ANNEX B:

LITERATURE REVIEW TO SUPPORT THE DEFINITION OF URGENT PRIMARY CARE AND URGENT CARE CENTRE.

For National Urgent Primary Care Pathfinder Panel

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Literature Review to support the definition of UPC and Urgent Care Centre

What is UPC?

Summary

Urgent care is often discussed together with emergency care. In a review of urgent and emergency care terminology (Turnbull et al 2019), it was found that four broad constructs are used in forming their definitions: physiological factors, relational language, health service characteristics, and patients' perceived needs. There can be a lack of specificity around the terms with overlapping or ambiguous characteristics. This can result in 'urgent care' and 'emergency care' being used interchangeably, which can cause confusion to service users. Therefore, a clear understanding of what constitutes 'urgent care' is needed.

Much of the literature refers to urgent care in general, rather than specifically to UPC. No distinction is made in the literature between UPC and other forms of urgent care, however this information can be useful in forming a definition of UPC. It is important to note that the outcome of this work was to produce a definition of 'urgent primary care' only and not of urgent care in general, so terminology and characteristics may differ to those used in other sectors, or from other definitions that might be more closely aligned to emergency care.

Forming a definition of 'UPC' is important for describing the Urgent Primary Care Centres (UPCCs), to support communication with the public, and to support the design of future models. In deliberations from the Task and Finish group, value was seen in giving simple definitions to differentiate the terms. The major constructs discussed involved the severity of the medical issues, and the time frame that the issue must be dealt with.

Considering the range of conditions that fall under the banner of 'urgent care', the timeframe of 8 hours was considered a reasonable benchmark, but it should not be considered bound as a target. Further investigation of the research literature has taken place and there is a very limited evidence-base on which to draw. While there is reference to urgent care in primary care settings this is not defined in detail – there is an assumption that the reader already knows what this is. Public opinion should be sought about the 8-hour figure which should form part of a wider set of measures of the UPCC. The definitions will continue to be reviewed as the national model of UPCCs is defined. The drafted simple definitions were as follows.

Simple definition of UPC and emergency care	
UPC:	Health and wellbeing issues that may result in significant or permanent harm if not dealt within the next 8 hours.
Emergency care:	Health and wellbeing issues that may result in significant or permanent harm or death if not dealt with immediately.

There was also discussion around expansion of this simple definition to provide more context of the characteristics of urgent care and how it can be accessed. An example of this expanded definition of UPC would be as follows.

Expanded definition of UPC	
UPC:	Health and wellbeing issues that may result in significant or permanent harm if not dealt within the next 8 hours. UPC services include a phone consultation through the NHS111 Wales* (including the 111 Clinical Support Hub), pharmacy advice, same day /out-of-hours primary care appointments, and/or referral to an urgent treatment centre (UTC). If unsure what service is needed, NHS111 Wales can help to assess and direct to the appropriate service/s.

* or health board equivalent where NHS111 is not used

Introduction

Although it is a term that is commonly used, the concept of 'urgent care' is difficult to characterise. Urgent care is often discussed together with emergency care, and much of the literature refers to urgent care in general, rather than specifically to UPC.

It has been noted that the language used to conceptualise urgent care has changed over time with urgent care being more closely linked to primary care in policy documents in the 1990s, but with the general term being discussed more in relation to emergency care rather than general practice in documents from 2010 onwards (Turnbull et al 2019). This is important to bear in mind as the outcome of this work was to produce a definition of 'UPC' only and not of urgent care in general, so terminology and characteristics may differ to those used in other sectors, or from other definitions that might be more closely aligned to emergency care.

In a definition provided by NHS England (n.d.), urgent and emergency care are described as a hierarchy of services that are distinct from one another. Whilst this suggests that there is clarity around the terms 'urgent' and 'emergency' in theory, in practice the concepts are used inconsistently. A review of policy documents and a detailed review of recent literature using the terms found that few provided a specific working definition of what they meant. Instead, the terms

would only be touched upon briefly when describing the services responsible for different needs, or there would be an absence of a definition altogether (Turnbull et al 2019). In other policy documents and research reports, these descriptions have been expanded to include extra details regarding the use and organisation of these services.

This document discusses the major constructs that are used in forming these definitions of urgent and emergency care, the lack of specificity around the terms, and the impact this may have to users. There is also discussion of the forming of a definition of 'UPC' from the Task and Finish group. Details of the search strategy used for the international review of the literature are presented in Appendix 1.

Constructs used in defining urgent and emergency care

In a review of urgent and emergency care definitions (Turnbull et al 2019), it was found that four broad constructs are used in their construction. No distinction is made in the literature between UPC and other forms of urgent care; however, this information can be useful in forming a definition of UPC. These constructs are discussed in this section, with a summary table provided in Appendix 2.

1. Physiological factors

Urgent care is defined in relation to the seriousness of the symptoms and whether the need is considered life-threatening. The language used can be quite subjective. For example, descriptions relating to emergency care include the words 'major' or 'severe', whilst descriptions of urgent care include conditions that can be considered 'minor'[1]. In order to aid in the understanding of what constitutes 'urgent' and 'emergency' care, sometimes examples are offered of particular symptoms and which category they fit into, as well as a time-frame for how quickly the symptoms need medical attention (Turnbull et al 2019) (see the Table 1).

Physiological aspect	Urgent	Emergency
Severity of illness or injury	Urgent but not life-threatening; not serious; 'minor' illness or injury; 'short-term' illness	Life-threatening; serious
Symptoms appropriate for different types of service	Sprains and strains; broken bones; wound infections; minor burns and scalds; minor head injuries; insect and animal bites; minor eye	Loss of consciousness; an acute confused state; fits that are not stopping; persistent, severe chest pain; breathing difficulties; severe bleeding that cannot be stopped; severe allergic reactions; severe burns or scalds; heart attack; stroke; major trauma

Physiological aspect	Urgent	Emergency
	injuries; injuries to back, shoulder and chest	(e.g. serious road traffic accident, serious head injury)
Onset of illness	Unforeseen; acute; sudden onset or worsening of symptoms	Unforeseen; acute; sudden onset or worsening of symptoms
Time frame	Does not need immediate medical attention. Cannot wait until the next day. For 'less serious yet immediate illness or injury'. Needs to be addressed quickly (treatment or review within 1-6 hours).	Requires immediate attention

Table 1. Physiological factors in policy definitions of urgent care in the UK (compared with emergency care) (Turnbull et al 2019)

2. Relational language

Urgent and emergency care are often discussed in relation to each other with terms such as 'serious' and 'more serious', 'not life-threatening' and 'life-threatening'. This is how the services are communicated to the public for services such as NHS 111 which is for "when it is less serious than 999". Also consider the NHS 111 strapline: "The telephone number to call when you need medical help fast – but it's not an emergency" (NHS England 2012).

