

What is the role of virtual community medicine for older people?

School of Medicine
Leung WY, Hussain A., Al-Refaie A.,
Cooper-Moss N., Akpan A., and Chauhan U.

Scoping Review and Clinic Data Analysis



WHY a scoping review?

- Broad research question
- Rapidly evolving and emerging research area
- Recent increase in the use of virtual technology due to the COVID-19 pandemic
- Mapping of wide range of intervention approaches and outcomes
- Identification of a focus for subsequent systematic review

Background

- Increase in virtual consultations due to **COVID-19**.
- Minimise virus transmission in **clinically vulnerable older adults**.

This research **has two components**:

- 1) **Scoping review** (ongoing)
- 2) **Analysis of data** from a sample of virtual community medicine consultations for older patients

Preliminary findings:

- Virtual clinics associated with **fewer appointment cancellations** and **shorter waiting times** (Murphy et al., 2020).
- Virtual consultations may not benefit everyone.
- This review therefore aims to identify the key factors to consider for virtual consultations and map a broader range of clinical outcomes.

Scoping review

- **PRISMA-P** and **PICO** framework
- **Four databases**: Medline, Embase, CINAHL and Psycinfo
- **Search terms combined**:
 - 1) **Virtual care** (31 terms)
 - 2) **Older people** (7 terms)

