being able to see the wound at all because of visual impairment and located the wound via touch. The participants appeared well practiced at completing wound treatment, approaching the related activities in a systematic and logical manner. All participants appeared confident, exhibited no hesitation, and some explained what they were doing, and why, as they self-treated.

One participant treated only one leg ulcer during the observation, as the effort to do the dressings on both legs on the same day was reported to be too great. This same participant explained how she had a supply of wound swabs, which she administered herself if she felt the wound was infected, and which she then had delivered to the General Practitioner for processing. She reported having done this this several weeks earlier and the general practitioner had prescribed her antibiotics on the basis of the results.

4.3 | Phase 3: Refinement of the STOW-V Checklist

Refinement of the STOW-V Checklist was informed by the results of the above-mentioned pilot and reconsideration of the information sources that were used during the development of the Checklist. We concluded that the structure, format, and focus of the Checklist (the Checklist Areas and Key Behaviours) were appropriate, however, that some Checklist Areas and Key Behaviours could be combined and that infection should be more comprehensively addressed.

TABLE 2 Draft STOW-V Checklist results

E	ent storage	Yes	Partial	No	N/S	
1	und equipment is stored in a sealed plastic container	3	0	4	1	
2	d dressing packets are taped closed	3	1	3	0	
3	sed dressing packets are dated for disposal	3	0	0	0	5
4	Ta d dressing packets are in a zip lock bag	1	0	1		6
5	All re ipment is available	6	1	1		0
Treatment works		Yes	Partial	No		N/A
6	Free of unne bjects	5	1	2		0
7	No visible dirt	5	3	0	0	0
8	Equipment is set o	8	0		0	0
9	Equipment is in reach ce	8	0		0	0
10	Lighting is on or curtains re open	7	1		0	0
Infection Control		Yes	Partial	o	N/S	N/A
11	Hands are washed before treatm	6	0	2	0	0
12	Hands are washed after removal o essing	4		2	1	1
13	Hands are washed before applying cl g	5		2	1	0
14	Hands are washed at the end of treatmen	5		2	1	0
15	Waste is bagged and tied	4		3	0	1
Removal of dressing						
16	Bandages are removed without causing skin traum		0	0	2	1
17	Tapes are removed without causing skin trauma		0	1	1	1
18	Secondary dressing is removed without causing trauma		0	1	1	1
19	Primary dressing is removed without causing skin trau		1	0	1	0
20	Products are removed immediately before treatment		0	2	0	0
Treatment of skin around wound						
21	Skin around wound is cleansed	3		4	1	0
22	Soap free product is used	7		1	0	0
23	Dry skin is removed without causing sl	1		4	0	2
24	Skin around wound is moisturised	2	0	6	0	0
25	Ph. balanced product is used	2	0	6	0	0
Cleansing of wound						
26	Irrigation fluid has been w	0	0		1	0
27	Irrigation of wound be some splash	0	0		3	0
28	Wound bed rubbin cause bleeding	4	0	3	0	1
29	Some debris co from wound	2	1	4		1
30	Wound bed i ry	4	0	4		0
Assessment of w						
31	Inspe (leans toward, uses magnifying glass)	2	1	5	0	0
32	Ide mments on tissue types	2	0	6	0	
33	comments on wound fluid	6	0	2	0	
34	es/comments on signs of infection (heat, redness, swelling, s)	5	0	3	0	
35	Takes image, tracing or other measurement	0	0	8	0	0
Application of dressing						
36	Dressing applied the correct side down	8	0	0	0	
37	ssing covers wound bed (and beyond wound if indicated)	6	0	2		0
3	ddresses the wound symptom/s	3	1		0	0
39	Tape/ dressing is non-adherent type)	3			0	5
40	Dressing is adhered t			1	0	3
Application of compression therapy						
41	Previous compression did not fall down		0	0	1	5
42	Underpadding is applied fr knee	6		0	0	8
43	Compression n n applied	2	0		1	4
44	Co ccured in place after application	2	0	0		6
45	y in footwear with compression in place	2	0	0	2	

We combined *treatment workplace* and *equipment storage* resulting in the revised Checklist—titled "Self-Treatment of Wounds for Venous Leg Ulcers Checklist" (STOW-V Checklist V1.0)—having eight Checklist Areas (*Equipment and Workspace; Hand Hygiene; Wound Dressing Removal; Skin Care; Wound Cleansing and Debridement; Wound Assessment, Wound Dressing Application and Compression Therapy Application*). We revised the wording of some Key Behaviours to be more easily identified as completed or not completed and through this refinement reduced the number of Key Behaviours in each Checklist Area from five to four.

