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Barriers and Enablers to Family Carers Providing Pressure Ulcer Care to Older People Living at Home: A Qualitative Study

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ABSTRACT

Aim: To explore barriers and enablers to providing pressure ulcer care experienced by family carers of older adults.

Design: Qualitative interview study informed by the Theoretical Domains Framework.

Methods: Semistructured interviews with a purposive sample of adult family carers of persons aged 65 years and above who had a Category 2 or above pressure ulcer. Participants were identified from district nursing caseloads in England. Data were analysed using the Framework Approach.

Results: Twenty-seven carers participated. Frequently performed pressure ulcer care behaviours included ensuring adequate nutrition and hydration; initiating, facilitating and coordinating professional care; managing incontinence/moisture; helping with repositioning and mobility; and keeping the wound clean/covered. Key influences on behaviour were reported in the domains of *Knowledge*, *Environmental Context and Resources*, *Social/Professional Role and Identity*, *Beliefs about Consequences*, *Emotion* and *Beliefs about Capabilities* and *Skills*. Carers recognised the importance of pressure ulcer care, felt committed to their relative's welfare and saw the benefit of their input. Key barriers included a lack of information and training, difficulty accessing healthcare resources and the emotional impact of caregiving. Support from health professionals and from family and friends was an enabler of care.

Conclusion: Family carers play a significant role in pressure ulcer care but face challenges in doing so. We highlight the complexity of tasks they perform and identify a broad range of barriers and enablers to pressure ulcer care.

Summary

- What does this paper contribute to the wider global clinical community
  - We highlight the complex nature of pressure ulcer care and report the wide range of pressure ulcer care behaviours that family carers perform. These included ensuring adequate nutrition and hydration; initiating, facilitating and coordinating professional care; managing incontinence and moisture; keeping the older person moving; and keeping the wound clean and covered.
  - Key barriers to providing pressure ulcer care included a lack of early information and skills training, difficulties navigating care services and the emotional demands of providing care. Availability of pressure ulcer equipment and support from health professionals, family and friends, where available, were important enablers of care.

- We make recommendations for how healthcare providers can address carers' information and support needs.
- Implications for the profession and/or patient care.
  - Pressure ulcer care pathways should consider the information and support needs of family carers.
- Impact.
  - Our findings will inform the co-production of an intervention to support family carers of older people with pressure ulcers.
- Reporting method.
  - The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was followed.
- Patient or public contribution.
  - Four patient and public members advised on the funding application, recruitment materials and methods, and data interpretation.

1 | Introduction

Pressure ulcers are defined as localised injury to the skin and/or underlying tissue usually over a bony prominence due to pressure or pressure in combination with shear [1]. Factors contributing to pressure ulcer development include limited mobility, impaired sensation, cognitive impairment, poor nutrition, unmanaged incontinence, and poor health and circulation. The populations at greatest risk of developing pressure ulcers are frail, older individuals [2] and people with spinal injuries [3].

Pressure ulcers impose a significant burden on patients, causing pain, exudate and malodour [4]. They can hinder rehabilitation [5] and lead to hospital admissions and delayed hospital discharge [6, 7]. Complications include soft tissue and bone infections, sepsis and even death [8]. In 2017/18, the U.K. National Health Service (NHS) treated an estimated 202,000 people for community-acquired and hospital-acquired pressure ulcers, incurring a cost of £571.98 million [9], with additional expenses arising from litigation.

Treatment involves both caring for the wound and reversing or mitigating the factors associated with pressure ulceration. Wound care involves irrigating, washing or cleansing the wound, applying topical agents such as ointments, creams or gels to the wound surface, and dressing the affected area. In healthcare settings globally, the SSKIN bundle [10] is widely used to reverse or mitigate the factors associated with pressure ulceration. SSKIN stands for Surface (ensuring the timely provision of pressure-relieving mattresses and cushions), Skin inspection (regularly inspecting vulnerable areas for early signs of tissue damage), Keep moving (encouraging mobility and repositioning), Incontinence management (keeping the skin clean and dry) and Nutrition (optimising wound healing by ensuring good nutrition and hydration) [11]. In the United Kingdom, the bundle has been extended to aSSKINg, with the inclusion of assessing risk (completing risk assessment tools) and giving information (providing health education) [12]. In in-patient settings, aSSKINg bundle activities are the responsibility of the registered nurse. Older people living at home, however, are not subject to 24-h nursing supervision, but those who have a nursing need will receive nursing care from a community nursing service. Older people with chronic wounds receive between one and three community nursing visits per week for wound care, depending on the severity of the pressure ulcer [13]. Those who are unable to meet their own personal care needs will typically receive assistance from family or friends.

Many countries are concerned about the burden on family carers of providing care to older people living at home and are developing policies to support and maintain the supply of family care [14]. Despite policy imperatives, in the 10-year period before this study began in 2022, only four published studies explored the perspectives of family carers (including those of older people) regarding pressure ulcer prevention and management [15–19]. Likewise, only four additional studies have been published studies since this study began [20–23]. These studies highlighted a high burden on carers, a lack of carer training and the importance of effective communication with healthcare professionals; however, most participants were caring for young people with spinal injuries.

Haesler et al. [24] published the results of a consumer survey undertaken on behalf of the National Pressure Ulcer Advisory Panel (NPUAP), European Pressure Ulcer Advisory Panel (EPUAP) and Pan Pacific Pressure Injury Alliance (PPPIA), which included 850 informal carers. The findings endorsed the results of previous research; however, it was unclear how many respondents were caring for people with pressure ulcers versus people at risk of pressure ulceration or older people versus younger people with spinal injuries. There is therefore very limited evidence to inform the development of interventions to support informal carers of older adults in the provision of pressure ulcer care. This study specifically examined the experiences of same- and next-generation informal carers and the impact on them of providing pressure ulcer care to older people living at home.

2 | Aim

The aim of the current study was to explore the views and experiences of family carers for older people living at home with a focus on understanding the barriers and enablers to providing pressure ulcer care.

3 | Methods

3.1 | Design

This was a qualitative interview study, using data collection and analysis informed by the Theoretical Domains Framework (TDF) [25].

3.2 | Theoretical Framework

The TDF is an overarching theoretical framework comprised of 14 domains, integrating constructs from multiple theories relating to behaviour change. The framework represents the wide range of individual, sociocultural and environmental influences on behaviour (see Table 1) and has been widely used within qualitative health-related research to facilitate the identification of the determinants of behaviour [26, 27]. For example, it has been used to identify the barriers and enablers to the

TABLE 1 | Theoretical Domains Framework (V2) (from Ref. [25]).

Domain	Definition	Constructs
Knowledge	An awareness of the existence of something	Knowledge (including knowledge of condition/scientific rationale) Procedural knowledge Knowledge of the task environment
Skills	An ability or proficiency acquired through practice	Skills Skills development Competence Ability Interpersonal skills Practice Skill assessment
Social/professional role and identify	A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting	Professional identity Professional role Social identity Professional boundaries Professional confidence Group identity Leadership Organisational commitment
Beliefs about capabilities	Acceptance of the truth, reality or validity about an ability, talent or facility that a person can but to constructive use	Self-confidence Perceived competence Self-efficacy Perceived behavioural control Beliefs Self-esteem Empowerment Professional confidence
Optimism	The confidence that things will happen for the best or that desired goals will be attained	Optimism Pessimism Unrealistic optimism Identity

(Continues)

TABLE 1 | (Continued)

Domain	Definition	Constructs
Beliefs about consequences	Acceptance of the truth, reality or validity about outcomes of a behaviour in a given situation	Beliefs Outcome expectancies Characteristics of outcome expectancies Anticipated regret Consequences
Reinforcement	Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus	Rewards (proximal/distal, valued/not valued, probable/improbable) Incentives Punishment Consequents Reinforcement Contingencies Sanctions
Intentions	A conscious decision to perform a behaviour or a resolve to act in a certain way	Stability of intentions Stages of change model Transtheoretical model and stages of change
Goals	Mental representations of outcomes or end states that an individual wants to achieve	Goals (distal/proximal) Goal priority Goal/target setting Goals (autonomous/controlled) Action planning Implementation intention

(Continues)

TABLE 1 | (Continued)

Domain	Definition	Constructs
Memory, attention and decision processes	The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives	Memory Attention Attention control Decision-making Cognitive overload/tiredness
Environmental context and resources	Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence and adaptive behaviour	Environmental stressors Resources/material resources Organisational culture/climate Salient events/critical incidents Person × environment interaction Barriers and facilitators
Social influence	Those interpersonal processes that can cause individuals to change their thoughts, feelings or behaviours	Social pressure Social norms Group conformity Social comparisons Group norms Social support Power Intergroup conflict Alienation Group identity Modelling
Emotion	A complex reaction pattern, involving experiential, behavioural and physiological elements, by which the individual attempts to deal with a personally significant matter or event	Fear Anxiety Affect Stress Depression Positive/negative affect Burn-out
Behavioural regulation	Anything aimed at managing or changing objectively observed or measured actions	Self-monitoring Breaking habit Action planning

implementation of evidence-based pressure ulcer care in an integrated community care team [28] and in care homes [29]. At the time the current study was conceived and undertaken, the TDF had not previously been applied to research involving family carers and pressure ulcer care to older people living at home.

3.3 | Inclusion Criteria

Study participants were adult family carers, that is any relative, partner, friend or neighbour aged 18 years or above who provided at least twice weekly care to a person aged 65 years and above with a Category 2 or above pressure ulcer in the last 3 months. Only people with mental capacity to consent to participate and living relatives were eligible to take part.

3.4 | Recruitment

Purposive sampling was used to capture the perspectives of family carers in employment or retired, with and without other caring responsibilities, and who cared for persons with and without age-related cognitive decline.

