

services, service users were a similar age (mean 68 years), but were taking more medications (mean 3.6 versus 2.8), were more often female (64.1% versus 54.2%), had higher educational attainment, and had higher GP visit rates.

Controlling for other factors, the following were associated with a high likelihood of availing of pharmacy services: female gender (odds ratio (OR) 1.32, 95%CI 1.14–1.52), third level education (OR 1.85, 95%CI 1.51–2.27), higher rates of GP visits, private health insurance (OR 1.29, 95%CI 1.07–1.56), higher number of medications, loneliness, and a diagnosed respiratory condition (OR 1.42, 95% CI 1.14–1.74). The relationship between these factors and requesting medicines advice were similar.

**Conclusion:** A high proportion of middle-aged and older adults visit community pharmacy and a quarter avail of specified pharmacy services. Despite advances in the services offered in pharmacies, medicines advice remains at the core of pharmacists' practice. Those on multiple medications, who may derive greater benefit from such services, are more likely to avail of them. Number of GP visits was also associated with service use, suggesting patients may avail of pharmacy services as a complement, rather than a substitute, to visiting their GP. Services were more often used by people who are lonely, and pharmacists should consider interventions to support these people.

## PATIENT AND HEALTHCARE PRACTITIONER PERSPECTIVES

### USING THE WORKING MODEL OF ADJUSTMENT TO CHRONIC ILLNESS TO EXPLAIN THE BURDEN OF RECURRENT URINARY TRACT INFECTION: A SURVEY-BASED STUDY

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**Introduction:** The treatment of recurrent urinary tract infection (RUTI) with antibiotics is causing concern as patients are often prescribed an inappropriate course of antibiotics, and the recurrence rate remains at 30–44% following treatment (1). Overprescription of antibiotics can also cause antimicrobial resistance. Given the current lack of adequate clinical guidelines for RUTI treatment, it is necessary for this population to adjust to living with a chronic condition, and research suggests that RUTI may be associated with poor mental health and a lower quality of life. Thus, there is a need for a more interdisciplinary approach to understanding RUTI, to inform additional treatment options.

**Aim:** The current study aimed to use the Working Model of Adjustment to Chronic Illness (WMACI) (see Figure 1) to explore the personal, physical and social burden of RUTI (2).

**Methods:** A cross-sectional survey was employed, which was informed by existing questionnaires and reviewed by experts including pain specialists (n = 6). 5,078 participants accessed liveutifree.com to seek information regarding their condition and completed the Live UTI Free survey. Participants provided information on their experiences with RUTI (recurrence rate, symptoms, pain intensity, triggers and comorbidity) and the associated burden. Binomial logistic regressions were conducted to assess the effect of RUTI characteristics on the likelihood of experiencing personal, physical and social burden.

**Results:** RUTI predicted greater likelihood of personal burden (enjoyment of life; enjoyment of favourite activities; mental

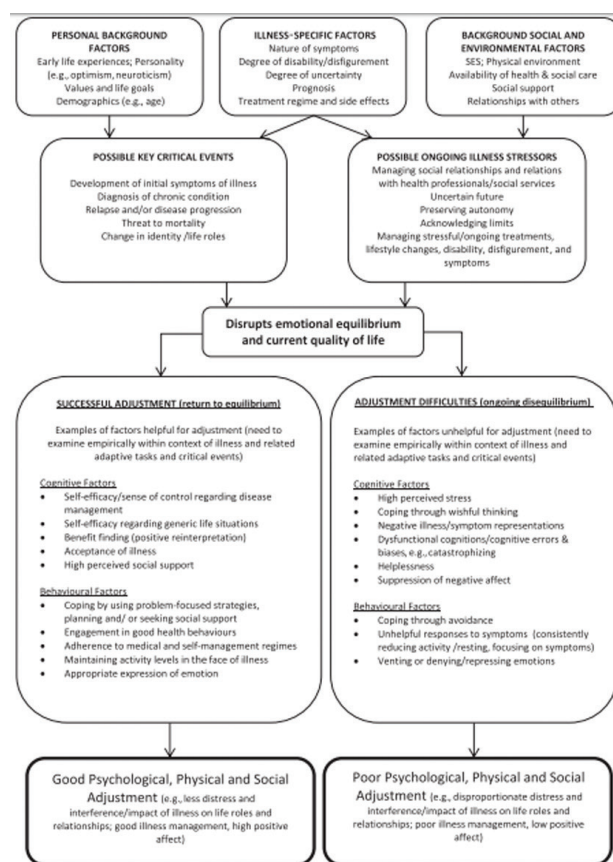


Figure 1: The Working Model of Adjustment to Chronic Illness

health) ( $R^2 = 18.8 - 20.8$ ,  $p = <.001$ ), physical burden (sleep; activities of daily living; maintaining a healthy lifestyle; sexual behaviour) ( $R^2 = 21.1 - 35.9$ ,  $p = <.001$ ), and social burden (normal work; finances; relationships with friends and family; relationships with partners) ( $R^2 = 17.0 - 25.8$ ,  $p = <.001$ ), with the burden associated with sexual behaviour showing the largest amount of variance. Rate of recurrence, symptom burden, pain intensity, and having an additional diagnosis of Interstitial Cystitis (IC) were most predictive of participant burden.

