

Urgent Virtual Care: Impact on GP, Emergency, and Scheduled Care Pathways

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Abstract

Aim

Urgent Virtual Care (UVC), launched by the Health Service Executive (HSE) South West aims to enhance patient care in General Practice and Emergency Department settings by seeking alternative care pathways to unscheduled ED visits at Cork University Hospital. This study aims to evaluate the impact of UVC on patient care pathways, unscheduled ED attendance, and GP referral outcomes.

Methods

A retrospective observational analysis was conducted using data from Salutem GP practice in Co. Cork, comparing two periods: a pre-UVC phase (August 4th to November 4th 2025) and a post-UVC phase (November 4th 2024 to February 4th 2025). During the pre-UVC period, all emergency referrals went to the ED. In the post-UVC period, patients were directed to either (1) ED or (2) UVC, including remote, onsite, or scheduled care.

Results

Post-UVC launch, 59 emergency referrals were made, with 17% (10/59) referred to UVC and 83% (49/59) to the ED. Pre-UVC launch, all 30 emergency referrals resulted in ED visits. Of UVC referrals, 40% (4/10) were resolved without ED attendance. 40% (4/10) led to additional scheduled care through UVC.

Discussion/Conclusion

Our findings demonstrate that UVC is a promising service that improves patient care, enhances healthcare resource efficiency, and provides GPs timely access to urgent consultant opinions.

Introduction

Emergency Department (ED) overcrowding is a persistent challenge at Cork University Hospital (CUH), mirroring global challenges in acute care. Overcrowding leads to extended

waiting times, increased patient morbidity, and staff burnout, underscoring the need for more efficient referral pathways¹. In Ireland, the existing referral pathway for General Practitioners (GPs) escalates urgent cases to the ED electronically, resulting in unnecessary attendance and added strain on resources.

To address this issue, the Health Service Executive (HSE) South West introduced Urgent Virtual Care (UVC), a consultant-led telemedicine initiative based at CUH. It is staffed by Emergency and Geriatric Medicine consultants, nurses, and other professionals. This service enables GPs and paramedics to consult with senior clinicians by phone or video call, supporting decision-making and redirecting patients to an appropriate specialist pathway. The service helps redirect patients to appropriate care pathways, ranging from home care and scheduling outpatient services to targeted diagnostic or ED attendance when necessary. In its first month, the UVC team handled over 410 referrals, with 69% of patients being successfully redirected to more suitable care options².

Digital health solutions, particularly teleconsultation systems, have shown promise in streamlining care pathways and mitigating inefficiencies, reducing the burden on ED resources³. This concept is reflected with the UVC, which enables ED specialists to assess referrals remotely, reducing unnecessary ED attendances. This study evaluates the impact of the UVC system on patient referral patterns to CUH from a primary care practice in Co. Cork, during a three-month pilot period. The primary objective is to determine whether UVC reduces unscheduled ED visits. Secondary objectives include examining the uptake of scheduled care on patient outcomes, assessing GP referral pathways, and identifying implications for ED resource utilization.

Methods

This retrospective observational study evaluated the impact of the UVC service on patient referral pathways at a primary care practice, Saludem Clinic, in Ovens, Co. Cork. Two time periods were examined: a pre-UVC period (4th August to 3rd November 2024) and a post-UVC period (4th November 2024 to 4th February 2025).

The referral pathway for urgent cases changed with the launch of the UVC. Prior to the introduction of the UVC, urgent referrals from GP were made electronically to the ED at CUH, a level 1 trauma centre. Following the launch of the UVC, referrals could be submitted either directly to ED or to UVC. Within the post-UVC period, UVC referrals were reviewed by senior clinicians via telephone or video consultation which could result in (i) management through virtual consultation with discharge back to the GP, (ii) redirection to scheduled outpatient care or diagnostics, or (iii) onward referral to ED (Figure 1).

Scheduled outpatient care refers to appointments or diagnostic procedures arranged for