The principle of data saturation informed sample size estimates. In the first instance, it was expected that ten interviews would be conducted with same-generation carers (e.g., spouses and similar age friends) and ten with next-generation carers (e.g., adult children and younger friends). After ten interviews, when three further interviews had been conducted with no new themes emerging, the point of saturation would have been achieved [30]. Thus, it was expected that between 13 and 16 same-generation carers would be recruited to take part and 13–16 next-generation carers. However, during the recruitment phase, fewer same-generation carers were being referred to the study and fewer were agreeing to take part. Therefore, the research team needed to critically reflect on the sampling strategy. Subsequently, it was decided that while we would continue to make efforts to recruit between 26 and 32 family carers and to target both same-generation and next-generation carers, if slower recruitment of same-generation carers persisted, the quality and richness of the data would be enhanced through the over-recruitment of next-generation carers, where these carers were from diverse ethnic backgrounds.

Potential participants were identified via clinical collaborators in the study locations and drawn from local district nursing team caseloads in two geographical regions in East London and another region in the East of England. Collaborators included district nursing team managers and dedicated pressure ulcer nurses working in the district nursing teams. Collaborators also included specialist tissue viability nurses whose responsibility it was to review adverse incident reports relating to community-acquired pressure ulcers.

Clinical collaborators passed family carer contact details to the primary clinical collaborator, who was the lead nurse for tissue viability in the study locations. The lead nurse telephoned potential participants, screened them for eligibility, explained what participation would involve and posted or emailed them a copy of the participant information sheet. If the family carer indicated a willingness to learn more about the study, their contact details were passed on to the research team and they were contacted by a research assistant (NS), who confirmed the receipt of the PIS and answered any questions they had regarding the study. To enable participation without financial sacrifice, participants were offered a £20 voucher. Recruitment took place between October 2022 and August 2023.

3.5 | Data Collection

Participation involved taking part in a one-off interview. Participants were given the opportunity to be interviewed in-person (e.g., in their home), online (e.g., using Zoom) or on the telephone. Immediately prior to the interview, informed consent was requested. Family carers were informed that participation was entirely voluntary, they were free to withhold consent and doing so would not affect the care the person they cared for received from any relevant service (e.g., from the NHS). Verbal consent was digitally recorded.

The interview schedule was arranged in three parts: (i) demographic questions (see Appendix 1); (ii) nonidentifiable information about the care recipient, which was limited to gender and age range (see Appendix 2). Responses to the first and second parts of the schedule were input live into Qualtrics (Qualtrics, Provo, UT), an online platform used to aggregate data describing a sample of participants; and (iii) participants were asked about their experiences of pressure ulcer care using questions based on the TDF (see Appendix 3, Table A1). This part of the interview opened with the question: *What were your initial thoughts when you were told the person you care for had a pressure ulcer?* Thereafter, participants' experiences of pressure ulcer care were explored. All domains of the TDF were covered; however, the order in which questions were asked depended on the direction of the narrative. Within each TDF domain, there was between one and three lead questions and between one and three prompt questions. Interviews were conducted by a female research assistant (NS), a BACP-qualified, person-centred psychotherapist, with experience conducting qualitative interviews, but no prior relationship with participants interviewed. This part of the interview was audio-recorded. The audio recordings were transcribed verbatim by a professional transcription agency, and deidentified transcriptions were imported into NVivo 12 software [31].

The interview schedule was drafted and refined in consultation with four patient and public involvement (PPI) advisors, who provided feedback on whether the questions were relevant, meaningful and jargon-free, and whether the structure of the questions was easy or difficult to understand. After the first interview, two members of the research team, with no relationship to the participants (K.M., a psychologist; and C.M., a nurse) reviewed the audio recording and subsequently modified some wording to increase the effectiveness of the interview questions; for example, a question pertaining to whether participants found anything about pressure ulcer care rewarding generated few responses and was changed to whether anything helped to make pressure ulcer care worthwhile. Data from this interview were included in the analysis.

3.5.1 | Data Analysis

The qualitative data were analysed to identify both the pressure ulcer behaviours performed by family carers and the barriers and enablers they faced in performing these behaviours. Both analytical streams were informed by the Framework Approach to

qualitative data analysis [32]. Interviews and coding were conducted concurrently.

To identify the pressure ulcer behaviours performed by family carers, one member of the research team (C.M.) read the first few transcripts line by line and applied an open or inductive code describing what they had interpreted in the passages as important. After coding the first few transcripts, codes were grouped together into categories to form a working analytical framework or framework matrix. This matrix was then applied to the remaining transcripts. Data were managed and summarised using Microsoft Excel, which included a chart per category and reference to illustrative quotes. K.M. interrogated the framework matrix and cross-checking the reduced data with the interview transcripts and challenging emerging interpretations. Any disagreements were resolved through discussion until consensus was reached.

To identify the barriers and enablers to family carers performing pressure ulcer behaviours, steps previously reported in TDF research exploring the barriers and facilitators to healthcare professional behaviour change were followed [33]. After familiarisation with the interview transcripts, guided by the TDF, the transcripts were deductively coded, with quotes identified as either barriers or enablers coded into the appropriate TDF domains.

Coding was conducted individually and then cross-checked collaboratively, with regular team discussions, challenging of interpretations, exploration of researcher assumptions and iterative review of coding within the TDF, to ensure appropriate domain allocation and reduce potential researcher bias. A code book was developed to help guide coding to the TDF. Disconfirming cases were actively examined, to ensure that findings accurately reflected the data and avoid the oversimplification of coding patterns.

To enhance coding accuracy, a selection of transcripts was independently coded by three researchers (K.M., C.M. and N.S.) who then discussed the coding until consensus was reached. An acceptable level of inter-rater reliability was taken at 60% agreement [26], which was reached following coding of the third transcript. Inter-rater agreement was used as a calibration exercise to support consistent application of the TDF coding framework between the team, to improve coding decisions. The remaining transcripts were then coded individually by N.S. This coding step was performed digitally in NVivo.

After coding data into theoretical domains, belief statements were inductively generated to represent similar underlying beliefs held by participants within each domain. Statements were developed by N.S. and classified as either a barrier or an enabler to pressure ulcer care. After the analysis of all interview transcripts in NVivo, statements were transferred to Microsoft Excel and interrogated by K.M. and S.P.H. Any disagreements were resolved through discussion until consensus was reached. Belief statements were also presented to the PPI advisors to ensure clarity and understanding of each statement. Amendments to the belief statements were then corrected in NVivo.

Next, belief statements were imported into the Lucid card sorting app (https://www.lucidchart.com) and the research team (N.S., K.M., C.M. and S.P.H.) linked together similar beliefs to inductively generate subthemes within each domain. Throughout this process, the original quotes were revisited in NVivo to ensure the accuracy of interpretation and meaning. To ensure accurate data management, belief statements and subthemes were then transferred back into Microsoft Excel, where the number of statements representing barriers and the number representing enablers were counted and then transferred back into NVivo.

Domains were then assessed for importance by K.M., S.P.H., N.S. and C.M., using four criteria previously applied in TDF research [33, 34]. The first criterion was frequency. Use of NVivo allowed frequency counts across domains, subthemes and belief statements. Frequency related to the number of participants whose quotes had contributed to a particular belief statement or subtheme. The second was elaboration, that is, the number of subthemes and belief statements within the domain. The third was the perceived impact on behaviour, that is, whether the item was considered a driver of pressure ulcer behaviour, and finally, the presence of conflicting belief statements (e.g., 'I am confident providing pressure ulcer care' versus 'I am not confident providing pressure ulcer care').

3.6 | Ethical Considerations

Ethical approval was granted by the NHS Health Research Authority Wales Research Ethics Committee 6 (Ref 22/WA/0099).

3.7 | Rigour and Reflexivity

To ensure rigour, the study followed and is reported using the COREQ checklist [35].

3.8 | Findings

In total, 93 eligible family carers were referred to the primary clinical collaborator, of whom 80 (86%) were contactable and 63 (78.8%) family carers agreed to their contact details being forwarded to the research team. The research team were able to contact 51 individuals (80.9%) comprising 19 (37.2%) same-generation carers and 32 (62.7%) next-generation carers. Of those they contacted, 32 (62.7%) agreed to take part comprising 8 (25%) same-generation carers and 24 (75%) next-generation carers. More same-generation carers declined to participate ($n = 11$, 57.9%) than next-generation carers ($n = 8$, 25.0%). Of those who agreed to take part, three subsequently indicated that they were no longer interested, either not attending the scheduled interview or failing to provide informed consent.

In total, 27 full interviews were conducted: six (22%) with same-generation carers and 21 (78%) with next-generation carers. Figure 1 shows the flow of participants through the study. All interviews were conducted by telephone and lasted from 21 to 142 min (median 59, IQR 43 min).

Despite challenges with same-generation carer recruitment, the final dataset of 27 interviews was deemed to have achieved sufficient analytical depth. This assessment was made when considering both data saturation, with rich data across TDF domains and no new themes emerging from participants' accounts and information power, where the study was deemed to have met the concept criteria, with well-defined, coherent categories supported by rich data, demonstrating sufficient depth, consistency and variation.