3. Health service characteristics

Some policy documents and research reports distinguish urgent and emergency care by the types of services they offer. Emergency care services are generally well-established, whilst urgent care services vary by location. See a summary in the table below. It has been considered that this variation in urgent care services may be cause of confusion for service users (Turnbull et al 2019).

	Urgent	Emergency
Type of service	• Urgent Care Centres (sometimes call treatment, primary care, or out-of-hours centre) • Walk-in Centre (in England) • Minor Injury Unit • NHS 111	• 999 ambulance service • Emergency departments (ED)/ Accident and Emergency (A&E) • Major Trauma Centre
What the service offers	Can be nurse or GP led. Urgent Care Centres are usually staffed by both GPs and nurses and their facilities vary by location	High level of clinical service, expertise, and resources. Manages full range of life-threatening illness and injury

	Urgent	Emergency
Availability	Varies by location: some open 24/7, some have opening hours (e.g. 0800-2200)	24/7

Table 2. Characteristics of urgent and emergency care (Turnbull et al 2019).

In addition, notions of 'urgency' may be defined by where a health problem is treated. Treatment of a broken bone would generally be seen as requiring urgent care, but if that service is not available (due to locality, opening times etc.), admission to ED would be required. The definition of urgency can therefore be fluid depending on service availability (Turnbull et al 2019).

4. Patients' perceived needs

The responsibility for judging the seriousness and suitability of a particular service often lies with the patient, so there may be language around what is 'appropriate' for a particular service or what constitutes a 'genuine' medical complaint. For example, a description of emergency care services from NHS Choices: "An A&E department deals with genuine life-threatening emergencies… Less severe injuries can be treated in urgent care centres or minor injury units" (NHS 2018).

Interpretation of urgent and emergency care by service users

A key factor that shapes users' interaction with urgent and emergency care services is their symptoms. Symptoms perceived as being prolonged, severe, unusual, worsening or causing pain are all described as being triggers for seeking help (Turnbull et al 2019). They may also seek these services if they are unsure about the severity of their condition and/or are looking to rule out certain conditions or to seek reassurance. Urgent care services therefore also provide a preventative/risk management purpose in the eyes of users.

Service users also had notions of what is 'appropriate' and 'inappropriate' use, and reports have suggested that almost two-thirds (65.6%) believed that others had used GP or ED services inappropriately (Adamson et al 2009). In another study, there was also concern around inequality of care, with the onus often on the patient to convey the urgency of their situation to health-care professionals, and therefore those less able to communicate might not get the care they need (Richards et al 2007). There were also issues around some users not wanting to be seen as a burden on services, fear of abusing the system or of wasting the time of healthcare professionals, which may cause delay in some seeking help (Turnbull et al 2019).

If a person believes they require urgent care or is unsure of which service they require, they are able to call the NHS 111 service where they can be assessed, and given the option to speak to a nurse,

doctor or paramedic if appropriate. Based on their assessment, they will then be directed to the service most appropriate to their needs, which could be to an UPC service, their local GP, or ED if necessary (NHS 2018).

Refining the definition of UPC

The need for a clear definition

The blurred boundary and sometimes overlapping characteristics of urgent and emergency care means that the terms can be used interchangeably. This can result in considerable confusion to service users. A mismatch has also been described between how policy and the public conceptualise the meaning or 'urgent' (Turnbull et al 2019). This can mean that service users may misunderstand the purpose of certain urgent care services.

A clearer understanding of what constitutes UPC is needed, and evidence has shown that service users want a clearer sense of service priorities and clarity in what different services are for[1]. A clear definition of 'UPC' is important for supporting wider communication with the public regarding wider urgent and emergency care, and to support the design of future models. A clear definition is also important in helping shape the work of developing Urgent Primary Care Centres (UPCCs) by helping to clarify the aims and remit of their services.

Developing a clear definition of UPC

The need for clarity informed the deliberations in refining the definitions of UPC and emergency care. To provide clear and purposeful definitions, value was seen in making them as simple as possible. The major construct around which the definitions were formed was the physiological aspects of urgent and emergency care, particularly the severity of the illness or injury and how this relates to the timeframe in which the medical issue must be dealt with.

With regards to severity, it is regarded that emergency care should be reserved for the most serious cases where there is risk of significant or permanent harm or death if the issue is not dealt with immediately. With UPC meanwhile, the risk of death is lower, but there is still a risk of significant or permanent harm if not dealt with within a certain timeframe.

In UPC, it is considered that cases should be seen 'same day', though this can be interpreted in different ways in different settings. Considering the range of conditions that fall under the banner of 'urgent care', a timeframe of 8 hours was considered a reasonable benchmark, but it should not be considered bound as a target. Further investigation is required regarding public opinion about the 8-

hour figure. For example, this could take the form of a patient satisfaction survey where the 8-hour figure is investigated indirectly where waiting times are noted, and patients are asked if they were happy with their treatment. There will be a need to test or to develop this measure as part of a wider set of measures of the UPCC.

Based on these conversations, draft simple definitions of urgent and emergency care were developed. The Task and Finish group agreed these draft definitions to help shape the work of developing UPCCs and the definitions will continue to be reviewed as the national model is defined.

Simple definition of UPC and emergency care	
UPC:	Health and wellbeing issues that may result in significant or permanent harm if not dealt within the next 8 hours.
Emergency care:	Health and wellbeing issues that may result in significant or permanent harm or death if not dealt with immediately.

In addition, consideration was also given to expanding the definition of UPC to include extra information regarding the other constructs, particularly with regards to the health service characteristics. This would include providing examples of the UPC services available in Wales and how they can be accessed. An example of this expanded definition is provided below.

Expanded definition of UPC	
UPC:	Health and wellbeing issues that may result in significant or permanent harm if not dealt within the next 8 hours. UPC services include a phone consultation through the NHS111 Wales* (including the 111 Clinical Support Hub), pharmacy advice, same day /out-of-hours primary care appointments, and/or referral to an urgent treatment centre (UTC). If unsure what service is needed, NHS111 Wales can help to assess and direct to the appropriate service/s.

*or health board equivalent where NHS111 is not used

Key messages from this updated review

- A full search of the international literature was conducted to evidence and supplement the existing review. Sixty thousand papers were identified initially. A rigorous process of review resulted in 170 papers, 16 had some information on the definition of UPC, 24 provided some information on Urgent Care Centres. However, there was very little good quality evidence to be found.
- A clear definition is important to shape the work of developing Urgent Primary Care Centres because it clarifies the aim and remit of the service.

- It is apparent that there are no clearly articulated definitions of what Urgent Primary Care involves, and no consensus on what constitutes an Urgent Primary Care Centre. Due to the range of locations examined, funding/payment arrangements, workforce capacity, capability, design. Countries included England, Wales, Scotland, Germany, Denmark, Norway, Netherlands, USA, Canada and Israel. Even within countries there was a variation in configuration, funding and workforce.
- There was no distinction made between UPC and other forms of urgent care.
- There was no evidence to quantify the exact period of time to which they referred. Public opinion should be sought about the 8-hour figure.
- Constructs used in defining urgent and emergency care included physiological factors, relational language, health service characteristics and patient perceived needs.
- Urgent care services vary by location and may cause confusion for service users.