**Conclusion:** RUTI was associated with all areas of burden. Some factors, including pain intensity and having an additional diagnosis of IC, affected a majority of areas. Predicted burden from having an additional diagnosis of IC may be a result of lack of clarity between the two diagnoses, which have shared symptom indicators and rely on urine culture testing, which has been demonstrated to be inaccurate. Misdiagnosis, or a dual diagnosis, may consequently contribute to burden. The WMACI was used to suggest how burden can lead to poor illness adjustment. Limitations of the study were that it did not explore the possibility of misdiagnosis and its impact, or investigate the effects of SES and country-level differences. However, the findings of the study have important clinical implications, as patients worldwide who are suffering with RUTI are required to manage significant burden that is associated with the condition, and this is an important issue which needs to be addressed in primary care settings. An interdisciplinary approach in primary care settings is recommended, which acknowledges the psychosocial burden that persists when treatment fails to resolve physical symptoms.

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# AN EXPLORATION OF COMMUNITY PHARMACISTS' EXPERIENCE, KNOWLEDGE AND PERSPECTIVES OF FRAILTY AND MEDICINES OPTIMISATION IN FRAIL OLDER PEOPLE: A QUALITATIVE STUDY

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**Introduction:** Frailty is a heightened state of vulnerability due to an accumulation of age-related defects in separate physiological systems (1). Frailty is becoming increasingly common, with up to 50% of older adults being diagnosed with mild, moderate or severe frailty (35%, 12% and 3% respectively) (2). Community pharmacists may often be the primary healthcare professional with whom frail older people have most frequent contact due to their convenience and accessibility. Therefore, it is hypothesised that community pharmacists could play a wider role in frailty identification and medicines optimisation for frail older people.

**Aim:** To explore community pharmacists' knowledge of frailty and its assessment, their experiences and contact with frail older patients in the community pharmacy setting, and their perceptions of their role in optimising medicines for frail older people.

**Methods:** Two strategies were used to recruit community pharmacists registered in Northern Ireland (NI). Community pharmacists were recruited through the Pharmacy Forum NI bi-monthly newsletter and the School of Pharmacy Undergraduate Placement Network, followed by snowballing. The interview topic guide was developed based on the published literature, current frailty guidelines and through discussion within the research team; it was piloted with four pharmacists. Semi-structured interviews commenced in March 2020. Due to the Covid-19 pandemic, face-to-face interviews were logistically not possible, therefore telephone interviews were conducted at a time convenient to participants. All interviews were recorded, transcribed verbatim and analysed using inductive thematic analysis.

**Table 1.** Characteristics of interview participants and the community pharmacies in which they worked (n=14)

Participant characteristics	n (%)
Female	9 (64.3)
Male	5 (35.7)
Time qualified in years	n (%)
<5	4 (28.6)
5 to 9	1 (7.1)
10 to 15	5 (35.7)
>15	4 (28.6)
Location of pharmacy	n (%)
Urban	7 (50)
Suburban	4 (28.6)
Rural	3 (21.4)
Size of pharmacy	n (%)
Independent	5 (35.7)
Small/medium chain	2 (14.3)
Large chain	7 (50)

**Results:** To date, 14 interviews have been conducted, lasting between 24 and 72 minutes. Apart from one interview, all were conducted over the telephone. Participant characteristics are summarised in **Table 1**. Analysis of interview transcripts is ongoing. Findings to date have highlighted the key role community pharmacists feel they play in assisting frail older patients with their medicines (especially during the current pandemic). Many saw themselves as a 'point of contact' for frail older people and highlighted the holistic approaches they used to care of such patients: "It's easier to get in contact with us than other healthcare professionals and we tend to be the first port of call really" [CP2]. Interviews highlighted a lack of pharmacist knowledge surrounding frailty as a condition and its assessment, with participants primarily focusing on the physical aspects of frailty (e.g. weight loss, weakness) when observing or 'informally assessing' patients. None of the participants reported formally assessing their patients using validated frailty tools or checklists: "It's not something that I've ever thought about. We don't have any tools readily available to us that I know of and certainly nothing that would be standardised" [CP1].

**Conclusion:** This study has highlighted that community pharmacists felt they could contribute to optimising medicines for frail older people. However, the findings emphasise the need for more formal training for community pharmacists about the clinical aspects of frailty, frailty assessment and future interventions to address the medicines-related issues they have encountered with this patient population.

## References

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# A QUALITATIVE STUDY EXPLORING PATIENT SUGGESTIONS FOR THE DESIGN, FUNCTIONALITY AND IMPLEMENTATION OF DIGITAL HEALTH TECHNOLOGIES BEFORE AND AFTER BARIATRIC SURGERY.

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**Introduction:** Health behaviour changes made during the pre-operative period can positively impact on post-operative outcomes and the success of bariatric surgery.(1) Digital technologies present an opportunity to support patients with this. Currently, little is known about the optimal design or delivery of digital technologies for this patient cohort. In order to develop useful and effective digital strategies for this unique patient cohort, it is important to first understand *how* bariatric surgery patients want to be supported.(2)