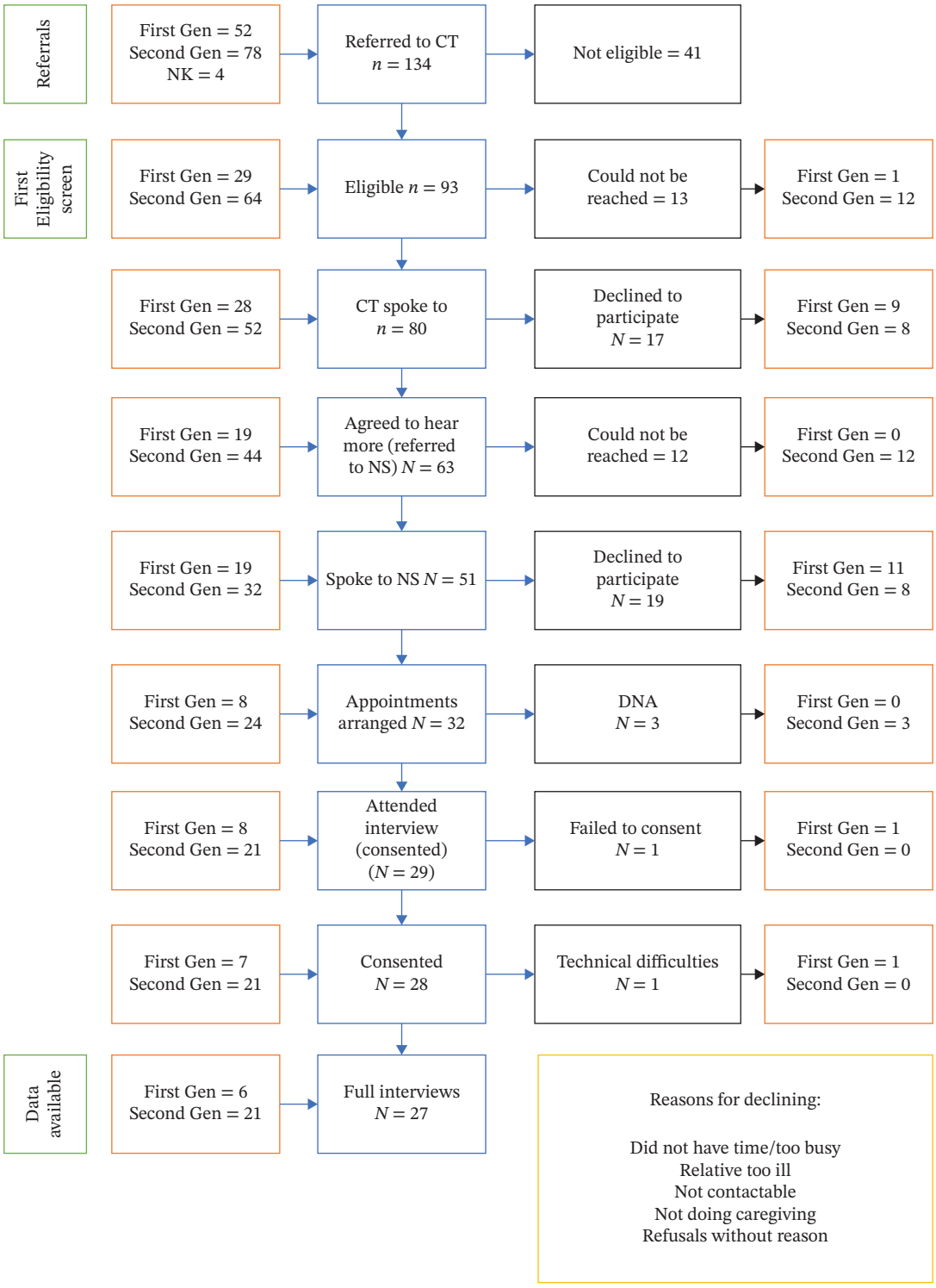

FIGURE 1 | Flow of participants through the study. First Gen, first generation; Second Gen, second generation; n/N, number; DNA, did not attend; CT and NS, author initials.

3.9 | Characteristics of Participants

Demographic data relating to participants and care recipients are presented in Table 2. The mean age of participants was 60.1 (SD 12.8) years. In terms of relationships with care recipients, participants were a combination of spouses, adult children, nieces and granddaughters. Slightly more females ($n = 16$, 59.3%) participated in the study than males ($n = 11$, 40.7%). Family carers were from diverse ethnic backgrounds, with participants identifying as White British/White Irish ($n = 16$, 59.3%), Black African Caribbean ($n = 4$, 14.8%), Black British ($n = 2$, 7.4%), Pakistani ($n = 2$, 7.4%), Indian ($n = 1$, 3.7%) and Arabic ($n = 1$, 3.7%).

Most care recipients were female ($n = 23$, 85.2%), and two-thirds ($n = 18$, 66.6%) were aged over 80 years. The four male care recipients were all cared for by female carers (one spouse, two

TABLE 2 | Participant and care recipient demographic characteristics.

	All participants ($n = 27$)	Same generation ($n = 6$)	Next generation ($n = 21$)
Participant age in years, mean (SD)	60.1 (12.8)	77.3 (6.9)	55.2 (9.4)
Participant gender, *n* (%)	16 (59.3)	1 (16.7)	15 (71.4)
Female	11 (40.7)	5 (83.3)	6 (28.6)
Male			
Relationship to care recipient, *n* (%)			
Husband	5 (18.5)	5 (83.3)	0
Wife	1 (3.7)	1 (16.7)	0
Daughter	11 (40.7)	0	11 (52.4)
Son	6 (22.2)	0	6 (28.6)
Niece	3 (11.1)	0	3 (14.3)
Granddaughter	1 (3.7)	0	1 (4.8)
Ethnicity, *n* (%)			
White British/Irish	16 (59.3)	5 (83.3)	11 (52.4)
Black African-Caribbean	4 (14.8)	0	4 (19.0)
Black British	2 (7.4)	0	2 (9.5)
Pakistani	2 (7.4)	1 (16.7)	1 (4.8)
Indian	1 (3.7)	0	1 (4.8)
Arabic	1 (3.7)	0	1 (4.8)
Not known	1 (3.7)	0	1 (4.8)
Age of care recipient in years, *n* (%)			
65–69	0	0	0
70–79	9 (33.3)	4 (66.7)	5 (23.8)
≥ 80	18 (66.7)	2 (33.3)	16 (76.2)
Location of residence, *n* (%)			
Same as care recipient	20 (74.1)	6 (100.0)	14 (66.7)
Different to care recipient	7 (25.9)	0	7 (33.3)
If living in the same property as the cared for person, amount of care provided per week (hours), mean (SD)	138.8 (52.8)	147 (51.4)	135.3 (54.9)
If living in a different property from the care recipient, number of visits a week			
Twice a week	0		0
Three to four times a week	2 (28.6)		2 (28.6)
Five to six times a week	0		0
Once a day	3 (42.9)		3 (42.9)

(Continues)

TABLE 2 | (Continued)

	All participants ($n = 27$)	Same generation ($n = 6$)	Next generation ($n = 21$)
More than once a day	2 (28.6)		2 (28.6)
Economic activity			
Retired	10 (37.0)	5 (83.3)	5 (23.8)
Full-time carer	2 (7.4)	1 (16.7)	1 (4.8)
Unemployed	5 (18.5)		5 (23.8)
Full-time employment	5 (18.5)		5 (23.8)
Part-time employment	3 (11.1)		3 (14.3)
Working from home	1 (3.7)		1 (4.8)
Not in full-time employment	1 (3.7)		1 (4.8)
Participants with other family members involved in caring for the person with a pressure ulcer	13 (48.1)	0	13 (61.9)
Participants with additional formal or informal responsibilities for looking after a child or young person aged under 18 years	7 (25.9)	0	7 (33.3)

daughters and one niece). Female care recipients were cared for by an almost equal number of male ($n = 11$, 47.8%) and female ($n = 12$, 52.2%) carers. Most participants ($n = 20$, 74.1%) lived in the same property as the care recipient, and where this was the case, they often reported providing care 24 h a day, 7 days a week. Those living in a different property reported visiting the care recipient up to several times a day. Almost half ($n = 13$, 48.1%) shared visiting and caring responsibilities to some extent with other family members, but the amount of support they received varied.

One-third ($n = 9$, 33.3%) of family carers were economically active. The remaining participants described themselves as either retired, unemployed or full-time carers. Some ($n = 4$, 14.8%) gave help or support to another person in addition to the person with a pressure ulcer due to a long-term physical or mental health condition or illness, or problems related to old age. Others ($n = 7$, 25.9%) reported formal or informal responsibilities for looking after a child or young person aged under 18 years, either their own children or grandchildren.

3.10 | Pressure Ulcer Behaviours

The first part of our analysis pertained to pressure ulcer behaviours, that is, the range of actions undertaken by family carers to support pressure ulcer care for older people living at home. A wide range of pressure ulcer behaviours were performed by family carers. The most frequently performed included ensuring adequate nutrition and hydration; initiating, facilitating and coordinating professional care; managing incontinence and moisture; keeping the older person moving; and keeping the wound clean and covered. Lesser performed behaviours included undertaking regular skin inspection; making the most of support surfaces; and managing pressure ulcer pain and monitoring for infection. Pressure ulcer behaviours together with descriptors are displayed in Table 3, where the number in the parentheses represents the number of participants performing the identified behaviour.

The proportion of carers performing these behaviours was similar among same- and next-generation carers, except for keeping the older person moving, which was performed by 15 (71.4%) next-generation carers but just one (16.7%) same-generation carer. Both male and female carers reported performing personal care. There were, however, some differences between them; for example, a larger proportion of male ($n = 10/11$, 90.9%) than female carers ($n = 8/16$, 50%) reported managing incontinence and moisture. Keeping the wound clean and covered was also reported by more male (7/11, 63.6%) than female (6/16, 37.5%) carers. Slightly more female (7/16, 43.8%) than male (3/11, 27.3%) carers reported performing skin inspections.

3.11 | Barriers and Enablers to Enacting Pressure Ulcer Care Behaviours

Reported barriers and enablers to pressure ulcer care were coded in all 14 of the TDF domains. Each domain was mentioned by at least 13 participants. In Table 4, the domains are ranked in order of the frequency of participants who mentioned that domain and the number of belief statements and subthemes within domains. This information is further elaborated in Table 5, which reports all of the subthemes with sample belief statements and supporting direct quotes from participants. A full list of generated belief statements is provided in Supporting Table 1.