P • Patients ≥ 65 years old at any geographical location

I • Virtual community consultations

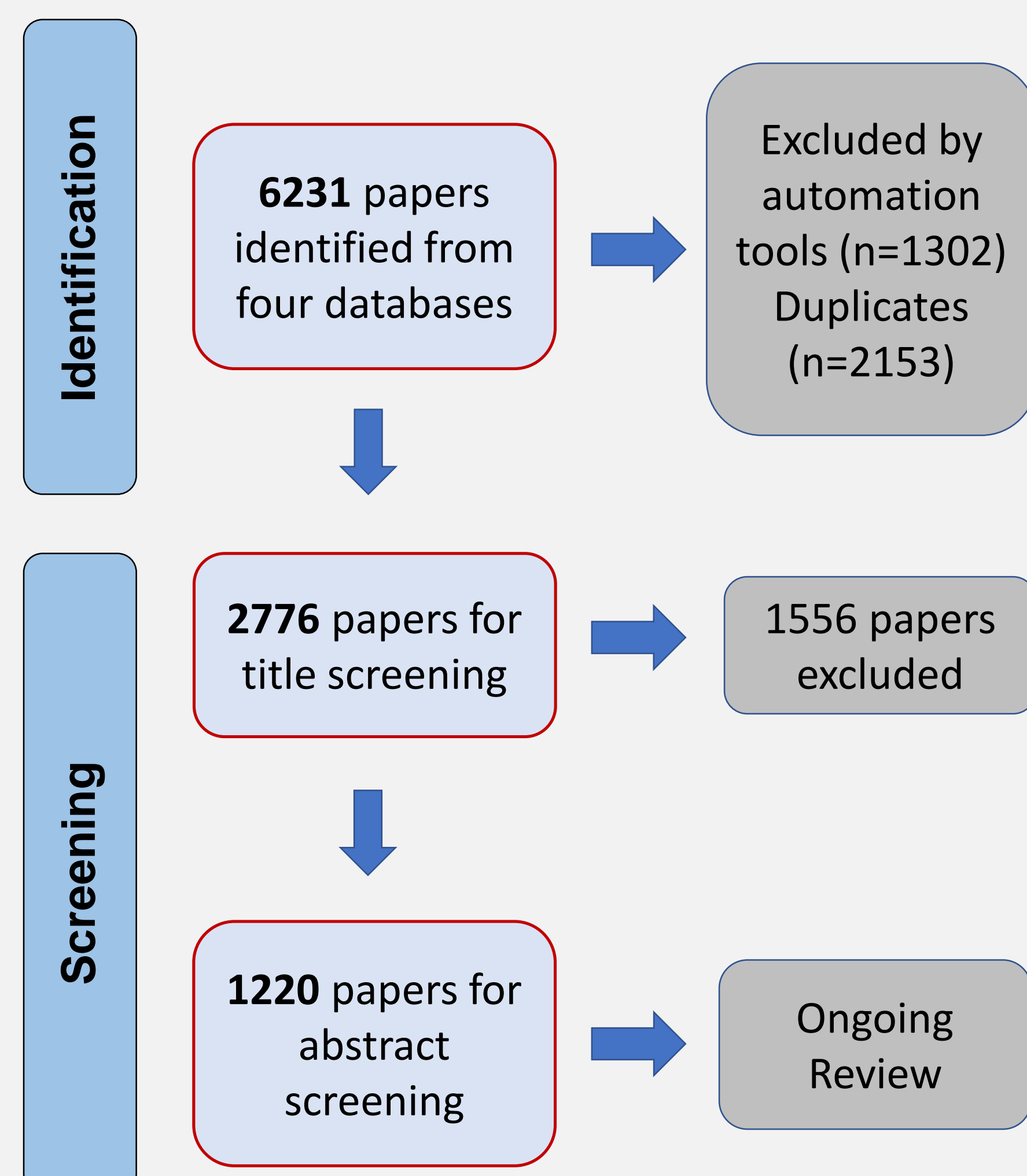
C • Face-to-face consultations

O • Clinical outcomes, factors affecting virtual consultation, satisfaction

Exclusion Criteria:

- Published >10 years ago
- Non-English
- Non-human
- No data on virtual consultation method
- Inpatient services only
- Intervention NOT for patients (i.e. carers only)

PRISMA Flowchart



Virtual clinic data analysis

Categorisation of data

Personal	Clinic efficiency	Outcomes
<ul style="list-style-type: none"> • Age • Gender • Postcode • Deprivation 	<ul style="list-style-type: none"> • Waiting time • Time for clinic letter to be sent to GP 	<ul style="list-style-type: none"> • Hospital admission • Investigation • Onward referral
Medical Records		
<ul style="list-style-type: none"> • Past medical conditions • Drug history • Frailty category 	<ul style="list-style-type: none"> • Diagnosis • Reasons for referral 	

- **Sample of 100 new** virtual community medicine consultations from April 2020 to March 2021 in Litherland, Liverpool.
- **Convenience sampling of 8-10 patients per month** (EMIS records).
- Analysis on **IBM SPSS** software (version 27).

Virtual clinic data results

Table I: Demographic and medical characteristics (n=100)

Gender distribution	Female: 43 Male: 57
Mean age	81.04
Mean waiting time	8.9 days Min: 0 days Max: 34 days
Mean time for clinic letter to get to the GP	1.6 days Min: 0 days Max: 12 days
Mean IMD score	25.10 (quintile group 4)
Mean no. of medications	8.16
Mean no. of past medical conditions	3.19
Most common referral reason	Neurology problems

Analysis:

Clinic's efficiency

- The **average waiting time meets the self-imposed standard** (14 days) but not the letter sending time (24 hours).
- Most patients live in L30 and the clinic is based in L21. Virtual approach may have **saved travelling time and cost** for both patients and clinicians.