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APPENDIX 1- Urgent Primary Care Narrative Review (UPCNR)

In this section we present the findings of the narrative review, the PRISMA process that was followed, the search strategy method undertaken, search terms and strings, literature sources and papers that informed the data extraction process and the DOIs for the papers accessed.

Review findings

A total of 60k papers were identified in the first tranche of searching and this was reduced via the PRISMA process to 170 papers. A thematic process was used to extract data (Silverman 2017) from this total and a narrative around what constitutes the definition of 'Urgent Primary Care', and 'Urgent Care Centre' was built from the data extracted.

Of the 170 papers identified only 16 papers had some form of information that could be used to inform a definition of 'UPC', and 24 had some form of information to inform an understanding of 'Urgent Care Centre'. However, on closer examination of the texts there was very little concrete material that could be used to determine definitions of these two terms. This was due to the range of locations examined in the papers and the particular local contexts of service configuration, funding/payment arrangements, workforce capacity/capability/design. Countries included: England, Wales, Scotland, Germany, Denmark, Norway, Netherlands, USA, Canada, and Israel. Even within countries there was variation in the details of configuration, funding and workforce.

From the material that was available, UPC may be seen to address health conditions for which a delay of several hours will not result in adverse health outcomes. However, none of the papers quantified the exact period of time to which they referred, and some gave diagnostic codes of the sorts of conditions that were included in the idea of non-emergent health conditions, but these were by no means exhaustive or replicable across different locations/configurations.

Urgent Care Centres (UCC) may be understood as facilities that treat non-emergency health conditions. They have extended opening hours beyond that which is provided by primary

care services. This in itself varies from country to country and within localities. The euphemism of 'office hours' is used but rarely defined. Some UCCs are open 24 hours a day, others only operate outside of primary care opening hours i.e. out of office hours. Again there is no consistency on the out of office hours' time period across locations. The range of services offered at UCCs varies widely depending on their country of location, and even location within a country. They may offer on-site imaging services, and various laboratory tests with different turn-around times for results. Typically, they provide easy access for service users with no appointments needed, and quick service. Where patients are required to pay at the point of delivery, they typically charge lower cost for care than Emergency Departments. UCC staffing varies from country to country and a lack of resource in rural areas is problematic in some countries e.g. USA. Some UCCs are staffed by non-medical advanced practitioners (APs), others have a blended staff group of medical practitioners with APs, RNs and other allied professionals, others are only staffed by medical practitioners with support staff dealing with administrative duties.

In the UK, even the Keogh Report (2013), and the Primary Care Foundation discussion paper (2012) shy away from making specific detailed recommendations for UCCs. In these documents there is talk of good service characteristics i.e. that a UCC should ensure that:

- 'Care is provided promptly.
- The patient's urgent needs are met (including reassurance where this is appropriate).
- The scope of the service is clear.
- There is clear governance and management responsibility for improving quality and cost-effectiveness.
- The environment is appropriate for provision of good quality care and supports integration with other services.
- The process used supports these objectives.
- There are mechanisms for capturing and acting on patient experience and other feedback' (Carson et al 2012 p3).

Our recommendation therefore is that the commissioning group should determine a definition of UPC and UCC by which they wish to work and be transparent in their definition and provide concrete details to support their definition of UPC and UCC. In this sense they will be the first body setting specific criteria for use in the UK.

PRISMA

The PRISMA process was followed to capture relevant papers (Moher et al 2009) using a structured extraction document devised for the project:

Identification	**Records identified through database searching** (n = 60,210)	**Additional records identified through other sources** (n = 5)
Screening	Number of records after screening **(n = 375)**	
	Number of records after duplicates removed **(n = 200)**	
Eligibility	Full-text articles assessed for eligibility **(n = 200)**	Full-text articles excluded: **n = 30** not relevant to UPC
	Studies left to be included in review **(n = 170)**	
Included	Studies included in narrative synthesis **(n = 170)**	

From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *P*referred *R*eporting *I*tems for *S*ystematic Reviews and *M*eta-*A*nalyses: The PRISMA Statement. PLoS Med 6(7): e1000097. doi:10.1371/journal.pmed1000097
www.prisma-statement.org

Search strategy method

The UPCNR followed good practice guidelines for conducting reviews (Moher et al 2009; Nurjono et al 2018, Williams et al 2017). The process started on 20 January 2021 and concluded 10 March 2021.

The PICO model was used to set parameters (Counsell 1997; Richardson et al 1995; Schardt et al 2007):

Population – urgent care providers, primary care service providers, primary care service users and carers

Intervention – urgent primary care

Comparison - Preceding service model.

Outcome - the impact of UPC on service provision, service users and carers, and ABUHB, BCUHB, CTMUHB, C&VUHB, HDdUHB, PTHB, SBUHB and WAST.

Search terms and strings

Search Term Primary String	Search Term Secondary String	
Urgent AND Primary AND Care		
Urgent AND Primary AND Care AND Cent* OR Service*OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Urgent AND Primary AND Care AND Cent* OR Service*OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team

Urgent AND Primary AND Care AND Patient AND Activity		
Ambulatory AND Care		
Ambulatory AND Care AND Patient AND Activity		
Ambulatory AND Care AND Cent* OR Service*OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Ambulatory AND Care AND Cent* OR Service*OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Urgent AND General Practice OR Family Doctor AND Care		

Urgent AND General Practice OR Family Doctor AND Care	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Urgent AND General Practice OR Family Doctor AND Patient AND Activity		
Urgent AND Primary AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Urgent AND Primary AND Care AND Cent* OR Service*OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help

	OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Urgent AND Primary AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit* AND Patient AND Activity		
Urgent AND General Practice OR Family Doctor AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Urgent AND General Practice OR Family Doctor AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first	OR contact first OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat*

		OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Urgent AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Urgent AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Urgent AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team

Rapid AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Rapid AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Rapid AND Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition*	OR Non-immediate medical attention OR Quick treatment

	OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Treatment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Local AND Clinical AND Assessment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Local AND Clinical AND Assessment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care

	OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Same day help
Local AND Clinical AND Assessment AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Integrated AND Urgent AND Care		
Integrated AND Urgent AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help

Integrated AND Urgent AND Care AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department*

	OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Primary AND Care AND Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Primary AND Care AND Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Primary AND Care AND Out-of-hours AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System

	OR contact first	OR Community Rehabilitation Enablement and Support Team
Walk-in AND Cent* OR Service* OR Clinic* OR Department* OR Unit*		
Walk-in AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Walk-in AND Cent* OR Service* OR Clinic* OR Department* OR Unit*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Minor injury AND Unit* OR Cent* OR Service* OR Clinic* OR Department*		