TABLE 3 | Pressure ulcer behaviours performed by participants.

Pressure ulcer behaviours	Descriptor
Ensuring adequate nutrition and hydration ($n = 26$)	• Planning a healthy and balanced diet and preparing food • Prompting fluid intake • Helping with feeding • Providing vitamin supplements
Initiating, facilitating and coordinating professional care ($n = 22$)	• Initiating professional care by contacting either the GP or district nursing service • Facilitating district nursing visits by giving nurses access to the older person's property or accompanying nurses during procedures • Ensuring care workers delivered high quality personalised care • Making applications for health and social care assessments • Following up when community nurses did not attend scheduled appointments • Making enquiries when support surfaces were not delivered as expected
Managing incontinence and moisture ($n = 18$)	• Changing incontinence pads/cleaning after episodes of incontinence • Applying barrier cream • Prompting toileting • Purchasing incontinence pads
Keeping the older person moving ($n = 16$)	• Promoting movement to maintain mobility • Turning and tilting for comfort and pressure area relief • Offloading pressure at the heels
Keeping the wound clean and covered ($n = 13$)	• Cleaning and dressing the pressure ulcer prior to the first assessment visit from the community nurse • Monitoring the condition and integrity of the dressing the nurses had applied, and undertaking unscheduled dressing changes when it had become soiled or dislodged • Stock management including ordering, tracking, storing and controlling the supply of wound management products • Purchasing dressings • Assessing healing
Undertaking regular skin inspection ($n = 10$)	• Checking for signs of deterioration
Making the most of support surfaces ($n = 6$)	• Removing and disposing of existing mattresses to accommodate replacements • Adjusting dynamic mattress settings for comfort • Reassuring the older person about the sounds emitted from motorised pumps on dynamic mattresses • Checking the integrity of support surfaces
Managing pressure ulcer pain and monitoring for infection ($n = 3$)	• Giving pain relieving medication • Checking temperature • Monitoring for swelling

TABLE 4 | Number of participants reporting each domain and number of belief statements and subthemes within domains.

Theoretical domain	Frequency—number of carers mentioning domain	Frequency rank	Number of belief statements						Number of subthemes	Subthemes rank
			Barriers	Barriers rank	Enablers	Enablers rank	Total	Total rank		
Knowledge	27	*1*	13	*4*	29	*1*	42	2	12	2
Environmental context and resources	25	*2*	40	*1*	21	*2*	61	1	17	1
Memory, attention and decision processes	24	*3*	3	*8*	16	*3*	19	5	7	3
Social/professional role and identity	24	*3*	5	*6*	11	*8*	16	7	5	4
Intention	24	*3*	1	*10*	9	*9*	10	12	4	8
Goals	22	*6*	0	*11*	14	*5*	14	8	2	12
Beliefs about capabilities	22	*6*	7	*5*	6	*11*	13	9	3	11
Emotion	21	*8*	19	*2*	4	*14*	23	4	4	8
Beliefs about consequences	20	*9*	16	*3*	16	*3*	32	3	5	4
Optimism	20	*9*	3	*8*	8	*10*	11	11	4	8
Social influence	16	*11*	0	*11*	12	*6*	12	10	5	4
Reinforcement	16	*11*	0	*11*	6	*11*	6	13	2	12
Skills	13	*13*	5	*6*	12	*6*	17	6	5	4
Behavioural regulation	13	*13*	0	*11*	5	*13*	5	14	1	14
TOTALS			112		169		281		76	

Note: The italics refer to rank orders of frequency of carer mentions, barriers, enablers and total; 1 = highest rank in frequency.

TABLE 5 | Barriers and enablers to pressure ulcer care within each theoretical domain.