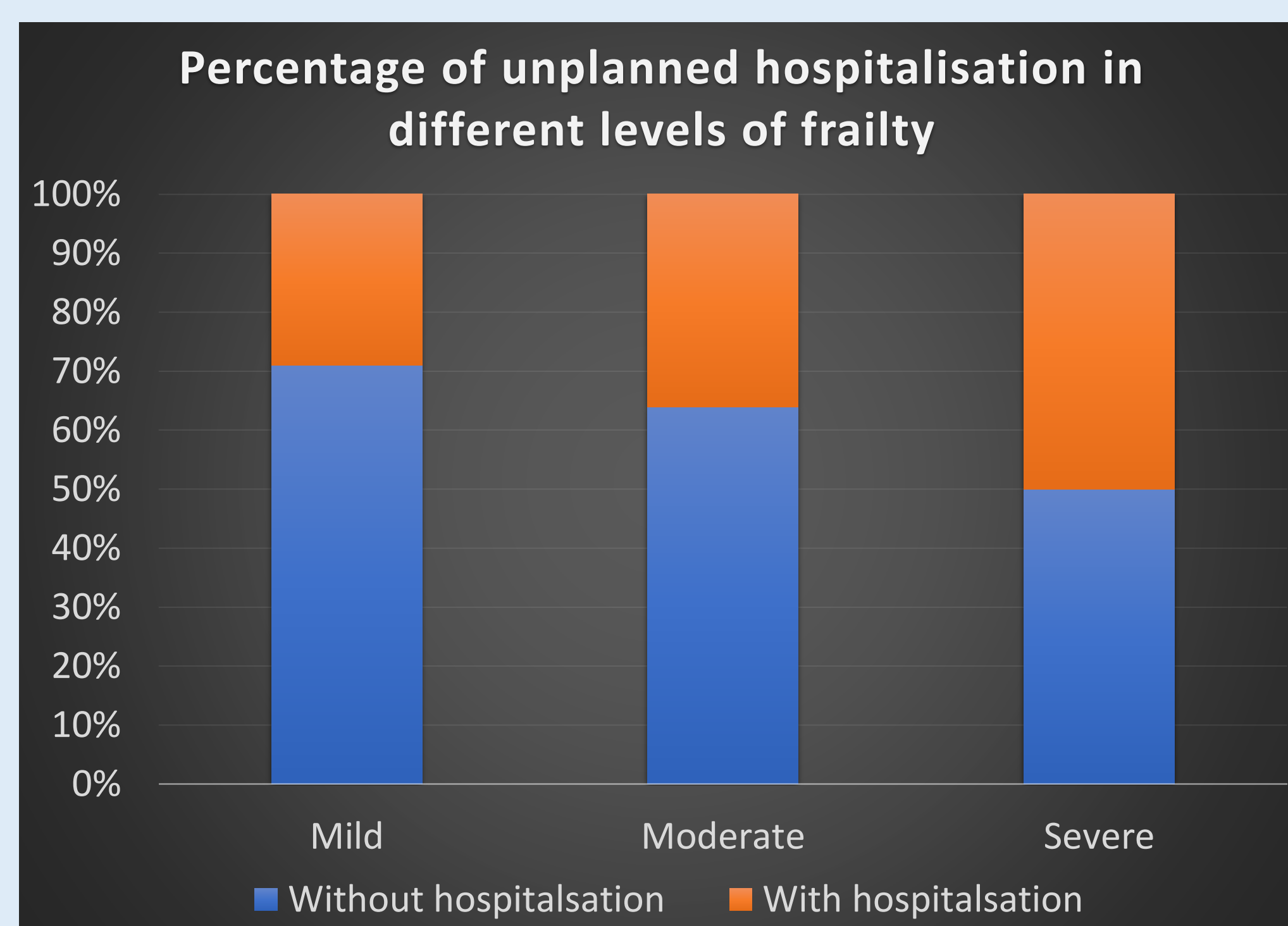
Deprivation

- Average IMD score is within the **quintile group 4**.
- Comparing to the report by Liverpool Council (2019), the IMD score of the patients in this clinic is **similar to the Northwest area** and **lower than the Liverpool City Region**.
- Patients are **living in more deprived areas when compared nationally**.
- **Higher proportion of patients from more deprived areas waited over 2 weeks to be seen** than that of the those in less deprived areas.

Polypharmacy issues

- **80% of patients had polypharmacy** (≥ 5 medications)
- **More than half of the patients** that are over 65 **take more than 8 medications**- a **fivefold increase** of what NHS Digital – Health Survey for England (2016) suggested.

Graph I: Unplanned hospital admissions according to frailty



Hospital admissions post virtual consultation

- **Frailty**: 50% of patients with severe frailty compared to only 29% of patients with mild frailty experienced unplanned hospitalization.
- **Age**: Increase from 20% to 41% in patients aged >80 years
- **Polypharmacy**: Increase from 18% to 66% in patients with polypharmacy.
- **Deprivation**: Patients with **unplanned hospitalisation lived in areas with a higher IMD score** than those who were not hospitalised.

Discussion

Deprivation:

- **Costs** of accessing the internet and purchasing a digital device can be a **burden for patients** (Fang et al., 2018).
- A possible cause of extended clinic waiting time.
- Devices may need to be provided to the patients

Education Level:

- **Technology literacy** may hinder patients to use digital devices.
- **Educational support** may be needed.

Virtual consultation modalities:

- Presence of **carers' support** may affect patients' preference on using a video-based or telephone-based assessment (Liu et al., 2021).

Risk versus benefit:

- Those with **higher degrees of frailty and complexity** tend to be at much **higher risk of hospital attendance** despite virtual interventions.
- Living in a **more deprived area may also be associated with higher hospital admission rates**.
- Social determinants of health and wellbeing cannot be omitted.
- Health and social care could provide **additional means of monitoring these higher risk individuals** continuously (e.g., self/remote monitoring).

Limitations

Sample size:

- 314 new patients were seen in total during the time stated. 100 patients were included in this sample.

No comparison data:

- Absence of data when clinic runs face-to-face.
- Remaining uncertainty on whether patient outcomes have improved or worsened due to the new approach.

Limited breadth of data:

- Unable to determine how the clinic **benefits from a virtual approach**.

Recommendations for further service evaluation

Data from the clinic:

- I. **Clinician's experience** of virtual approach
- II. Evolution of **diagnosis certainty** level
- III. Any appointment duration difference

Data from patients:

- I. Patients' **satisfaction** on virtual consultation
- II. Patients' **education level** and **technology literacy**
- III. Virtual **modality preference** (video/telephone)
- IV. Role of **family/carers support**

Conclusions

- Data and papers from the review suggested that factors such as **age, frailty level, social economic status and technology literacy** should be considered when deciding if a virtual approach will benefit patients.
- **Additional data and comparison data is required** in order to **fully evaluate the impact** of virtual consultations in older patients.

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