Minor injury AND Unit* OR Cent* OR Service* OR Clinic* OR Department*	AND Minor Illness* OR Minor Condition* OR Short-term Illness* OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help OR Same day treatment* OR Same day care OR Same day help
Minor injury AND Unit* OR Cent* OR Service* OR Clinic* OR Department*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first OR contact first	OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team
Rapid-response AND community nursing		
Rapid-response AND community nursing AND Unit* OR Cent* OR Service* OR Clinic* OR Department*	AND Minor Illness* OR Minor Condition* OR Short-term Illness*	OR Non-immediate medical attention OR Quick treatment OR Quick care OR Fast medical help OR Rapid medical help

	OR Non-life threatening OR Immediate illness* OR Immediate Injur* OR Less severe injur*	OR Same day treatment* OR Same day care OR Same day help
Rapid-response AND community nursing AND Unit* OR Cent* OR Service* OR Clinic* OR Department*	AND Telephone assessment* OR Telephone service* OR NHS 111 OR 111 first OR Telemedicine OR Telehealth OR Telephone first	OR contact first OR Appropriate use of service* OR Clinical assessment service* OR at emergency department* OR in emergency department* OR co-locat* OR Acute Demand Management System OR Community Rehabilitation Enablement and Support Team

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Inclusion/Exclusion criteria: ***Include***: written in English; published since 2000; any type of literature or document; any country where UPC has been introduced	***Exclude:*** written in any other language than English; published before 2000; Emergency Department provision of emergency care; emergency care

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APPENDIX 2- Summary Table of Constructs For Definitions of Urgent and Emergency Care

The table below provides a summary of the four broad constructs used in forming definitions of urgent and emergency care. These constructs were identified in a review of urgent and emergency care definitions conducted by Turnbull et al (2019).

Construct	Description
Physiological aspects	• Nature of symptoms (e.g. seriousness; suddenness) • How quickly medical attention is needed
Relational language	• ‘Urgent’ is defined in relation to definitions of ‘emergency’ (e.g. ‘less serious’, ‘minor’)
Health service characteristics	• Type of service (e.g. urgent care centre, minor injury unit, NHS 111) • What the service offers (e.g. convenience; care close to home; signposting; treatment; advice) • Service availability (geographic location; opening hours) • How care is provided (e.g. telephone; urgent care centre)
Patients’ perceived needs	• Patients perceived need/urgency and their use of services • Notions of appropriateness and legitimacy of health service use

APPENDIX 3- Challenges of providing urgent and emergency care (Wilson, 2020)

What is the demand for urgent and emergency care?

The demand for urgent and emergency care services has seen significant increases in recent times. In Wales, there were 394,900 emergency admissions in 2018/19, a rise of 3% from the previous year, and up from 344,000 in 2009/10, an increase of 14.8%[11]. This rising demand for urgent and emergency services is a trend that is also seen in the UK more widely, and in other developed countries[12].

In a 2015 report[12], a number of key factors were identified that influenced the demand for urgent and emergency care:

- **Population and demographic changes –** In particular, an aging population with increasingly complex needs can lead to an increase in demand for urgent care. The report estimated that the rising aging population accounted for around 25% of the increase in demand for urgent and emergency care[12].
- **Health needs –** chronic conditions, acute illness, drug and alcohol dependency
- **Socioeconomic factors –** isolation and loneliness, lack of social support, social deprivation
- **Patient factors –** Decision making behaviours, awareness, expectations, convenience
- **Policy –** insurance coverage, numbers of hospitals, access to primary care, geographical differences in provision.

Although they were able to identify the contributing factors, the report team noted that the relative influence of each factor is poorly understood. Therefore, there is not currently a comprehensive profile of the different healthcare needs of populations accessing emergency and urgent care which could be used to inform health-service planning. There was also a noted lack of information about urgent care in the primary care setting, and modelling studies that could be used to forecast likely future changes in demand[12].

Why do people attend urgent and emergency care services?

Various studies have been conducted to understand the reasons that patients give for accessing urgent and emergency care. These studies consist of qualitative interviews, focus groups, surveys and questionnaires and primarily involve patients presenting to ED with urgent, rather than emergency care needs.

Based on a review of 31 studies, Turner et al.[12] identified a number of common reasons given for attending ED:

- **Lack of access to or confidence in primary care:** Examples include dissatisfaction with GPs, limited opening hours, anticipated waiting times for appointments, previous experience using OOH services and perceived barriers. The elderly in particular did not like or trust telephone-based OOH services. In many studies, a high proportion of patients attending the ED were registered with GPs but still chose to access the ED instead.
- **Lack of awareness of other options:** Patients were unaware that there were other services that may have been more suitable to their needs (e.g. Out-of-hours services, urgent care clinics)
- **Urgency:** Patients perceived that their condition required urgent treatment, or were anxious and were seeking reassurance from emergency-based services.
- **Advice/instruction:** Patients were advised to attend the ED by family, friends or health-care professionals.
- **Resources:** Patients believed that their condition needed the resources offered by a hospital, including hospital doctors (rather than GPs), diagnostics (particularly radiography), and treatment.
- **Convenience:** Attending ED was considered more convenient in terms of location, not having to make an appointment and opening hours. Older people were more likely to contact a GP first, but younger patients contacted urgent care centres, ED or OOH services, as they found this more convenient.
- **Costs:** In some health systems, costs and transport options affected decision-making.

In addition to the reasons given above, a further reason that has been identified is the complexity of the current system. People can struggle to navigate the confusing and inconsistent array of urgent care services provided outside of hospital. In this regard, EDs have become victims of their own success. A number of reports make reference to the strong “brand” that A&E has, which, despite increasing pressure, continues to provide a responsive service that is trusted by the public[13–15]. So rather than trying to navigate the various urgent care facilities to determine which offers the service most applicable to their needs, they patients simply default to A&E[15].

Understanding the reasons why people choose to turn to emergency departments can be useful in designing new models of urgent care so that they can be better tailored to what users want. For example, in understanding that patients feel that the current system is too complex, some initiatives have looked to develop ideas of “service integration” or taking a “whole system” approach. The ambition is that urgent care services are able to integrate seamlessly into the care system so that patients do not see the joins between them; that information is able at every stage rather than having to take patient details many times; and, that the responsibility of care can be passed between these services without hinderance[16].

In order to achieve this integrated "whole system approach", it is important that new care services are not commissioned in isolation. In a 2013 review of urgent and emergency care, the NHS in England acknowledged that the isolated commissioning of new services had meant that their system could be confusing. Whilst the establishment of new facilities had been well-intentioned, they added complexity to the system, causing confusion for patients and staff. Referring to the various services that were being offered including walk-in centres, minor injury units, urgent care centres, and a range of similarly named facilities that all offered slightly different services, at different times, and in different places, the report stated, "Starting from scratch, nobody would design the current array of alternatives and their configuration"[15].