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
Environmental context and resources: Any circumstance of a person's situation or environment that discourages or encourages the development of skills and abilities, independence, social competence and adaptive behaviour	Information and advice ($n = 19$)	I have not been provided with printed information about PU care, but it would have been useful for my PU care	5	7	12	*No, no, I've never seen information sheets (PUC01)*
	Support surfaces ($n = 17$)	We have been provided with special mattresses and cushions to help relieve pressure when my relative is in bed or on the chair for long periods	3	1	4	*She's got a long contour pressure cushion on her chair, she's got an electric chair [...] and, she's got a high-risk pressure mattress. [...]. The equipment makes things easier. PUC10*
	Availability of wound management products ($n = 13$)	Following up NHS dressing supplies places an extra burden on my PU caring role,	2	0	2	*I had a bit of a problem with, [...] special [dressing] pads and the District Nurses were getting them but [...] sometimes, they've come around and said, 'Well, there's no [dressing] pads left'.[...] Well, I make sure that they've got them, [...], they bring them, just make sure that they've got everything there, otherwise, they just turn up sometimes, and they haven't got anything with them. (PUC11)*
	DN accessibility, scheduling and reliability ($n = 11$)	I had to treat the PU by myself as the DNS did not respond promptly to the referral asking them to visit my relative	7	1	8	*a week later I rang them to say nobody's been, [...] and it was another week before anybody came. [I had to] Put extra barrier cream on. (PUC03)*
	GP input ($n = 12$)	The GP does not get involved in PU wounds care	3	3	6	*I spoke to the doctor about it and she said it's more of a nurse thing she said. (PUC08)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Personalised care ($n = 7$)	The current homecare package does not provide sufficient visits to meet our family's needs	4	1	5	*the Social Worker came round and she eventually said that, she could have one carer, twice a day for 5 days a week. Why [only] the 5 days? (PUC16)*
	Out of pocket payments ($n = 9$)	I have to make out of pocket payments to ensure there are sufficient dressings available	3	1	4	*They're not there, they don't come. So, I went up to the chemist and paid £45 for a box of dressings ...(PUC01)*
	Having the time to care for relative ($n = 5$)	No longer working means, I have time to provide PU care	1	2	3	*it would be difficult if I was still working [...]. But as we are both retired it's not an issue. (PUC02)*
	Informal networks of support ($n = 5$)	I have family and friends that help me provide PU care	1	2	3	*Asking family, before everyone, family is here, my sisters, aunties, [...] family helps, give ideas, advice, what to do, how to sit, how to do this, help before everyone, even doctors it was, family help. (PUC13)*
	Moving and handling equipment ($n = 5$)	I have the moving and handling equipment needed to move my relative.	2	2	4	*we've got slip sheets, slide sheets, so, I can move her with them. (PUC17)*
	Care worker ($n = 5$)	Most care workers are very alert to the signs of skin damage	1	1	2	*because our carers are quite good, [...] they do keep an eye on it, and they'll let us know, and then they'll let the office know, the care office, and someone will contact the GP, then they send out the nurse (PUC29)*
	Wider health and social care team ($n = 4$)	Lack of continuity of care from the wider health and social care team makes PU care harder	1	0	1	*it's a different one every time, so there's no continuity in the person you're dealing with (PUC01)*
	Care co-ordination ($n = 4$)	Lack of joined up services have prevented the PU from healing	2	0	2	*things got worse, they didn't put her on antibiotics because they were trying to work with the district nurses who were coming and saying one thing and then they don't put in the notes, the GP never got the information. (PUC25)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Access to physiotherapists ($n = 3$)	I can't access the physiotherapy needed to keep family member moving	2	0	2	*the physio actually said it would take months for them to get to mum (PUC25)*
	Discharge planning ($n = 2$)	The hospital's failure to arrange PU care on my relative's discharge makes my caring role harder.	1	0	1	*she's tended to come out of hospital with a pressure sore, she doesn't go in with a pressure sore, she comes out with a pressure sore but it's not kind of discussed. (PUC14)*
	Patient condition ($n = 2$)	The district nurses' insistence on bedrest makes everything more difficult	1	0	1	*I'd like to be, you know, if she could have a couple of hours in the chair, I'd like someone to say, 'Right, don't worry, a couple of hours', which most of them do, but you do get the odd one, like the Pressure Sore Nurse, herself, said, 'Not to get her out of the bed, at all'. (PUC17)*
	COVID circumstances ($n = 1$)	To reduce the risk of COVID-19 transmission from different care workers visiting my relative, I chose not to have care workers	1	0	1	*Yes because about 3 years ago I caught Covid and my view was that the least amount of people that come in the house the better it was for her because at the time I was getting something like eight or nine, ten carers, different ones come in. (PUC19)*
Knowledge: An awareness of the existence of something	SSKIN—keep moving ($n = 21$)	Frequent repositioning is an important part of PU care	0	2	2	*Well I know that they've got to be turned, the main thing and not being in the same position for too long (PUC17)*
	Illness perceptions ($n = 21$)	I did not realise how long it can take PUs to heal	4	5	9	*I thought that, it would all be over and done with, in a few weeks, a month tops, I didn't expect it to get worse, and worse, when people were actually doing things. I don't think I realised, just how bad these things are (PUC16)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Information about prevention and/or risk ($n = 20$)	I knew nothing about PUs before my relative developed one	3	0	3	*I didn't know anything about it before, we only, I mean, we only sort of found out about it really, through my mum, when she started getting them. (PUC29)*
	Sources of information (receipt of information) ($n = 15$)	I have taught myself about PUs	0	9	9	*So, everything we've done is because we've learnt it ourselves (PUC25)*
	SSKIN—nutrition ($n = 14$)	Good nutrition is important for PU care	0	2	2	*But she's got to eat well and drink a lot, and keep, she's got little energy drinks (PUC17)*
	SSKIN—incontinence and moisture ($n = 13$)	Managing moisture, urinary and faecal incontinence is essential for PU care	0	3	3	*I'm aware of what causes, what can cause the pressure ulcers and also making sure she's changed regularly to prevent her from being soiled. (PUC09)*
	SSKIN—skin inspection ($n = 12$)	I have learnt what to look for to identify a PU	0	3	3	*when I was looking, the back of her leg, looked like it was going very red and bruised, and I thought, that's, no, that's another one coming up. (PUC16)*
	Information to manage and/or care ($n = 9$)	I received little advice on how to care for PU	3	3	6	*Nobody sat us down and said like, 'Your mum's bedbound, these are the sort of things that can happen, this is what you need to look out for', nobody ever did that. (PUC29)*
	SSKIN—dressing ($n = 6$)	I understand how to use the various PU dressings that are available	1	1	2	*So, if you apply the heat from your own hands it helps, on the back of that plaster, it helps that glue become more sticky and it activates the glue on the plaster and it stays on (PUC09)*
	Lack of training ($n = 5$)	Training and information on PU care would have been really useful	1	0	1	*Somebody to teach you what to look out for and how to deal with it as quickly as possible, early intervention I think is the key for success. (PUC03)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	SSKIN—support surfaces ($n = 4$)	Properly set up pressure relieving equipment is essential for good PU care	0	1	1	*If you put the setting right, then it's obviously, more comfortable, because if you're not putting the correct weight in, you can't have the correct mattress. If you do it too soft, you can feel the bars, and if you do it too hard, you might as well lay on the floor. (PUC16)*
	Onerous learning ($n = 1$)	Learning about PU takes a lot of effort	1	0	1	*apart from watching them and seeing how they did it we still also had to look at the instructions ourselves, just so that we got it right, it was quite full on I won't lie. (PUC25)*
Skills: An ability or proficiency acquired through practice	Skills acquisition—from HCPs and carers ($n = 7$)	I learned PU care by watching HCPs and getting information	0	4	4	*just made a point of making sure that when they come, I watch what they do (PUC15)*
	Areas of competence—capable ($n = 3$)	I am able to reposition my [cared for person] to help PU care	0	4	4	*I started doing that, not much, just like with cushions and that, moving him about a little bit and propping him up a bit different, every couple of hours. (PUC05)*
	Skills acquisition—not shown ($n = 3$)	No one gave me instructions relating to the pressure relieving mattress	3	1	4	*When they install the bed nobody actually gives you any instructions, talks you through it (PUC09)*
	Skills acquisition—self ($n = 3$)	I taught myself PU care	0	3	3	*I don't think I really needed any training really just I just picked things up as I went along. (PUC09)*
	Areas of competence—less able ($n = 2$)	I would struggle to cope if the PU became infected	2	0	2	*when it's just a nick, and it's just red and that, I'm fine, but when it starts getting infected, I can't deal with it. (PUC10)*
Social/professional role and identity: A coherent set of behaviours and displayed personal qualities of an individual in a social or work setting	Scope of PU care role ($n = 15$)	Some aspects of PU care are too difficult or unpalatable for me	1	5	6	*I didn't get involved in touching the dressing on the pressure ulcer, I'm very finicky, I can't look at anything like that, the smell makes me feel sick as well. (PUC16)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Sense of duty ($n = 12$)	It is my duty to provide PU care for my relative	0	1	1	*No, there's nothing that puts me off. It's my mother isn't it (PUC01)*
	Balance of responsibilities—family carer ($n = 9$)	I would rather provide personal PU care myself, than have it provided by professional carers.	1	4	5	*Because you think if anything happens to her, it's just the carer, as such, I'm not saying they're not up to the job, but they're not going to do what I would do, basically. (PUC11)*
	Balance of responsibilities—HCP/care worker ($n = 5$)	It is the responsibility of professionals to provide PU care, rather than mine.	3	0	3	*I think it's the nurse's job isn't it, dealing with pressure ulcers (PUC29)*
	Balance of responsibilities—shared ($n = 5$)	Providing PU care is a joint responsibility between me, healthcare professionals and care workers	0	1	1	*So, initially when it was first diagnosed, we had the district nurses coming in and it was just a case of that they would change bandages or plasters and say 'see you next week'. Our responsibility was to try and make her as comfortable as possible and get more involved with moving her position and just trying to keep her clean and dry down there (PUC14)*
Beliefs about consequences: Acceptance of the truth, reality or validity of outcomes of a behaviour in a given situation	Consequences of my care on relative—positive ($n = 17$)	My personal involvement in PU care is beneficial for my relative	0	15	15	*what I'm doing is the right thing to do because it helps to get that regular movement in her body, so we were doing the right thing (PUC25)*
	Consequences of care on the carer—negative impact ($n = 13$)	PU care has had a negative effect on my social life	11	0	11	*Well, you know, you can't go out to places that you would like to go, if you do go, you can't stay out too long, you have to come back. (PUC20)*
	Lack of control on outcomes ($n = 5$)	PUs take a long time to heal regardless of care provided	1	1	2	*Well, I wouldn't say it's because they get better, the sores get better because they don't always...they take so long don't they? (PUC30)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Missed opportunities ($n = 5$)	If I had understood PU care earlier on, then the PU might not have got so bad	3	0	3	*I believe, you know, if we did this from the beginning, from day one, when she came out of hospital, I don't think it would have got to this level. (PUC24)*
	Consequences of my care on relative—negative ($n = 1$)	The PU care I provide can cause my relative pain	1	0	1	*he's saying, 'Oh, it's sore, it's sore, don't keep touching it', (PUC05)*
Goals: Mental representations of outcomes or end states that an individual wants to achieve	Task focused ($n = 19$)	Providing PU care is very important to me	0	8	8	*Yeah, yeah but it comes first. Because I do all the cooking and all the washings and all the rest of it. But you have still got to look after that pressure ulcer, because if it gets worse we don't know what else you get. (PUC02)*
	Outcome focused ($n = 12$)	Keeping my relative with a PU comfortable is my main goal	0	6	6	*That's the main thing is trying to keep her comfortable really. (PUC01)*
Beliefs about capabilities: Acceptance of the truth, reality or validity about an ability, talent or facility that a person can put to constructive use	I am a capable carer ($n = 14$)	I am confident in providing PU care	0	6	6	*You know what, I've been caring for my mum...I feel quite confident (PUC04)*
	Limitation to providing comprehensive PU care ($n = 10$)	There is a limit to the PU care that I can provide	3	0	3	*it quickly became clear that I couldn't cope with...keeping her clean on my own, because it's not a matter of strength, it's a matter of handling somebody gently. (PUC06)*
	Uncertainty in ability (psychological limitation) ($n = 7$)	I am unsure if I am providing the correct PU care	4	0	4	*one of the worse things for me was, after washing it, and applying the dressing. The not knowing whether you're doing it right and if it's going to stay, (PUC15)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
Emotion: A complex reaction pattern, involving experiential, behavioural and physiological elements, by which the individual attempts to deal with a personally significant matter or event	Impact of process of caring ($n = 14$)	If my relative gets a PU, I feel as though it is my fault	9	2	11	*you sort of feel a bit guilty at first, because you feel like, well, could I have done more? (PUC05)*
	The pressure ulcer itself ($n = 14$)	The smell and appearance of the PU is deeply unpleasant and makes me feel unwell	6	0	6	*Emotionally, the times that I've seen it, it's a bit, it's not a nice feeling, just the visual and the smell and stuff. (PUC24)*
	Managing the care process ($n = 5$)	Trying to get hold of HCPs is a frustrating process	4	1	5	*you have to phone a central hub don't you. They're just hopeless they are, Jesus. You'll get nurses saying nobody's there, so you phone the next days, oh she will phone you, this, that and the other. It takes days to get over it. It's quite disturbing. (PUC08)*
	Emotional control ($n = 1$)	I don't let my mood affect my PU care	0	1	1	*it's like being a parent, you take it out of it, and it's for a short amount of time, so if I needed to change it or somebody had to do something specific around the pressure ulcer, then I would make sure I get that done. And then I would be like, you know, back to the mood with whatever it is I'm doing. But you have to separate it, (PUC22)*
Social influence: Those interpersonal processes that can cause individuals to change their thoughts, feelings or behaviours	Support from healthcare professionals ($n = 14$)	Health professionals give me the advice and support I need	0	6	6	*we can do it now, with the help we are getting from the carers and the nurse and the doctors, we get lots of help, we're getting lots of help (PUC13)*
	Support from family and friends ($n = 5$)	I turn to my family for practical advice and support in providing PU care	0	3	3	*one of my aunties as well, was a carer. And she was like okay, you need to do this, this, this and this. (PUC22)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Support from care workers ($n = 2$)	Care workers have provided me with guidance for PU care	0	1	1	*Basically, the advice I was given from the carer, when I pointed out to the carer [...]I pointed out that there was a problem there, she told me what to do, to call the doctor and get some, she knew what worked and what didn't work. So, she said look don't worry about this, we just need to order this product and this product and whatever and ... (PUC09)*
	Support from person being cared for ($n = 1$)	The person I care for guides me on how to care for their PU	0	1	1	*If I did [forget what to do] the wife would remind me anyway (PUC02)*
	Working as a team ($n = 1$)	I think that effective PU care is a team effort	0	1	1	*I think what we did jointly between myself, the carers and the nurses was very successful and was the right treatment. (PUC03)*
Reinforcement: Increasing the probability of a response by arranging a dependent relationship, or contingency, between the response and a given stimulus	Interpersonal feedback ($n = 12$)	Feedback from my relative tells me how well I am doing with their PU care	0	3	3	*Well, I just see from her reaction, her face, that she's comfortable and so on. (PUC26)*
	Biophysical feedback (healing) ($n = 8$)	Seeing the PU get better is rewarding	0	3	3	*suppose the fact that it did get better, I think that's the rewarding bit. (PUC03)*
Behavioural regulation: Anything aimed at managing or changing objectively observed or measured actions	Making plans and monitoring ($n = 13$)	I deliver PU care by following a specific routine	0	5	5	*I need a routine as in you do the same thing every morning when we wash her in that you apply the barrier cream on all of her areas that we know are susceptible to it and that's done every single time we change her pad. (PUC14)*
Memory, attention and decision processes: The ability to retain information, focus selectively on aspects of the environment and choose between two or more alternatives	Ease of decision-making—easy ($n = 17$)	Decisions relating to PU care are straightforward	0	4	4	'Are these decisions easy or complicated for you?' *I think now it's; I don't want to say it's complicated*et al.*l really, not with just sort of, it's just sort of, just regular (PUC05)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Decision making—with HCP ($n = 13$)	If I have a query or problem with PU care, I consult HCPs about what to do	0	3	3	*Yes, if I saw something that looked a bit suspicious I would wait for the carers to come in and say 'what do you think' and also necessarily I'd ring the district nurse. (PUC03)*
	Memory ($n = 8$)	Nothing gets in the way of remembering what to do when caring for the PU	0	5	5	*No, it's pretty straightforward, now we know what it is, and now we know what causes it, and now we know what can happen and now we know the routine. So, nothing really gets in the way. (PUC29)*
	Ease of decision-making—difficult ($n = 3$)	I find information about dressings confusing	3	0	3	*Yeah, all the different dressings they're ordering and bringing in and putting on her, that's confusing, I don't know where I am. (PUC10)*
	Decision-making—with family ($n = 2$)	My relative and I decide what needs to be done for the PU together	0	2	2	*Well, we decide that together. (PUC02)*
	Decision-making—self ($n = 2$)	I think carefully about making the right decisions for PU care	0	1	1	*And if he's asleep, you think, well, I have a bit of an argument with myself, sort of like, I think well, what do I do? If he's asleep, does that mean he's comfortable? I suppose he would be, because otherwise he would wake up, then you think, well, shall I wake him to turn him a little bit, and then or shall I just turn him, which is what I try to do now, just turn him, without waking him. (PUC05)*
	Decision-making—online sources ($n = 1$)	I consult the internet to help me make decisions about PU care	0	1	1	*you call the GP, otherwise, go online, and we go online (PUC20)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
Optimism: The confidence that things will happen for the best or that desired goals will be attained	Current healing of PU ($n = 16$)	I am optimistic that what I do will make the PU better or prevent it getting worse	2	3	5	*I feel relatively optimistic, to be fair, because [...] I do think that the fact that we are there so much and we keep an eye on so much, and all these services know that we do that, that's why they tend to be mindful. (PUC29)*
	Prevention of future ulceration ($n = 12$)	I am optimistic that what I do will prevent further PUs developing	1	3	4	*I think we're more optimistic that it won't happen again because [...] it almost puts the fear of god into you that it's happened once, so you're just a bit more on the ball. (PUC14)*
	Expectations of PU care load ($n = 2$)	I think that the level of PU care I provide will increase or stay the same over time	0	1	1	*I think it'll be the same. It definitely won't decrease, hopefully it won't need to increase, because she's on her healing bit now. (PUC22)*
	Older relative's future function ($n = 2$)	Once the PU gets better, I am hopeful that my relative will be able to resume doing the things they used to be able to.	0	1	1	*Hopefully in the next few weeks it will be healed up and she can go out again. (PUC08)*
Intention: A conscious decision to perform a behaviour or a resolve to act in a certain way	Intentions to provide care ($n = 17$)	I will contact HCPs if I have concerns re PUs	0	4	4	*well, I intend to call the doctor any time it reoccurs, and make sure that it's attended to as quickly as possible. (PUC26)*
	Stability of intentions ($n = 16$)	I will continue to provide the same level of PU care that I do now	1	1	2	*just make sure that it is clean, fresh dressings and it's not getting any worse basically, just continue as we've been going (PUC11)*
	Unlimited care intentions ($n = 10$)	Nothing will prevent me from continuing to provide PU care for my relative	0	3	3	*I couldn't get to the point where I'd say, well, I'm not doing it, like you do, but there is never a point where I wouldn't do it. (PUC07)*

