



**Health  
Information  
and Quality  
Authority**

An tÚdarás Um Fhaisnéis  
agus Cáilíocht Sláinte

# **Protocol for a health technology assessment of an alternative telephone pathway for acute, non- urgent medical care needs in the pre-hospital setting**

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## About the Health Information and Quality Authority (HIQA)

The Health Information and Quality Authority (HIQA) is an independent statutory body established to promote safety and quality in the provision of health and social care services for the benefit of the health and welfare of the public.

Reporting to the Minister for Health and engaging with the Minister for Children, Equality, Disability, Integration and Youth, HIQA has responsibility for the following:

- **Setting standards for health and social care services** — Developing person-centred standards and guidance, based on evidence and international best practice, for health and social care services in Ireland.
- **Regulating social care services** — The Chief Inspector of Social Services within HIQA is responsible for registering and inspecting residential services for older people and people with a disability, and children’s special care units.
- **Regulating health services** — Regulating medical exposure to ionising radiation.
- **Monitoring services** — Monitoring the safety and quality of permanent international protection accommodation service centres, health services and children’s social services against the national standards. Where necessary, HIQA investigates serious concerns about the health and welfare of people who use health services and children’s social services.
- **Health technology assessment** — Evaluating the clinical and cost-effectiveness of health programmes, policies, medicines, medical equipment, diagnostic and surgical techniques, health promotion and protection activities, and providing advice to enable the best use of resources and the best outcomes for people who use our health service.
- **Health information** — Advising on the efficient and secure collection and sharing of health information, setting standards, evaluating information resources and publishing information on the delivery and performance of Ireland’s health and social care services.
- **National Care Experience Programme** — Carrying out national service-user experience surveys across a range of health services, in conjunction with the Department of Health and the HSE.

Visit [www.hiqa.ie](http://www.hiqa.ie) for more information.

## 1. Introduction

An acute, non-urgent medical care need is where the investigation or intervention for an injury or illness could be safely deferred or managed in other areas of the healthcare system. For individuals seeking healthcare it may be difficult for them to distinguish between medical care needs that require urgent medical attention, and those that are acute, but non-urgent. Depending on the context of the individual, there may be overlap in terms of the symptoms experienced and the perceived urgency.<sup>(1)</sup> It may be up to the individual to determine their point of entry into the healthcare system. This is usually informed by their perceived level of urgency of their particular healthcare need.

Currently in Ireland, people have a range of options to access publicly-funded healthcare, including:

- through their general practitioner (GP) during office hours or ringing GP out-of-hours services
- self-presenting at a Local Injury Unit (LIU)
- self-presenting at an emergency department (ED)
- ringing 112/999 to access emergency ambulance services.<sup>(2)</sup>

People also have the option to visit a community pharmacy where they can obtain advice and or be redirected to other primary care or urgent care services. When primary care services and LIUs cannot be readily accessed, people with acute, non-urgent care needs who are unwilling or unable to wait either go to a hospital ED or call 112 or 999 for an emergency ambulance in order to access healthcare. This has contributed to an increased burden on emergency services and EDs. Additionally, under the current pathway, there may be people who require care in the ED, but who defer attending as they do not think this level of care is necessary or because they expect long waiting times. Provision of an alternative telephone pathway is intended to support the timely provision of care in the most appropriate setting.

In light of the above issues, the Health Service Executive (HSE) requested that the Health Information and Quality Authority (HIQA) carry out a health technology assessment (HTA) of an alternative telephone pathway for acute, non-urgent care needs in the pre-hospital setting. This request was subsequently prioritised for inclusion in the HIQA HTA work plan. This protocol presents the proposed methodology for assessing the epidemiology and burden of disease associated with acute, non-urgent care needs in the pre-hospital setting. It also describes the approach that will be used to assess current international practice, and the organisational implications, budget impact, and social and ethical aspects associated

with provision of a national alternative telephone pathway, distinct from the 112/999 emergency services for acute, non-urgent care needs in the pre-hospital setting.