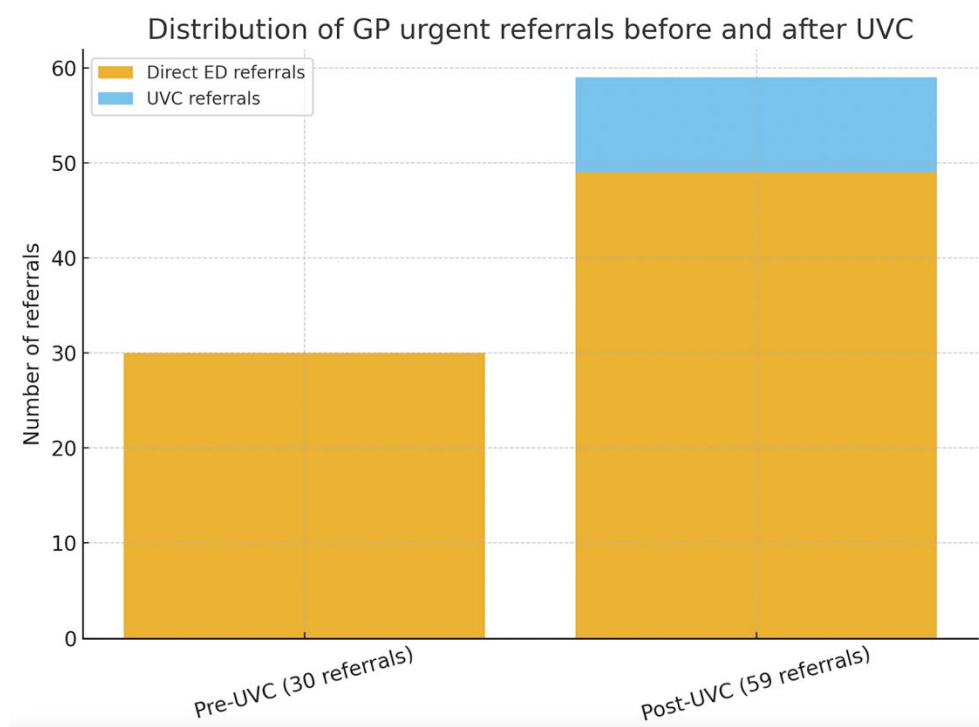
patients as an alternative to unscheduled ED attendance. This includes UVC consultations via phone or video, scheduled ED attendance, outpatient specialist consultations, imaging services (e.g., ultrasound, MRI, CT scans) at offsite diagnostic centers, and at-home ED services where a clinician visits the patient.

The population of the study consisted of all patients who received urgent or emergency referrals from the practice during the two study periods. No exclusion criteria were applied. Patients in the pre-UVC group were recorded as referred to ED, while post-UVC referrals were divided into direct ED referrals or UVC referrals with subsequent outcomes recorded. In both groups, patients recorded as referred to ED were assumed to have attended the department, while UVC referrals were followed to their documented outcomes.

The primary outcome recorded was the proportion of referrals resulting in unscheduled ED attendance. Secondary outcomes included the proportion of referrals managed through scheduled care and distribution of referral pathways.

Moreover, data was obtained from Health e-referrals, outpatient clinic letters, discharge summaries, and practice records. Where necessary, additional information was drawn from patient follow-up notes. Referral data were tabulated and analysed descriptively. A schematic diagram was prepared to illustrate referral pathways before and after implementation of UVC was made.

Figure 1. Schematic representation of referral pathways before and after implementation of Urgent Virtual Care (UVC).



Results

Referral Patterns and Utilization of UVC

During the pre-UVC period (4th August–3rd November 2024), 30 urgent or emergency referrals were made, all of which were directed to the ED at CUH (Table 1). In the post-UVC period (4th November 2024–4th February 2025), a total of 59 urgent referrals were submitted by the Salutem GP Practice. Of these, 49 (83%) were direct CUH ED referrals while 10 (17%) were referred through the UVC service (Table 1).

Of the 10 UVC referrals, 2 occurred during the UVC introductory period, prior to the service being integrated into the e-referral health link system. The remaining 8 referrals were made after the 12th of December 2024, when the UVC was completely integrated on to the health e-link referral (Table 1).

Table 1. Distribution of emergent referrals from Salutem GP practice before and after implementation of UVC

Referral Dates	ED Referrals	UVC	Total
4 th August- 3 rd Nov	30		30
4 th Nov - 11 th Dec	20	2	22
12 th Dec- 4 th Feb	29	8	37
4 th Aug - 4 th Feb	79	10	89

UVC Outcomes and ED Service Utilization

Of the 10 UVC referrals, 4 (40%) were fully managed by UVC, avoiding an unscheduled ED visit. Amongst the 4 patients that did not require an ED referral, one was handled through a UVC video call, and three were managed via UVC consultation with follow-up by their GP. The remaining six patients (60%) were triaged by UVC and subsequently referred to the ED by appointment. Among these, two received treatment in the ED, one departed prior to an assessment but was later followed up by the UVC team, and one did not attend as their condition had resolved. Two patients ultimately required hospital admission. Of the 5 patients that presented to the ED, four reported very short wait times (10 minutes to 1 hour). The outcomes and ED service utilization are outlined in Figure 2.