(Continues)

TABLE 5 | (Continued)

Theoretical domain and definition	Subtheme (number of participants with quote in this subtheme)	Sample belief statement	Number of belief statements			Sample quote
			Barriers	Enablers	Total	
	Trusting and monitoring professionals ($n = 2$)	I will ensure that the carers are doing what they are supposed to be doing	0	1	1	*Just to keep an eye on her sores, make sure that we're asking the carers, if there's any sores there, and you know, and, just make sure that we keep an eye on the carers really (PUC29)*

Knowledge and *Environmental Context and Resources* were considered the most important domains in terms of frequency, elaboration in belief statements and subthemes, the presence of conflicting beliefs and the perceived impact of these beliefs on caring behaviour. Other key domains were *Social/Professional Role and Identity*, *Beliefs about Consequences*, *Emotion and Beliefs about Capabilities and Skills*. Two domains that were ranked fairly high in terms of the frequency of enabler belief statements but never as barriers were *Goals* and *Social Influences*.

Key barriers to pressure ulcer care were in the domains of *Environmental Context and Resources, Emotion, Beliefs about Consequences, Knowledge, Beliefs about Capabilities, Social/Professional Role and Identity and Skills.* Key enablers were in the domains of *Knowledge, Environmental Context and Resources, Beliefs about Consequences, Goals, Social Influence and Skills.* In common with reporting in other studies that have used the TDF (e.g., Ref. [34]), a narrative summary of the findings within each of these key domains is reported below.

Knowledge was mentioned by all participants, most of whom reported having had no knowledge of pressure ulcers before their relative developed one, other than having heard the term pressure ulcer or 'bed sore'. A lack of knowledge was a barrier to pressure ulcer care early on, but the acquisition of knowledge over time became an enabler. Initially, carers did not know what to expect and were taken aback by how quickly pressure ulcers could develop and how long they could take to heal. They told us that they were not given information early on about what to do to help prevent their relative from getting pressure ulcers or what to look out for. Knowledge about pressure ulcer care was acquired over time, and carers mostly had to be proactive to obtain information, for example, by making sure they watched health professionals and asking questions. Several carers had acquired knowledge over time about aspects of pressure ulcer care, for example, frequent repositioning, keeping the skin clean and dry and the signs of skin deterioration to look out for. Some had also learned how to change dressings. Although participants were aware of the importance of good nutrition and hydration, this usually related to their benefits for general well-being rather than specific to pressure ulcer care.

Environmental Context and Resources was also important in terms of both barriers and enablers of pressure ulcer care. Key barriers in this domain related to the lack of provision of information materials, insufficient availability and coordination of health and social care services and difficulties obtaining sufficient/appropriate equipment. Enabling factors were when these resources were put in place. Challenges that were experienced included difficulty in contacting the district nursing team between visits (regardless of the presence or absence of a 24-h single point of access service) and a lack of continuity of district nurses and care workers. This often meant that carers had to take on the role of organising and coordinating services, as reported above in the section on behaviours. Furthermore, the frequency of visits from nurses and care workers was not always considered sufficient, placing an extra burden on carers by requiring them to carry out aspects of both routine personal care themselves between visits, as well as elements of nursing care, such as changing dressings if they became soiled between nursing visits.

A particular problem in relation to environmental context and resources was with the timely availability of sufficient wound

management and/or incontinence products, with carers spending considerable time and energy chasing up delivery and/or paying for some items themselves. Where specialist pressure relieving mattresses and cushions had been supplied, this was generally seen by carers as an enabler to their care, although a small number reported that their relative found them uncomfortable, which required them to modify the furniture housing the equipment (e.g., the bed or the chair) or make adjustments to the mattresses or cushions themselves.

Information and advice were considered enabling resources when they were received, including from care workers, district nurses and specialist nurses. Provision tended, however, to be on an informal, ad hoc basis and not given early on to enable carers to help prevent and/or recognise early signs of skin damage.

Beliefs about Consequences were both barriers and enabling influences on pressure ulcer care. Strong enabling beliefs related to the benefit that carers perceived their care to have for their relative. For example, by carrying out pressure ulcer care behaviours such as applying barrier creams, regular repositioning, keeping the pressure ulcer clean and inspecting the skin, carers felt that they were helping the pressure ulcer to heal, reducing the risk of deterioration or further wounds appearing, and were beneficial for the care recipient. Barriers to care mostly related to the consequences of providing care on the carers themselves. This included the physically draining demands of care and the impact on their living arrangements, social lives, careers and overall quality of life, with some carers describing their lives revolving around caring for their relative.

Social/Professional Role and Identity: Participants reported taking on the caregiving role from a sense of love and duty to the person they cared for. There was, however, a variation between carers in how much of the caregiving role they felt they could take on, what they saw as the scope of their caregiving role and what they saw as the role of health professionals or care workers. For example, several participants did not feel qualified to perform any pressure ulcer care and preferred to leave it to the professionals. In contrast, some participants involved themselves in almost all aspects of care, including changing dressings and/or preferred to do the caregiving themselves rather than involving care workers. Others were happy to take on some tasks but reported limitations in what they would do, for example, because a task was unpalatable to them or was considered inappropriate if it involved intimate care (e.g., a son changing underclothes for his mother).

Emotion: The emotional toll of caregiving was considerable. This included feeling upset, worried and frustrated by the process of caring, for example, feeling guilty that the pressure ulcer had occurred or worrying about it getting worse. Some carers found the aspects of the pressure ulcer itself, such as the smell and appearance, very unpleasant. Managing care processes, such as chasing up supplies and trying to contact health professionals, could be deeply frustrating.

Goals: Where goals were reported, they were always enablers of pressure ulcer care. Participants considered providing care to be important and performed pressure ulcer care behaviours with the goals of keeping their relative as comfortable as possible and preventing pressure ulcers or helping them get better. Behavioural goal priorities included keeping the pressure ulcer clean to promote healing and helping with repositioning and turning.