It was apparent that the "not seen" and "partially completed" codes were an issue as they permitted a level of rater judgement which would be problematic once the STOW-V Checklist was ready for use in practice. Given that behaviours "not seen" or "partially completed" would be flagged for viewing again when the observation Checklist is repeated in clinical practice, it was concluded that these codes could be replaced with the pre-existing "no" as either would result in the activity requiring follow up. This resulted in the revised version of the Checklist having three codes; "yes", "not applicable" and "no".

The STOW-V Checklist (V1.0) has eight Checklist Areas and each has four Key Behaviours. There are 32 Key Behaviours in total of which 26 are principally supported by the wound standards,[20] three by the venous leg ulcer guideline[21] and three by our literature review.[12] The STOW-V (V1.0) was reformatted in Microsoft Word in preparation for testing in paper format in a reliability study.[3]

5 | DISCUSSION

Engaging patients in self-management can be an effective and acceptable approach to the care of chronic conditions.[4] Although the promotion of self-management among those who have chronic wounds has increased over recent decades, and particularly during the COVID-19 pandemic, the extent of the embrace in the professional and nonprofessional wound care community has been limited. The growing recognition that patients can benefit when involved in care[1] and the ever present competition for healthcare funding and resources,[23] are compelling reasons to consider self-treatment of wounds as an approach to wound management.

Our study sought to develop the content of the Self-Treatment of Wounds Checklist (the "STOW Checklist" V1.0) and pilot and refine the Checklist in preparation for reliability testing. We used a systematic and evidence-based approach to developing and using structured observations for the study of health behaviour and to guide the process of developing, piloting and refining the STOW-V Checklist.[15] The three phases of the study drew on multiple evidence sources including; a review of the literature; discussion with key stakeholders including healthcare consumers; consultation with clinical, research, and statistics experts within an advisory panel; our mixed methods descriptive explanatory study conducted with self-treaters of chronic wounds[2,11,12,17,18]; clinical practice guidelines[21]; and wound management standards.[19]

The pilot of the STOW Checklist V1.0 was undertaken with eight patients who self-treated their leg ulcers. The pilot identified Key Behaviours that were and were not undertaken and some that were more challenging to complete than others. The Checklist was refined following the pilot resulting in the STOW-V Checklist (V1.0) which includes eight Checklist Areas with four Key Behaviours and 32 items in total.

The vision for the STOW-V Checklist is that it is used by nurses to support self-treatment of wounds, in the first instance venous leg ulcers, in an evidence-based manner. The value of the Self-Treatment of Wounds Checklist is potentially high, as the Checklist can help to identify Key Behaviours that are and are not conducted and therefore direct the nurse to consider where intervention (in the form of patient education, support, and monitoring) is required. The STOW-V Checklist could be a valuable component of a complex intervention for self-management of venous leg ulcers. Nurses must be aware of the health literacy of their patients and ideally this would be assessed before self-treatment commences so that the patients understanding of self-treatment, the aetiology of their wound and the treatments that they are prescribed is identified and optimised.

To enable effective self-treatment of chronic wounds it is imperative that the Checklist is tested for reliability and this has been completed.[3] The Checklist should be used in a shared care model whenever possible and the required patient education, support, and monitoring must be available. Future research should focus on the utilisation of the STOW-V Checklist by patients who have wounds other than venous leg ulcers. The benefit of translating the Checklist into other languages is evident given the universal presence of chronic wounds in the community. A shared care model within which the STOW-V Checklist V1.0 can be used should be established and the resulting impact of self-treatment of wounds on patient, care provider and system outcomes should be investigated.

6 | CONCLUSION

This paper has reported the development, pilot and refinement of the "Self-Treatment of Wounds for Venous Leg Ulcers" Checklist. To our knowledge, this is the first

reported research that has systematically developed a theoretically and evidence-based tool to assist nurses to appraise the conduct of leg ulcer treatment when undertaken by the patient. Our subsequent publication[3] reports a study that investigated the reliability of the STOW-V Checklist V1.0 when used by nurses with patients who had venous leg ulcers in the community care setting. The STOW-V Checklist can be accessed via this subsequent publication.

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DATA AVAILABILITY STATEMENT

Research data are not shared.

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