## 2. Aims and objectives

The aim of this HTA is to assess the requirements for the provision of a national alternative telephone pathway, distinct from the 112/999 emergency services for acute, non-urgent care needs in the pre-hospital setting. This would involve patients with acute, non-urgent care needs calling a trained operator who would triage and redirect these patients to the appropriate healthcare services, particularly outside of normal GP hours. The introduction of an alternative telephone pathway has the potential to improve the appropriateness of ED presentation, potentially reducing unnecessary ED attendance, thereby alleviating pressure on Acute Floor services in hospitals, where the latter is defined as *'an integrated service configured to manage unscheduled care demand ... this may be co- or proximally located clinical and support services which work together to manage unscheduled demand on a daily basis.'*<sup>(3, 4)</sup>

Considering people with acute, non-urgent care needs in the pre-hospital setting in Ireland, the specific objectives of this HTA are to:

- describe the current pathways to access publicly-funded healthcare
- describe the existing and projected demand and burden on current pathways
- review international practice relating to the implementation of an alternative telephone pathway distinct from the 112/999 emergency services
- review the current evidence of the efficiency, safety, clinical effectiveness and cost effectiveness of providing an alternative telephone pathway
- assess the budget impact of providing an alternative telephone pathway
- consider any potential organisational and resource implications of providing an alternative telephone pathway
- consider any patient and social implications that providing an alternative telephone pathway may have for patients, the general public and the healthcare system in Ireland
- consider any ethical and legal implications that providing an alternative telephone pathway may have

- based on the evidence in this assessment, provide advice to the Minister for Health and the HSE to support a decision on whether to provide an alternative telephone pathway.

The HTA will be conducted in line with the HIQA quality assurance framework for HTA.

### **3. Establishment of the Expert Advisory Group**

An appropriately representative Expert Advisory Group (EAG) will be convened as a source of expertise to inform interpretation of the evidence and development of the advice to the Minister for Health and the HSE.

This group will comprise nominees from a range of stakeholder organisations, including patient representatives, healthcare providers and managers, as well as clinical and public health experts.

The terms of reference of the EAG are to:

- contribute to the provision of high-quality and considered advice by HIQA to the Minister for Health and the HSE
- contribute fully to the work, debate and decision-making processes of the group by providing expert guidance, as appropriate
- be prepared to provide expert advice on relevant issues outside of group meetings, as requested
- provide advice to HIQA regarding the scope of the analysis
- support the evaluation team, led by HIQA during the assessment process, by providing expert opinion and access to pertinent data, as appropriate
- review the project plan outline and advise on priorities, as required
- review the draft report from the evaluation team and recommend amendments, as appropriate
- contribute to HIQA's development of its approach to HTA by participating in an evaluation of the process on the conclusion of the assessment.

### **4. Description of the technology**

The technology considered in this HTA represents a system change, involving the potential introduction of an alternative national telephone pathway, distinct from the 112/999 emergency ambulance services, targeted at individuals with acute, non-urgent issues in the pre-hospital setting in Ireland.<sup>(2)</sup> A description of the options

currently available to access publicly-funded healthcare in the pre-hospital setting in Ireland will be provided. A description of the proposed alternative telephone pathway and the system change this technology represents will also be provided. In addition, a brief overview of identified alternative telephone pathway options for acute, non-urgent care needs that are currently being implemented internationally will be provided.

## 5. International practice

The available options to access healthcare for acute, non-urgent care needs in the pre-hospital setting can vary among countries and regions. Hence it is important to describe practice and systems that are relevant to the Irish context. A review will be undertaken to identify alternative telephone pathway options for acute, non-urgent care implemented internationally.