Social Influences were always reported as enablers of pressure ulcer care behaviours. That is not to say that carers did not report some interpersonal difficulties but rather that these were not reported to influence their care. Many carers became quite socially isolated (see also *Beliefs about Consequences),* but where support from family and friends was received, it was an enabler to care through sharing of the caregiving burden. Health professionals were seen as an important influence on pressure ulcer care where specialist nurses provided advice and support and where carers were able to watch and learn from district nurses during home visits.

Beliefs About Capabilities and *Skills:* Approximately half ($n = 14$) of participants, most of whom ($n = 13$) were next-generation carers, reported feeling capable of performing their caring role and having gained skills and developed confidence over time providing care. However, some expressed uncertainty whether they were providing care correctly. There were also some limits to what carers felt confident doing, for example, caring for more serious pressure ulcers, and limits to their physical capabilities in terms of turning and repositioning.

Although *Memory, Attention and Decision Making* was mentioned by 24 participants and was ranked highly in terms of the number of belief statements and subthemes, the team did not consider it to be a key domain. The reason was that carers mostly did not report particular challenges in these cognitive tasks relating to pressure ulcer care but felt they were part of a routine and turned to health professionals to help with issues of uncertainty.

4 | Discussion

The purpose of this study was to identify barriers and enablers that family carers experience to providing pressure ulcer care. We interviewed 27 carers, who were found to perform a wide range of pressure ulcer care behaviours. The key influences on caregiving behaviour were reported in the theoretical domains of *Knowledge, Environmental Context and Resources, Social/Professional Role and Identity, Beliefs about Consequences, Emotion, Beliefs About Capabilities* and *Skills*.

Enabling factors to pressure ulcer care included that carers were motivated to care for their relatives, recognised the importance of their involvement in pressure ulcer care and expressed satisfaction in seeing the benefit of their care to their relatives. However, in common with other studies exploring the provision of pressure ulcer care by family carers [15–20, 36], we found that pressure ulcer care placed a significant burden on carers and negatively affected their quality of life. In the following paragraphs, we consider the support that carers require to help overcome the barriers identified.

Our study highlights the complexity of tasks that family carers perform when caring for a person with a pressure ulcer. This includes not only the number and diversity of care behaviours but also the difficulty of navigating often disjointed care systems involving several different providers. Despite this complexity and the substantial role that family carers play in pressure ulcer care, identified in this study and elsewhere [15, 16, 18, 19], participants did not routinely receive training in pressure ulcer care. It is therefore perhaps unsurprising that participants reported an initial lack of knowledge about pressure ulcers; their

involvement in pressure ulcer care tended to fall upon them once a wound appeared and learning was on an ad hoc basis. Our findings concur with those of other studies that have found limitations in family carers' knowledge [37] and may help to explain health professionals' concerns [38] that carers do not recognise or escalate significant skin changes. Given that family carers' preventive pressure ulcer care behaviour has been found to be associated with pressure ulcer incidence [39], our findings indicate that it is necessary to take early action to help carers recognise and reduce pressure ulcer risk. Early provision of such support could also help to avoid the emotional distress that the unforeseen appearance of pressure ulcers causes to carers.

It is not, however, simply a matter of providing family carers with information about pressure ulcers. Other factors found to influence pressure ulcer care included carers' perceptions of the limits of their role and their self-confidence in performing different tasks. For example, it is not surprising that next-generation carers were more likely than same-generation carers to involve themselves in the physically demanding task of moving the care recipient. However, carers varied in their willingness to take on some tasks that may be considered unpalatable or too intimate, a finding that we have not seen reported in other studies with family carers of people with pressure ulcers [15–20, 36]. Appropriate support and training may enhance carers' confidence to take on pressure ulcer care, but this is not necessarily the case for all tasks. Any intervention must therefore consider carers' differing expectations and tailor the intervention to their needs and capacities, while being consistent in the advice given.

The healthcare context was both a barrier to and an enabler of pressure ulcer care. For example, nurses provided an important source of advice and support, and provision of pressure ulcer equipment enabled wound care. However, obstacles were faced in the availability and coordination of services. Similar findings regarding the impact of the organisation or accessibility of healthcare services have been reported in a recently published study from another region of the United Kingdom [20] and in other health care systems [16, 37]. Although some clinical guidelines do recognise the role of carers and advise on the type of information they should receive [40, 41], they do not take into account the needs of carers. This study shows that the information and support needs of carers need to be considered and formalised in community care pathways for pressure ulcers.

While early education and skills training and a more streamlined care pathway should help to alleviate some of the burden experienced by carers, any intervention must also consider directly addressing their emotional needs. For example, social isolation, which is increasingly recognised as detrimental to health [42], was reported by several participants. However, none of the existing interventions targeted at carers of people with or at risk of pressure ulcers have addressed carer well-being but have focused on education to help prevent pressure ulcers [43, 44]. The Cochrane review by O'Connor et al. [43] concluded that there was uncertainty as to whether the interventions reduced the risk of developing a new ulcer. Although the review by Huang et al. [44] reported that the included interventions improved caregiver knowledge and caregiver behaviour, they did not describe these outcomes further. These reviews and the findings of the current study indicate that interventions for carers need to include more than wound care education. An umbrella review of interventions for informal caregivers of older adults (although none were for pressure ulcers) [45] concluded that the effectiveness of existing interventions at reducing the negative impact of caregiving on caregivers' mental and physical health outcomes is uncertain; however, multicomponent interventions showed the largest effects. Kirvalidze et al.'s recommendation that interventions need to take into account the variability of carers, care recipients, care context and implementation characteristics is supported by the findings of our study.

4.1 | Strengths and Limitations

A recent systematic review of psychosocial factors affecting community-based pressure ulcer prevention [37] asserted that more research is needed relating to older adults and the current study makes a contribution to filling that gap. Strengths of our study include the use of a theoretical framework to inform data collection and analysis. This approach has enabled us to identify a broad range of barriers and enablers to pressure ulcer care, which can be addressed by a future intervention. We recruited a sample of participants who are diverse in age, gender and ethnicity. Although we recruited a larger proportion of female than male carers, the number and proportion of male carers in the current study is higher than in other qualitative studies on this topic [15–18, 20, 36]. This has shown that male carers may be involved in all aspects of pressure ulcer care, which is not necessarily reflected in other studies. We recruited via health professionals to ensure that the care recipients did have a diagnosed pressure ulcer, thus overcoming a risk in research where carers self-refer that they may not know the difference between, for example, pressure ulcers and venous leg ulcers.

A limitation of the current study is the small number of same-generation carers ($n = 6$) we were able to recruit, most of whom ($n = 5$) were male. Partly, this was due to the smaller number of available same-generation carers, but it was also the case that same-generation carers, particularly women, were more likely to refuse participation. In another U.K. study [20], which recruited 10 family carers of older adults at risk of pressure ulcers, eight of the carers were of the same generation as the care recipient (six women and two men). The number of same-generation carers is small in both studies, so the gender imbalance may be due to chance. We reported some descriptive statistics on performance of pressure ulcer care behaviours between participants with different characteristics (men/women; same/next generation). This was for illustrative purposes, and we recognise the limitations in view of the small number of participants.

Our study did not include care recipients' perspectives. However, other studies that have included both care recipients and carers have combined their responses in the results, whereas we considered it important to understand carers' experiences as distinct from those of care recipients and/or health professionals.

4.2 | Recommendations for Further Research

The findings from this study have led to recommendations regarding the information and support needs of family carers of older adults with pressure ulcers. However, few same-generation carers participated. Research suggests that older carers may experience care differently to younger age groups due to their experiences of multiple losses, ambivalence about asking for support, social isolation and feelings of loneliness, and concerns

for their relatives when they can no longer care [46]. Further research is recommended to more fully capture the experiences of same-generation family caregivers. Our study found some differences between male and female carers in the pressure ulcer care behaviours they performed; however, as stated above, numbers were too small to draw any strong conclusions. The sample size also meant that we could not compare any differences between participants from different cultures. We did not compare participants of differing age, gender and/or culture on the barriers and enablers they experience to providing pressure ulcer care but recognise that these are important issues to consider in future research. Our research was cross-sectional so we did not examine carers' experiences over time; developing a greater understanding of how the carer role develops and changes would be a valuable addition to this area. Further research is also needed to develop and evaluate appropriate interventions for carers that help overcome the barriers and enhance the enablers to pressure ulcer care identified in this study.

4.3 | Implications for Policy and Practice

Family carers play an important role in caring for older adults with pressure ulcers. Public health and clinical services can help to optimise carers' involvement through the early provision of information and skills training. In the first instance, this would include raising public awareness of pressure ulcers by promoting campaigns such as the Stop the Pressure Day and other initiatives by the EPUAP (https://epuap.org/stop-pressure-ulcers/). Thereafter, tailored pressure ulcer prevention information should be provided to family caregivers when older people are either discharged from hospital or admitted to community nursing caseloads. Such information must be derived from material produced in collaboration with patients and carers to ensure it is grounded in their reality and maintains a person-centred perspective. Once skin damage has occurred, community nursing teams need to be responsive to concerns identified by carers between scheduled visits, such as those relating to stock management or the integrity of dressings. This might be achieved through the provision of dedicated telephone/videocall support. There is also the opportunity to make greater use of intelligent dressings, such as those with visual indicators to facilitate appropriate dressing changes.

To facilitate and sustain carers' involvement in pressure ulcer prevention and management, help should also be provided in navigating complex health and social care systems, managing the emotional burden of pressure ulcer care and addressing social isolation. In relation to system navigation, one intervention that might be explored is the expert patient/carer or peer buddy model, where carers are paired to share their experiences and further their understanding of care services and caring for someone with a pressure ulcer. Such an approach might not only improve access to and contact with services but also increase carers' social and emotional well-being, reducing feelings of isolation. A more fundamental improvement would be the reduction in the extent of system navigation work expected of carers. This would involve the expansion of the care navigator role, where health and social care practitioners are employed to provide support ranging from giving clear and consistent information about formal resources and services to arranging support and monitoring the quality of that support.