> "All the public want to know is that if an urgent care problem ever arises, they can access a service that will ensure they get the right care when they need it"
>
> *- NHS England. Transforming urgent and emergency care services in England: urgent and emergency care review end of phase 1 report. 2013*

The report argued that users of services will often be looking to these services at a crisis point in their lives, and in this moment they cannot be expected to be well-versed enough in the nuances of the different systems, models, and services offered by different facilities to then make an enlightened decision to attend the service most appropriate to their needs. The system therefore needs to be intuitive so that it is easier for people make the right decision.

Primary care services in or alongside emergency departments (ED)

One potential solution being considered regarding the issue of capacity in ED is the utilisation of a general practitioner within the emergency department, or at a closely located unit. This strategy intends to improve patient flow and reduce crowding in ED by "streaming" patients presenting with non-urgent conditions to primary care services. This would help to free up resources in ED so that they are in a better position to care for critically unwell patients[17,18].

Using this model, primary care services are often described as being "co-located" with emergency departments, but this can be implemented in different ways. For example, a "co-located" primary care service may be similar to normal practice settings, providing care in a unit separate to the emergency department. Alternatively, GPs may work within the emergency department, with responsibilities beyond usual primary care[18]. Primary care clinicians associated with emergency departments can include a mix of GPs, advanced nurse practitioners and nurses working regular or ad hoc shifts in different ways, seeing different patient groups[19].

> Three main roles that GPs undertake in emergency departments[19]:
>
> 1. Treating patients with primary care type problems in a unit alongside the emergency department including walk-in centres, urgent care centres or traditional out-of-hours services.
> 2. Screening patients at ED to redirect those with primary care type problems to an alternative service
> 3. Being fully integrated with the ED service, treating patients presenting with a wider range of conditions

In a 2018 review of studies that investigated this model, NICE found little benefit for co-located GP-led units[20]. While benefits may be provided in reduced numbers of diagnostic investigations, no

effect was found of patient/carer satisfaction, mortality, quality of life, time to admission, readmission, or ED demand. However, this was only based on two studies from the 1990s, so may not represent current staffing models. Whilst the committee decided not to make a recommendation for GPs to work within or on the same site as the ED, it was acknowledged that the available evidence was limited.

A review in 2019 also found that there was little evidence that general practitioners in emergency departments directly or indirectly affected the care and throughput of the sickest patients[17]. Another observed a paradoxical increase in attendances to ED with co-located primary care services, with the rise being attributed to provider-induced demand[21]. It also noted that whilst marginal savings may be realised per patient, this is likely to be overshadowed by the overall cost of introducing a new service.

Overall, current evidence for the initiative is described as "weak"[18], but it is acknowledged that the studies have diverse designs, making it difficult to draw conclusions on safety and effectiveness[18,22]. Two new observational studies have been commissioned by the National Institute for Health Research to investigate the effectiveness of this model more thoroughly (Award ID: 15/145/04 and 15/145/06)[23,24]. They are due to be completed in 2021.

Impact of Covid-19 on demand

In the wake of the Covid-19 pandemic, EDs noted a significant reduction in demand across Wales, with activity being up to 60% below normal levels at times[2]. Similar drops in demand were also reported in parts of England[25]. There were initial concerns that this may have been due to patients delaying seeking treatment due to the risk of expose to Covid-19, however emerging evidence suggests that the reduction was mostly down to lower risk patients with minor conditions not turning up.

It is unclear whether those patients sought other care services instead, but this significant reduction suggests that a proportion of patients who present at ED do not require urgent care and would benefit from accessing care from other parts of the system. To support this notion, a report by The King's Fund (using pre-Covid data) found that 9% of people who attend ED are discharged without requiring treatment, and a further 32% receive guidance or advice only[22].

Since June 2020, after the number of reported Covid-19 cases reduced and lockdown measures started to be eased, EDs began noticing a gradual return to the 'normal range' of activity. It has been suggested that a significant proportion of people who present to ED could instead be treated by primary care. A key aspect in the development of new model of urgent primary care is in the direction of people to the most appropriate service so that they receive the right care, in the right place, first time.

Phone First/Contact First

Phone First in Wales – CAV 24/7

One of the traditional ways that people access urgent care is by walking into emergency departments. Due to the Covid-19 pandemic, however, there is now an absolute requirement to keep people safe through social distancing, and there is concern that the safety of patients and staff could be compromised if EDs become overcrowded. As a result, the Royal College of Emergency Medicine reflected on an urgent need to change from a service model which has unlimited numbers

of people attending ED in an uncoordinated way, adding that the most vulnerable patients attending ED are at most risk if they do pick up Covid-19 in 'over-crowded' departments.[2,3]

A way that this challenge is being tackled is by a new model being trialled by Cardiff and Vale University Health Board. The 'CAV 24/7' phone service is designed to help people who want or need urgent care to access the right advice or treatment in the right place[26]. Instead of walking into ED, people are encouraged to call the phone service where their health needs are assessed by a suitably qualified doctor or nurse. Depending on the severity of the condition, people may then be:

- encouraged to self-care
- signposted to a more appropriate service in their local community, or
- directly booked an appointment in an ED if they need further assessment and treatment.

In addition to preventing overcrowding of EDs, the CAV 24/7 service also aims to prevent misuse or over-reliance on ED services. Evidence suggests a proportion of people who come to emergency departments do not require the expert care provided by healthcare professionals in these units and would benefit instead from either self-care or accessing advice, health or social care in other parts of the system[3]. The CAV 24/7 system can direct these people to more appropriate services, thereby freeing up capacity and easing the strain on EDs.

The service also benefits users as the booking system means that they are able to be seen more immediately upon arrival, instead of having to wait for an indeterminate time in a waiting room. With regards to Covid-19, this is also helpful in protecting people who are at risk, vulnerable or have been shielding, by reducing the time they spend in the Department.

On 5th August 2020, the CAV 24/7 trial went live as a 'pathfinder' for this new approach in Wales. As part of local development work, a clinical review of patients accessing the Emergency Department at University Hospital Wales, Cardiff was undertaken. The review found 60% of total patient attendances were suitable for the 'CAV 24/7' pathfinder model, with 21% of patient presentations suitable for self-care, advice or assessment in an alternative setting[2]. Therefore, the model clearly has potential to collaboratively redesign the way people access services when they need – or want – advice or treatment.

Meeting Wales policy goals

The programme is able help in achieving the vision of *A Healthier Wales* by providing a more seamless experience for users. Using the Phone First system, users are directed to appropriate services based on their unique needs. Those that can receive care more appropriately in the community will be more able to do so, aiding in the prevention of unnecessary attendance to hospital.

The programme can also aid in meeting the policy goals for urgent and emergency care set by NHS Wales for winter 2020/21, particularly the goals 1-3: 1) co-ordination, planning and support; 2) Signposting, information and assistance for all who want or need urgent care; 3) Preventing unnecessary attendance / admission to hospital

Phone First in England – 111 First

Similar models of telephone assessment are also being piloted in parts of England using the NHS 111 service under the name '111 First'. Much like the CAV 24/7 service, 111 First provides an assessment

service to rapidly identify people who need to attend the ED. If the patient does not need to attend an ED straight away, local clinical assessment services will call to complete a more detailed assessment of the patient. The service is staffed by doctors and other health professionals and has access to a range of local services to support patients' needs. It is able to offer self-care advice, book the patient into appointments in the community, or book ED appointments if necessary[25]. If the pilots are successful, the service could be rolled out to all trusts in England in December 2020[27].