The following research question will be addressed within this chapter: *What is the evidence for the impact on health outcomes and healthcare delivery for any identified operating alternative telephone pathways distinct from the 112/999 emergency services for acute, non-urgent care needs in the pre-hospital setting?*

Given the broad nature of the research question, a scoping review will be undertaken. A scoping review can be defined as a form of evidence synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence, and gaps in research related to a defined field by systematically searching, selecting and synthesising existing evidence.<sup>(5-7)</sup> The review will adhere to the Arksey and O'Malley six-stage framework.<sup>(8)</sup> The scoping review framework follows the main systematic reviewing principles. However, it allows for more flexibility in terms of inclusion and exclusion criteria, pays less attention to quality appraisal and is more focused on presenting a thematic overview of findings rather than determining any definitive effect estimate. Therefore, formal quality appraisal will not be undertaken for this review.

A literature search will be conducted in Medline Complete via Ovid and Embase via Ovid. Grey literature sources will also be searched (Appendix 1), with a particular emphasis on the websites (professional bodies, departments of health, ambulance services, and HTA agencies) for the chosen countries. Additionally, the first 100 results of Google will be searched. Additional search methods used will include forward citation searching of eligible studies and searching reference lists of identified systematic reviews and included studies. Searches will be limited to the period from 2004 to January 2024 to capture the most recent 20 years of data. A cut-off of 2004 was chosen on the basis of an initial scoping exercise which showed that the majority of alternative telephone pathways across Organisation for Economic Co-operation and Development (OECD) countries were established in the



last 20 years.

The population, area of interest, context and outcomes of interest for this question are summarised in Table 1.

**Table 1: PICOS for scoping review of international practice**

<b>Population</b>	People who have an acute, non-urgent healthcare need in the pre-hospital setting.
<b>Interest</b>	An alternative telephone pathway, distinct from 112/999, to access the healthcare system for acute, non-urgent conditions in the pre-hospital setting.
<b>Context</b>	OECD countries
<b>Outcome</b>	<p>The main outcomes of interest are:</p> <ul style="list-style-type: none"> <li>▪ appropriateness (medical appropriateness and or accuracy of advice or referrals)</li> <li>▪ compliance (user compliance with advice given)</li> <li>▪ costs (costs or cost savings — for example, costs saved from callers’ change in subsequent healthcare-seeking behaviour as a result of the call)</li> <li>▪ disposition (outcome of the triage call)</li> <li>▪ safety (the safety of triage decisions made — for example, the rate of potential adverse events or triage errors)</li> <li>▪ service impacts (impacts on telephone triage service or other services, either from increased or reduced service use and or increased or reduced staff workload)</li> <li>▪ service use (performance analysis)</li> <li>▪ user characteristics</li> <li>▪ user experience (such as satisfaction, reassurance, doubts about competency, relevance of triage questions).</li> </ul>
<b>Study design</b>	<p>Empirical evidence (all study designs) from the following document types:</p> <ul style="list-style-type: none"> <li>▪ reports</li> <li>▪ evaluations</li> <li>▪ HTAs</li> <li>▪ peer-reviewed publications.</li> </ul>

**Key:** HTA – health technology assessment; OECD – Organisation for Economic Co-operation and Development

For data management purposes, the results of the search will be exported to Covidence ([www.covidence.org](http://www.covidence.org)). Two reviewers will independently review the titles and abstracts and subsequently full texts of the identified records. Those that meet the inclusion criteria for this scoping review (as per Table 2) will be included in this chapter. Inclusion will be limited to implemented alternative pathways, distinct from the 112/999 emergency services for acute, non-urgent care needs in the pre-hospital setting (even if based on a pilot study); descriptions of theoretical alternative pathways will be excluded. Any disagreement regarding the eligibility of documents will be resolved through discussion, and using a third reviewer where necessary.