Impact on Scheduled Care

All 10 (100%) of UVC referrals avoided unscheduled ED attendance (Table 2). Four patients (40%) were redirected to scheduled care, including outpatient department (OPD) appointments and expedited diagnostics (Table 2). The remaining six attended ED by prior arrangement following UVC triage, which reduced waiting times on arrival.

ED Referral Trends

In the pre-UVC period, all 30 (100%) urgent or emergency referrals from the Salutem GP practice resulted in unscheduled ED attendance. However, during the post-UVC period, 49

out of 59 direct ED e-referrals (83%) led to unscheduled ED attendance. Despite the overall increase in urgent/emergent referrals, 10 (17%) were redirected to the UVC pathway, which contributed to a reduction in the burden of the ED. Of these, 5/10 UVC referrals were fully managed outside of the ED, demonstrating UVC's potential to help alleviate pressure on emergency services.

Figure 2. Distribution and outcomes of referrals pre- and post-UVC implementation.

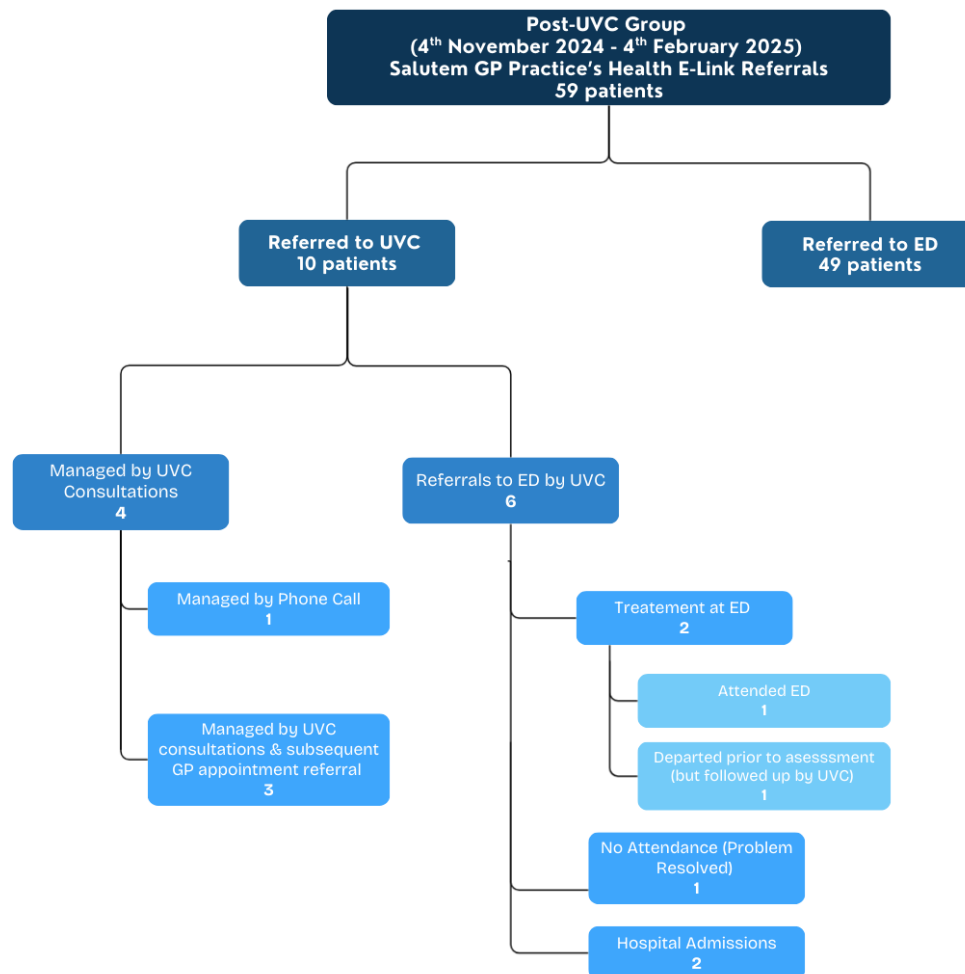


Table 2: *Impact of UVC on ED Visits and Scheduled Care*

Referral Timeline	Total Referrals	ED Visits (%)	Scheduled Care
Pre-UVC	30	100% (30/30)	0% (0/30)
Post-UVC	59	88% (52/59)	17% (10/59)*
*not including 4 additional scheduled care interventions made by UVC, beyond initial consult and treatment			

Discussion

Before the introduction of the UVC, GPs had limited options for escalating care for patients requiring urgent intervention. In cases of diagnostic uncertainty, GPs faced the challenge of potentially overburdening the ED with non-critical presentations or delaying critical care. The UVC pathway now offers real-time consultant input, enabling a more informed pathway for decision-making. This reduces the risk of missed emergencies and unscheduled ED visits. Additionally, the improved patient experience with UVC over unscheduled ED care helps reassure GPs, enhancing both patient outcomes and provider confidence. This aligns with international evidence that telemedicine can streamline care pathways and improve resource use^{4, 5}.