APPENDIX 4: New urgent primary care pathfinder for Wales - Urgent Primary Care Centres (UPCCs) (Wilson, 2020).

The development of UPCC pathfinders in Wales

The development and implementation of models that address urgent primary care patient activity at a practice, cluster, and pan-cluster level is essential to delivering care closer to home. This is a key commitment in the plan for *A Healthier Wales* and also aligns to the policy goals and objectives set out in the Strategic Programme for Primary Care.

The value of developing new models of care has also been reinforced by the unique challenge posed by Covid-19, and the increasing difficulty presented to patients in accessing advice, care or support through multiple portals in a timely manner. Whilst a range of alternative services to ED exists, the public are not always clear on what these alternatives are or how they can be accessed. This can lead to patients attempting to access emergency departments when their needs could be better served by other services.

In the *Winter Protection Plan 2020-2021*, Welsh Government set out that whilst the Covid-19 pandemic has had a profound effect upon the delivery of NHS and social care services, as well as changing the behaviour of the general public in the way they access healthcare, the vision set out in *A Healthier Wales* for seamless health and social care remains sound. The Welsh Government remains committed to delivering the transformation needed at pace and scale. This will be crucial to support people and their carers through challenging winter pressures as well as tackling the impact of Covid-19.

The implementation of urgent primary care centre (UPCC) pathfinders aims to address these challenges by simplifying local urgent healthcare provision. This will enable better management of demand, and avoid 'hand-offs' and multiple entry points. The implementation of these facilities along with local development of 'Phone First/Contact First' model is a clear opportunity to transform the way urgent primary care is delivered in Wales. This will enable the provision of the right access point for large cohorts of patients, ensuring patients only attend hospital when they need to. The result will be an optimising of the patient experience and improving clinical outcomes.

To support the sustainable transformation of the provision of care in line with *A Healthier Wales*, The Welsh Government has made up to £4million national funding available for Health Boards to develop and deliver local urgent (same day) primary care centre pathfinders. The funding is available for 2020/2021 initially with further funding for 2021/22 to be made available subject to evidence of successful implementation and tangible impact determined through national evaluation.

To establish as much commonality as possible between the newly implemented UPCCs, it is important to consider the principles and standards of these facilities. In addressing a similar challenge of standardising the provision of urgent care, NHS England set out a core set of standards for urgent treatment centres[28]. These can provide a basis for standards in UPCCs in Wales.

These standards set out that patients and the public will:

1. Be able to access UPCCs that are open at least 12 hours a day, GP-led, staffed by GPs, nurses and other clinicians, with access to simple diagnostics, e.g. urinalysis, ECG and in some cases X-ray.

2. Have a consistent route to access urgent appointments offered within **XX hrs** and booked through NHS 111 (or possibly the Phone First service), ambulance services and general practice.
3. Increasingly be able to access urgent and same-day appointments, and out-of-hours general practice, for urgent appointments.
4. Know that the UPCC is part of locally integrated urgent and emergency care services working in conjunction with the ambulance service, NHS111, local GPs, hospital A&E services and other local providers.

A separate document outlining the principles and standards of All Wales UPCCs is being prepared.

Urgent Treatment Centres (UTCs) in England

The NHS in England offers a mix of walk-in centres, urgent care centres, minor injury units and urgent treatment centres, all with different levels of service. There had been confusion around the different services that the different facilities offer, so there is currently an effort for these to be standardised to offer a more consistent service across the country. By Autumn 2020, these will either be called urgent treatment centres or will change to offer other primary health care services[10].

UTCs have the following characteristics:

- GP-led
- Open for at least 12 hours a day every day of the week (including bank holidays).
- equipped to diagnose and treat many of the most common ailments people go to A&E for.
- Referral to UTCs can be made through NHS 111, or people can just turn up and walk in.
- Conditions that can be treated at UTCs include: sprains and strains; suspected broken limbs; minor head injuries; cuts and grazes; bites and stings; minor scalds and burns; ear and throat infections; skin infections and rashes; eye problems; coughs and colds; fever; abdominal pain; vomiting and diarrhoea; emergency contraception.

If people feel that they require urgent treatment, but it is not life-threatening, they are advised to call NHS 111 for an assessment. They will be given the option to speak to a nurse, doctor, or paramedic if appropriate and advised of where to go for treatment. This may be a UTC, out-of-hours GP service, local GP in normal hours, or the nearest A&E if necessary. All UTCs have clear processes in place if it is decided that treatment at A&E is more appropriate.

APPENDIX 5: Models of care (Wilson, 2020)

Canterbury Model

In Canterbury, New Zealand, a transformative healthcare programme was undertaken beginning in 2007 in response to projected rising demand on an already stretched healthcare system that was not affordable given the available workforce and poor financial performance[29,30]. The District Health Board in Canterbury set out a programme that aimed to moderate demand for hospital care, particularly among older people, by enabling the health system to support people in their homes and the community. The primary vision of the model was to produce a single, integrated health and social care system where services would cooperate and coordinate around the needs of patients, and to reduce waiting times for access to services[30,31].

As part of the model, a number of new programmes were developed that were centred around common themes of integration across organisational boundaries, increasing investment in community-based services, and strengthening primary care[30,32]. As a result of the changes that were implemented, Canterbury's health system had success in achieving its aim of moderating demand for hospital care and supporting more people in their homes and the community. Whilst it was difficult to measure the impact of individual initiatives, there was strong evidence that their collective impact modified demand for health care and reduced pressures on acute hospitals[30].

Given the similar challenges being faced by the NHS as those in Canterbury when the model was initiated, and the positive impact that this model has had, the integration of this kind of model of care in the UK is something to be considered, and of particular interest is how the Canterbury model may be used to address urgent and emergency care.

Acute Demand Management System (ADMS)

Relating specifically to urgent and emergency care, one of the programmes initiated as part of the Canterbury model was the Acute Demand Management System (ADMS). Under this system, people with acute care needs can receive urgent care in their homes or communities, thus avoiding hospital admission. Patients are managed by GPs supported by rapid-response community nursing, community observation beds, hospital-based specialist advice and rapid diagnostic tests. These services allow for many treatments or procedures that would otherwise require hospital admission to be administered within the community. Using this model of care, attendance at EDs and acute medical admission rates have been held at low growth in a trend that was especially evidence in elderly patients and those with ambulatory care or chronic disorders.

This model of care is distinguished from other integrated home-based health care programmes due to its development and management by primary care rather than acting as an outreach programme from hospital-based services.