**Table 2: Inclusion and exclusion criteria**

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> <li>▪ Information is provided on outcome data regarding the implementation of an alternative telephone pathway, distinct from 112/999, for acute, non-urgent conditions in a pre-hospital setting.</li> <li>▪ The alternative telephone pathway has been implemented at a national or regional level.</li> <li>▪ The implemented alternative telephone pathway is generally applicable to all members of the public, regardless of age and or existing healthcare conditions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Studies that describe an alternative telephone pathway service without providing any quantitative or qualitative outcome data.</li> <li>▪ The alternative telephone pathway is specific to a patient group with an existing healthcare condition.</li> <li>▪ The alternative telephone pathway is specific to a specific cohort of the community — for example, paediatric population.</li> <li>▪ A service designed to include those with acute and urgent conditions.</li> <li>▪ The alternative telephone pathway is specific to an individual hospital/specialist centre/care provider.</li> <li>▪ Studies focused on the broader structures of acute, non-urgent care pathways and supports without reference to an alternative telephone pathway.</li> <li>▪ Conceptual papers and projections of possible future developments.</li> </ul>

Data extraction will be performed by one reviewer and cross checked by another. A data extraction tool will be developed and piloted before implementing. As this is a scoping review aiming to provide an overview of a diverse range of outcomes and

practice, no quality appraisal will be undertaken. Google Translate and DeepL will be used to obtain translations of non-English language documents, where possible. Due to the reliance on grey literature sources, when screening studies, particular attention will be given to the reliability of the source in order to minimise the risk that the included data do not accurately represent implemented pathways. Key representatives from selected countries will be contacted for confirmation of included data and to identify additional resources, as appropriate.

This scoping review will be reported in accordance with the Preferred Reporting Items for Systematic reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) Checklist.<sup>(6)</sup>

## **6. Epidemiology and burden of disease**

A comprehensive description of the current and projected demand and burden on current pathways for acute, non-urgent care in the pre-hospital setting in Ireland will be provided. This section will be informed by a review of national literature and data. Where available, national datasets will be used to estimate the demand for out-of-hours primary care, usage of the 112/999 phone line for emergency ambulance services, and hospital ED attendance.<sup>(2)</sup> Data on the size of the eligible population will be sought from the Central Statistics Office (CSO). National data will be supplemented with data from the international literature that are considered broadly applicable to the Irish context. The epidemiological data from this chapter will also be used to inform the inputs to the economic evaluation (section 8 below) and the estimated resources required (sections 7 and 8 below) to introduce an alternative telephone pathway for acute, non-urgent care needs in the pre-hospital setting in Ireland.

## **7. Organisational considerations**

The assessment of necessary organisational changes arising from the implementation of an alternative telephone pathway for accessing healthcare in the pre-hospital setting for those with acute, non-urgent healthcare needs will be carried out in accordance with the EUnetHTA Core Model.<sup>(9)</sup> Anticipated changes in the organisation of care will be described along with the expected impact on existing activities. Consideration will also be given to the impact on various types of resources (such as human resources, equipment and supplies, and facilities) and any additional associated healthcare interventions (for example, additional patient education and support services).

## 8. Economic evaluation

An economic evaluation comprising a budget impact analysis (BIA) will be conducted to provide information for decision-makers regarding the potential affordability of the provision of a national alternative telephone pathway, distinct from the 112/999 emergency services, operating in the pre-hospital setting. The BIA will quantify and cost the resource requirements (such as number and grade of staff to operate the telephone pathway) and predict the additional costs to the HSE associated with implementing an alternative telephone pathway over an initial five-year time horizon. Potential cost offsets, such as prevention of ambulance call out and ED presentation, will also be considered and included, if appropriate; the BIA will be reported in terms of the incremental annual cost. In Ireland, the 'reference case' or preferred method in the primary analysis for HTA is to adopt the perspective of the publicly-funded health and social care system, that is, the HSE.<sup>(10)</sup> A summary of the model characteristics for the BIA is presented in Table 3.