ED wait times in Ireland are among the longest in Europe, affecting patient care and trust. The 2015 Euro Health Consumer Index (EHCI) ranked Ireland's emergency care waiting times as the worst in Europe, with delays often exceeding international standards⁶. Long waits lead to patient dissatisfaction, and some leave before being assessed, risking clinical outcomes.

However, UVC may reduce unnecessary ED attendances; in this pilot, 50% of UVC referrals were managed without an ED visit, suggesting potential to ease ED pressure. This indicates an expedited management of a pre-assessed cohort, rather than intrinsic improvements in ED triage efficiency. UVC has also helped vulnerable groups like the elderly and young children, with 3 of 10 referrals being over 70 and 3 under 6, showing the need for improved triaging.

GPs and hospital consultants have expressed concerns about the potential for inappropriate UVC referrals, particularly in critical conditions such as stroke, acute coronary syndrome (ACS), sepsis, and seizures, where immediate emergency intervention via 999 is essential. Ongoing

education for GPs on referral criteria and reinforcing the distinction between cases suitable for UVC versus those requiring immediate ED presentation is crucial. Inappropriate UVC referrals for time-sensitive emergencies could delay critical care, leading to negative patient outcomes. Clear referral guidelines and continuous GP training are necessary to ensure patient safety and optimal use of the UVC service.

Future efforts should focus on refining referral criteria, expanding GP UVC education initiatives, and ensuring continuous evaluation of UVC's impact on ED workflow and patient outcomes. Additionally, raising awareness of UVC among GPs and promoting its consideration for referrals instead of direct ED referrals—when clinically appropriate—can enhance its effectiveness in alleviating the ED burden while ensuring high-quality patient care.

The introduction of the UVC model has had a measurable impact on emergency care pathways, which have helped reduce direct ED referrals and alleviate patient management. Moreover, 40% of the cases resulted in scheduled follow-up care, ensuring patients received appropriate management while avoiding unnecessary hospital visits. Although the total number of urgent referrals increased in the post-UVC period, 17% were redirected from immediate ED visits, demonstrating UVC's effectiveness in streamlining triage and easing ED congestion. These findings suggest that integrating UVC into primary care could improve healthcare efficiency, particularly in managing non-critical urgent cases. Further research is needed to explore the long-term feasibility of this model and its impact on patient outcomes and healthcare resources.

However, it is important to note that our findings should be interpreted with caution. The introduction of an original service may have led to a Hawthorne effect, with clinicians and patients altering their behavior due to the awareness of being observed. Data were drawn from a single GP practice, introducing possible inclusion bias and limiting generalizability. Furthermore, the study periods spanned autumn and winter months, during which seasonal variation in respiratory and infectious illnesses may have influenced referral patterns. Finally, as this was an observational analysis, causal inferences cannot be drawn.

Declarations of Conflicts of Interest:

None declared.

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References:

1. Morley C, Unwin M, Peterson GM, Stankovich J, Kinsman L. Emergency department crowding: A systematic review of causes, consequences, and solutions. *PLoS One*. 2018;13(8):e0203316.
2. Cork University Hospital Emergency Medicine. Urgent Virtual Care [Internet]. Cork: CUH Emergency Medicine; [cited 2025 Feb 18]. Available from: <https://cuhemergencymedicine.ie/urgent-virtual-care/>
3. Kim HS, Mendis K. Telemedicine in the COVID-19 era: An opportunity for the future. *Telemed J E Health*. 2020;26(9):1111–3.
4. Barclay KL, Munro R, Ludlow K. Use of remote assessment tools to substitute routine outpatient care: scoping review. *J Med Internet Res*. 2025;27:e65938. doi:10.2196/65938.
5. Lowe C, Chakravorty P, Crowley J, Sampson M. Improving safety, efficiency, cost, and satisfaction across a musculoskeletal pathway using the digital assessment routing tool for triage: prospective cohort study. *J Med Internet Res*. 2025;27:e67269. doi:10.2196/67269.
6. Health Consumer Powerhouse. Euro Health Consumer Index 2015. Brussels: Health Consumer Powerhouse; 2015.