Since an initial pilot study of the programme in 2000, the programme has evolved under a philosophy to provide whatever it took to safely look after patients at home; a key factor to the success of the programme was in allowing general practice teams to decide what resources and services were required to safely replace hospitalisation with care in the community[33]. An ethos was described of "high trust with minimum bureaucracy", with only essential information being required to initiate a service in the programme, and claims being paid without question. In this way, it was

considered that money did not get in the way of providing urgent care, enabling a high-trust environment[34].

Other aspects important to the success of ADMS[34]:

- Normalising self-management where appropriate and directing the population to primary care while only attending ED in emergencies. Patients encouraged to engage with community-based services, including nurse-led telephone triage linked to general practice.
- Access to and information about the programme (ADMS) through general practice is appropriate for people who experience greater risk and prevalence of disease, and for those of lower socioeconomic groups.
- Factor considered most important to successful integration was shift in culture and improvement in working relationships between primary and secondary care clinicians, and that ADMA was designed primarily by general practice.
- Structured education programme for general practice teams on delivering this form of care was also considered important, with delivery of care for some conditions requiring education and skill enhancement of general practice teams.

Community Rehabilitation Enablement and Support Team (CREST)

CREST was established in 2011 as an extension to ADMS and aimed at reducing the length of time spent in hospital of elderly patients by providing clinical assessment and home-based rehabilitation. Varying levels of support could be provided for up to six weeks and individualised care plans produced for long-term use in patient's homes[31,34]. The establishment of this service gave general practice teams improved access to rehabilitation services and domiciliary support for elderly patients, with general practice teams being able to refer patients directly to the CREST service[34].

Greater Manchester Model

In 2018 the NHS in Greater Manchester launched an improvement programme for urgent and emergency care. A key element of this plan was in shaping the role of primary care in providing high-quality urgent care, citing that 9 in 10 urgent care contacts occur in primary care[35]. The focus of the programme is on keeping people well, encouraging them to get treatment close to home rather than going to hospital, improving patient flow, and supporting discharge and recovery. The Greater Manchester Primary Care Strategy 2019-2024 set out some major aims for improving access to primary care.

Integrated urgent care in Manchester aims to offer a single point of access for care and treatment in each locality, with strong links into neighbourhood teams. There is an emphasis on enabling people to get help more easily in their own home and in care homes through community-based services that responds to 111 and some 999 calls, which includes social care, mental health and voluntary, community and social enterprise (VCSE) support. The programme also aims to seamlessly link with other services including secondary care advice, local out of hours services and urgent treatment centres, all with shared records, to support people to stay well at home and reduce potentially avoidable attendances to ED[35].

To manage access to urgent and emergency care, one programme that was launched was the Clinical Assessment Service (CAS). The service aims to provide multi-disciplinary urgent care response within

each locality. It brings together NHS 111 and GP out of hours services, including direct booking from NHS 111 into other urgent care services[35]. The CAS is seen as a core development to transforming the pre-Emergency department part of the urgent and emergency care pathway to help safely reduce hospital attendances and admissions.

In a report from September 2020, the Greater Manchester Joint Health Scrutiny Committee stated that the service had been successful in managing the demand of NHS 111 and 999 services and that it had been extended to manage extra calls as part of the Covid-19 response[25]. It was also extended to manage specific mental health demand providing a single point of contact and clinical assessment of patients experiencing a mental health crisis who had originally called 999, before onward referral to other GM services.

> "The GM Clinical Assessment Service (CAS) has played a vital role in managing the high demand away from 999 and 111 by taking appropriate calls and manging them effectively by providing a flexible and clinically skilled service as a forerunner to a fully integrated urgent care service for Greater Manchester."
>
> Greater Manchester Joint Health Scrutiny Committee, September 2020[25]

Greater Manchester also aims to run a pilot of the 111 First service beginning in autumn 2020 (see previous section on 'Phone First'). Patients will be encouraged to call ahead of their attendance to ED where they will be assessed and directed to the most appropriate service. People who attend ED will be assessed as soon as they arrive. Those that do not require emergency care, may go on for further assessment in a different area of the hospital or be referred back to another service in the community, which might include pharmacy, or a GP[25].

Scotland Model

The government in Scotland is in a process of transforming primary care services to better meet changing needs and demands. The new approach focuses on multidisciplinary team working and aims to reduce pressures on services, and improve outcomes for patients by enabling access to the right professional, at the right time, as near to home as possible. In December 2016, they published a Health and Social Care Delivery Plan[36] which identified six long-term outcomes to deliver this vision:

- People are more informed and empowered when using primary care
- Primary care services better contribute to improving population health
- The experience of primary care is enhanced
- The primary care workforce is expanded, more integrated and better co-ordinated with community and secondary care
- The primary care infrastructure – physical and digital – is improved
- Primary care better addresses health inequalities

Relating specifically to urgent primary care, the Scottish government has been looking to improve out of hours (OOH) services. A National Review of Primary Care OOH Services[37] was conducted in 2015 and 28 recommendations were given to provide secure person-centred, sustainable, high quality and safe primary care during the OOH period.

Recommendations are proposed about a new model of care; workforce and training, quality and safety, and data and technology. Recommendations are provided around promoting prevention and

self-care where appropriate, and to seek the right urgent care service when required. Proposals are also made about research, evaluation, affordability and best use of resources, and national workforce, OOH service specification and implementation plans are recommended also, with guidance for local translation.

Since 2015 Integration Authorities, NHS Boards and others have been taking forward the recommendations. Additionally, A National Out of Hours Oversight Group was established that brings together key partners to identify key priorities to make out of hours services more resilient and sustainable, and to address ongoing challenges.

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APPENDIX 6: International literature review findings

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
Adigun et al, 2018	USA	Non-emergent health conditions are defined as those health conditions for which a delay of several hours will not result in adverse health outcomes.	UCCs treat non-emergent health conditions. Walk-in clinics with extended office hours, on-site X-rays, laboratory tests that treat non-urgent health conditions in an ambulatory setting outside of the traditional hospital based or freestanding emergency department. Provide easy access, quick service, and charge lower cost for care than Eds. Extended hours of operation. No appointments needed	Differences in perception of the seriousness of health problem between beneficiaries and health care providers, which may lead to beneficiaries accessing care more at the ED than the UCC. African Americans were less likely to use UCCs. Eds may be more culturally competent than UCCs at treating racial/ethnic minorities. Age was not a predictor of UCC use. Distance was not a significant factor in UCC use. The study team did not have information on the time of day when beneficiaries utilized care for their nonemergent health conditions. UCC hours of operation were from 8:00 am-8:00 pm and not 24 hours a day. Although UCCs were available within a 5-mile radius for the majority of beneficiaries, including African Americans, beneficiaries may not use them for non-emergent health conditions. Access alone may not help with utilization of UCC services; interventions targeted at informing the community about UCC locations, services provided, and when they may use them
Akpinar et al, 2018	Turkey	N	N	Patients reported excessive pain (20.4%), perceived urgency (14.5%) and that EDs were available 24 h a day (13.2%). Easy accessibility to hospitals was the main reason why patients bypassed family doctors and came to Eds.
Albert , 2015	UK	N	A significant reduction in emergency department attendances. Incorporate new skills and technology.	Many patients lack the skill to negotiate an appointment. The homeless, those with English as a second language, and sick patients without energy fare badly. Urgent care centres