**Table 3: Model characteristics for BIA**

Model characteristics	BIA
Perspective	Publicly-funded health and social care system (HSE)
Time horizon	Five years
Discount rate	N/A
Outcome	Incremental cost per annum
Sensitivity analysis	Deterministic and probabilistic

**Key:** BIA – budget impact analysis; HSE – Health Service Executive; N/A – not applicable.

Estimates of the impact of the alternative telephone pathway will be primarily influenced by uptake rates. A range of scenarios reflecting judgments on uptake rates for an alternative telephone pathway will therefore be considered in the BIA. For parameters that are unsupported by published literature, input from the EAG will be required to inform plausible values.

## 9. Patient and social considerations

There are many factors that need to be considered prior to the introduction of an alternative telephone pathway, distinct from the 112/999 emergency ambulance services, targeted at individuals with acute, non-urgent issues in the pre-hospital

setting in Ireland. This chapter will outline the potential patient and social considerations relating to the provision of such a pathway. The data from the scoping review (section 5) undertaken to identify alternative telephone pathway options for acute, non-urgent care implemented internationally will be used to inform the section on patient and social considerations. The analysis of this information will be guided by the patient and social domain of the EUnetHTA HTA Core Model.<sup>(9)</sup>

## **10. Ethical and legal considerations**

The ethical analysis will consider key social norms and values relevant to the provision of an alternative telephone pathway. Key ethical issues in the EUnetHTA Core Model will be used to guide the ethical analysis, under some or all of the following topic headings:<sup>(9)</sup>

- benefit-harm balance at both the individual and population level
- autonomy
- respect for persons
- informed consent
- ethical consequences.

Key legal issues in the EUnetHTA Core Model will be used to guide the legal analysis, under some or all of the following topic headings:<sup>(9)</sup>

- governance of risk
- authorisation
- guarantee
- regulation of market.

## **11. Dissemination**

The evidence gathered, as outlined in sections 4 to 9, will be synthesised in a report to be published on the HIQA website. The findings of the report will inform HIQA's advice to the Minister for Health and the HSE.

## References

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## Appendix 1 – Grey literature sources

The resources listed below will be searched for relevant data relating to alternative pathways in the pre-hospital setting (this list is not exhaustive and will be added to as necessary):

### Grey literature

- [Google](#)
- [INAHTA database](#)
- [TRIP database](#)
- [Lenus](#)

### EU/EEA

- Denmark
  - [Danish Health Authority](#)
  - [Denmark, Pre-hospital](#)
  - [The Capital Region of Denmark](#)
  - [The Danish Health Technology Council](#)
  - [Healthcare Denmark](#)
  - [VIVE - The Danish Centre for Social Research and Analysis](#)
  - [Danish National Institute of Public Health](#)
  - [Ministry of the Interior and Health](#)
- Sweden
  - [Ministry of Health and Social Affairs](#)
  - [Socialstyrelsen \(Health and Medical Care and Social Services, Sweden\)](#)
  - [Swedish Emergency Care Registry](#)
  - [Swedish Agency for Health Technology Assessment and Assessment of Social Services](#)

### Non - EU

- Australia
  - [Department of Health and Aged Care](#)
  - [Australian National Health and Medical Research Council Clinical Practice](#)
  - [Australian Institute of Health and Welfare](#)
  - [Healthdirect](#)
- England
  - [Department of Health and Social Care](#)
  - [Office for Health Improvement and Disparities](#)
  - [UK Health Security Agency](#)

- [National Institute for Health and Care Excellence \(NICE\)](#)
- [National Institute for Health and Care Research](#)
- [NHS England, Hospital Accident & Emergency Activity](#)
- [NHS England](#)
- [Nuffield Trust](#)
- [University of Sheffield, Centre for Urgent and Emergency Care Research](#)
- **Japan**
  - [Japan Council for Quality Health Care](#)
  - [Center for Outcomes Research and Economic Evaluation for Health](#)
  - [Ministry of Health, Labour and Welfare of Japan](#)
  - [Osaka Prefectural Government](#)
  - [Tokyo Metropolitan Government](#)
  - [Nara Prefecture](#)
- **Scotland**
  - [Public Health Scotland](#)
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