5 | Conclusion

This study makes a valuable addition to the small body of work that has examined the experiences of family carers who provide pressure ulcer care. We identified the complexity of the carers' role and key barriers and enablers they experience to performing that role. These included a lack of early information and skills training, difficulties navigating care services and the emotional demands of providing care. Availability of pressure ulcer equipment and support from health professionals, family and friends, where available, were important enablers of care. Our findings can inform the future development of interventions to support carers of older adults with pressure ulcers.

Author Contributions

Caroline McGraw, Kathleen Mulligan, Shashivadan P. Hirani, Carole Taylor and Eamonn McKeown were responsible for the conception and design of the study. Nicola Sears conducted the interviews. Nicola Sears, Caroline McGraw, Kathleen Mulligan and Shashivadan P. Hirani coded the data and conducted the analysis. Caroline McGraw, Kathleen Mulligan, Shashivadan P. Hirani, Nicola Sears and Eamonn McKeown interpreted the data. Caroline McGraw and Kathleen Mulligan wrote the first draft of the manuscript, and all authors provided feedback.

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Disclosure

All authors approved the final version of the manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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Supporting Information

Additional supporting information can be found online in the Supporting Information section. **Supporting Information.** Supporting Information includes a table indicating a full list of generated belief statements within clusters and theoretical domains and the COREQ checklist for standardised reporting of qualitative studies in the health and social sciences, as applied to this study.

Appendix 1: Interview Schedule (Part 1)

Questions about you

Instructions to interviewer

- Do not audio record this part of the interview
- Record participant responses electronically in Qualtrics

1.1. What is your age in years?

1.2. What is your gender?

- Female
- Male
- Other, please state

1.3. What is your ethnic group?

- White
  - English/Welsh/Scottish/Northern Irish/British
  - Irish
  - Gypsy or Irish Traveller
  - Any other White background, please state
- Mixed/multiple ethic group
  - White and Black Caribbean
  - White and Black African
  - White and Asian
  - Any other mixed/multiple ethnic background, please state
- Asian/Asian British
  - Indian
  - Pakistani
  - Bangladeshi
  - Chinese
  - Any other Asian background, please state
- Black/African/Caribbean/Black British
  - African
  - Caribbean
  - Any other Black/African/Caribbean background, please state
- Another ethnic group
  - Arab
  - Any other ethnic group, please state

1.4. What is your relationship to the person with a pressure ulcer who you help to look after?

- Husband or wife
- Legally registered civil partner
- Partner
- Son or daughter
- Stepchild
- Brother or sister (including half-brother or half-sister)
- Stepbrother or stepsister
- Mother or father
- Stepmother or stepfather

- Grandchild
- Other relation, please write in
- Unrelated, please write in

1.5. Do you live in the same household as the person with a pressure ulcer you help to look after?

- No (go to Question 1.6)
- Yes (go to Question 1.7)

1.6. Approximately, how many times do you visit the person who has a pressure ulcer?

- Twice a week
- Three to four times a week
- Five to six times a week
- Once a day
- More than once a day

1.7. Approximately, how many hours care do you provide to the person who has a pressure ulcer each week?

1.8. Apart from caring for the person who has a pressure ulcer, and excluding any paid work, do you look after or give any help or support to anyone else because they have a long term physical or mental health condition or illness, or problems related to old age?

- Yes
- No

1.9. In addition to yourself, are there other family caregivers involved in caring for the person with the pressure ulcer?

- Yes
- No

1.10. Do you have any formal or informal responsibilities for looking after a child or young person aged under 18 years?

- Yes, please write in
- No

1.11. What is your employment status?

- Working as an employee in a full-time capacity
- Working as an employee in a part-time capacity
- Self-employed or freelance in a full-time capacity
- Self-employed or freelance in a part-time capacity
- Doing any other kind of paid work in a full-time capacity
- Doing any other kind of paid work in a part-time capacity
- None of the above, please write in

Appendix 2: Interview Schedule (Part 2)

Questions about the person you care for who has a pressure ulcer

Instructions to interviewer

- Do not audio record this part of the interview

TABLE A1 | Interview topic guide based on TDF domains.

TDF Domains	Question	Confirm covered (tick)
Social/professional role and identity	• In what way and to what extent are you involved in helping to care for X's pressure ulcer? ∘ Do you feel it is up to you to help care for X's pressure ulcer? ∘ Is there anyone else currently involved in caring for X's pressure ulcer? If so, who? What are they doing? ∘ Is there anyone else you think should be involved in caring for X's pressure ulcer but who is not currently involved? If so, who? What do you think they should be doing? • How does caring for someone with a pressure ulcer impact on other aspects of your life?	
Knowledge	• What did you know about pressure ulcers before you were told that X had a pressure ulcer? ∘ And what is your understanding of pressure ulcers now? ∘ Are you aware of anything that people can do to help pressure ulcers get better or prevent them from getting worse? (Prompts: skin inspection, use of pressure-relieving support surfaces, keep-moving/repositioning, managing moisture and incontinence, and ensuring adequate nutrition and hydration)	
Skills	• Have you been shown or been taught by a healthcare practitioner (or learnt from other sources) the things people can do to help pressure ulcers get better or prevent them from getting worse? ∘ How easy or difficult is it for you to do the things? • Is there anything about helping with pressure ulcer care that you would like more training on or to be shown what to do?	
Beliefs about capabilities	• How confident do you feel about caring for X now that they have a pressure ulcer? ∘ Is there anything that would help to increase your confidence? If so, what? • What do you find most challenging about caring for X given they have a pressure ulcer? ∘ Are there some parts of caring for X's pressure ulcer that you find easy?	

(Continues)

TABLE A1 | (Continued)

TDF Domains	Question	Confirm covered (tick)
Optimism	• What did you expect would happen when the pressure ulcer first appeared?	
	• What are you hoping will happen now X has developed a pressure ulcer?	
	∘ How optimistic or pessimistic are you that what you do will help X's pressure ulcer get better or prevent it from getting worse?	
	∘ How optimistic or pessimistic are you that what you do will help prevent X getting further pressure ulcers?	
Reinforcement	• Is there anything about pressure ulcer care that you find rewarding? • Is there anything that discourages you from providing pressure ulcer care?	
Beliefs about consequences	• What are the benefits for you and for X of the pressure ulcer care you provide for them? • Are there any disadvantages to you or X, in providing the care that you give?	
Intentions	• What do you intend to do in the future to help care for X's pressure ulcer?	
	∘ Is there anything that might prevent you from doing this?	
	∘ How likely is it that you will continue to provide the current level of pressure ulcer care? Do you think that the level of care you provide will increase or decrease?	
Goals	• When you think of all the things you do for X (e.g., maybe keeping them company, helping to make sure they eat properly, helping with personal hygiene), how important is to you to provide pressure ulcer care? ∘ Which of the things you do to help with pressure ulcer care do you see as most important?	
Memory, attention and decision processes	• How do you decide what needs to be done to care for X's pressure ulcer?	
	∘ Are these decisions easy or complicated for you?	
	∘ How would you decide when to contact the nurse or doctor about the pressure ulcer?	
	• How do you remember to deliver care in such a way as to encourage the pressure ulcer to heal or to prevent it from getting worse?	
	∘ Is there anything that gets in the way of you remembering what to do in relation to caring for the pressure ulcer?	
	• Is there anything about caring for the pressure ulcer that you find confusing?	
Environmental context and resources	• Are there any external factors that affect (help or make challenging) the way in which you provide pressure ulcer care? (Prompts: time pressures, financial factors, work life, equipment and resources, physicality of caring, etc.)	
	• What kind of resources are needed to help a person care for someone with pressure ulcers? (Prompts: money, equipment, support worker, time)	
	∘ Is there any part of pressure ulcer care that you would like to do but can't because you don't have the resources we have just discussed?	
Social influences	• Has anyone influenced the pressure ulcer care that you provide, for example, X themselves, a friend, a family member, a formal carer, your GP or nurse?	
	∘ Have other people (including X themselves) made it difficult for you to provide the best care you could?	
	∘ What might other people be able to do to support you with your caring role?	
Emotion	• How does providing pressure ulcer care affect you emotionally (both positively and negatively)? • How do your feelings at the time (e.g., good or bad mood, fatigue) affect what you do about providing pressure ulcer care?	
Behavioural regulation	• Do you have any routines, tactics, plans or ways of working that you follow to help care for X's pressure ulcer?	
	• Are there any tools you use to prompt or guide you on how to care for pressure ulcers (e.g., information sheets provided by nurses or reminders you put on sticky notes or on your phone)?	
	• How do you judge whether what you are doing is working well?	
	∘ How do you address or cope with any problems you encounter?	

- Record participant responses electronically in Qualtrics

2.1. What is the gender of the person with a pressure ulcer?

- Female
- Male
- Other, please state

2.2. What is the age of the person with a pressure ulcer?

- 65 – 69 years
- 70 – 79 years
- 80 years and over

Appendix 3: Interview Schedule (Part 3)

Questions about your experiences of pressure ulcers and pressure ulcer care

Instructions to interviewer

- Please audio record this part of the interview
- Open with the question: What were your initial thoughts when you were told X had a pressure ulcer?
- Thereafter, explore participants' experiences of pressure ulcer care using the below. All domains will need to be covered; however, the order in which questions are asked will depend on the direction of the narrative provide. At the same time, if a participant's answer to one question answers one or more other questions, carry forward their responses and do not ask them to repeat themselves. The bold bullet point is the lead question and the indented bullet points are prompt questions.