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
				satisfy ethical principles well. Timely assessment reduces clinical risk. Comprehensive treatments that complete care at the first attendance provide direct benefit. Popular care options respect patients' autonomy rather than doctors' prejudices. And making care available to people when they walk in distributes resources more justly than putting up barriers that favour the better educated and more pushy.
Alberti and Morris, 2017	USA	N	Urgent Care Association of America (UCAOA) defines UC as "the delivery of ambulatory medical care outside of a hospital emergency department on a walk-in basis, without a scheduled appointment" (2015). UC clinics often overlap services provided in other settings such as primary care offices and EDs but are able to see patients without advance appointments, with shorter wait times and for lower cost than EDs. Characteristics that typically distinguish UC clinics include: a focus on convenience (extended hours and unscheduled appointments); management of a wide range of clinical conditions and services including intravenous fluid hydration, intravenous medication administration, laceration repair, on-site laboratory testing and radiology, and a philosophy that views patients as customers. Care at UC settings is provided by nurse practitioners, physician assistants, and physicians as episodic care with no intention of re-assessment or follow-up	An increasing number of Americans are using urgent care (UC) clinics due to: improved health insurance coverage, the need to decrease cost, primary care offices with limited appointment availability, and a desire for convenient care. Patients are treated by providers they may not know for episodic illness or injuries while in pain or not feeling well. Treatment instructions and follow-up directions are provided quickly. Limited health literacy is common in a suburban UC setting, increasing the risk that consumers may not understand vital health information. Clear provider communication and confirmation of comprehension of discharge instructions for self-management is essential to optimize outcomes for UC patients.
Alyasin and Douglas, 2014	Saudi Arabia	N	N	Saudi citizens have access to unlimited, free medical care through a network of primary healthcare centres (PHCCs) throughout the country. The desire to receive care on the same day, the possibility of having laboratory tests and other

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
				investigations which are not provided in PHCCs, the lack of trust in primary care services, and convenience for patients who prefer medical treatment that is available 24/7. The major reason reported for dissatisfaction with primary care was lack of access and convenience. Examples included frustration with the appointment system, poor telephone communication, long waiting lists, and restricted opening hours. In Saudi Arabia, PHCCs are typically closed at 5 pm during the weekdays and do not open on weekends. Communication and cultural barriers were problematic given that most primary care physicians are expatriates and do not speak Arabic. Perception that the ED provides better care than other health services in the area (44.6%; n = 156), access to investigations such as blood tests and X-rays (37.4%; n = 131), and the perceived urgency of their problem (22.3%; n = 78). Patient perceptions of urgency differed significantly from nurse ratings suggesting the need for greater consumer education about the appropriate clinical management of their condition. Patient perceptions of urgency differed significantly from clinical opinion. Approximately two-thirds (65.3%) of CTAS V patients and one-third (31.8%) of CTAS IV patients believed their condition was more urgent than their triage nurse rating.
Amiel et al, 2014	UK	Urgent care has been defined as 'the range of responses that health and care services provide to people who require or who perceive the	A variety of models including walk-in centres, minor injury units and general practitioner (GP)-led urgent care centres have been developed. NHS walk-in centres patients more likely to be home owner-occupiers, have further education, live locally and, in contrast to	We found participants attending a GP-led urgent care centre were mainly working young adults, especially women, registered with a GP, and who rated themselves as healthy. Over 80% of participants reported that their usual health status was very good or good. They did not report any long-term illnesses, two-thirds had no requirement for regular

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		need for urgent advice, care, treatment or diagnosis.	international research, were registered with a GP. The main reasons for attending were 'speed of access' and 'convenience'. GP-led urgent care centres, especially those collocated with an emergency department. 2 types of service: open access urgent care services with no appointment necessary and normal GP services with planned appointments for local residents. The urgent care facility is open 24 hours a day for 7 days a week and staffed by GPs and emergency nurse practitioners. On arrival and following registration, patients are triaged by a GP streamer who decides on the most appropriate healthcare 'stream' for the patient. The streams comprise 'minor illness', 'minor injury', 'GP priority', 'emergency department transfer' and 'see and treat' in triage. All ambulatory patients presenting to what was previously the entrance to the emergency department are now seen and streamed by GPs working at the urgent care centre.	medication, and consulted their GP less often than the national average. The ability to get a faster appointment than with their GP and proximity to home or work were the most commonly cited reasons for attendance. We found that level of satisfaction with usual GP services was not a major reason for attending the centre, but a high proportion of participants had attended the centre before and this had influenced their decision to return. Although the GP streamer who saw the participants thought that they had a minor illness, a significant proportion of patients thought that their condition was serious and had high levels of worry. Expectations of the visit, the most common reason was to be given a prescription, followed by seeing a hospital specialist and then looking for advice only. Similar to findings from studies in walk-in centres, most participants attended the urgent care centres soon after their problem began and had not consulted another health professional before coming. May use other 'walk-in services' in preference to routine general practice. Difficulties in making international comparisons due to the variations in definition of an 'inappropriate' attendance, type of urgent care facility and the healthcare system being examined.
Backman ET AL, 2008	Sweden	N	N	This study shows that symptoms, previous hospitalization, and current perception of symptoms are the main factors discriminating between patients seeking healthcare at an ED and those attending a primary care centre
Bardelli and Kaplan, 2013	Switzerland	"Non-urgent" cases were defined as those needing treatment within 2 to 4 hours, based on an	N	Young age and non-Swiss origin were associated with increased use of the emergency unit for "non-urgent" conditions.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		abbreviated version of the Manchester Triage System patients that a general practitioner would not be expected to refer to an emergency department,		
Bernstein et al 2021	USA	urgent and non-emergent conditions based on International Classification of Diseases, 10th edition (ICD-10) coding for all patients 60þ years of age and eligible for telehealth	N	In total, 313,516 telehealth visits were analysed across three healthcare organizations. Telehealth encounters were successful in resolving urgent and non-emergent needs in 84.0–86.7% of cases. When visits required follow-up, over 95% were resolved in less than three visits for both telehealth and in-person cohorts.
Booth et al, 2019	UK	N	Service that primarily treats injuries or illnesses requiring immediate care, but not serious enough to require a visit to an ED. Treatment facility – may also include diagnostic services General practice teams Often located near A&E departments. See Front of accident and emergency general practice for co-located services (walk-in clinics outside a traditional ED).	NIHR funded study report. We conducted an initial mapping review to assess the quantity and nature of the published research evidence relating to seven vulnerable groups (socioeconomically deprived people and families, migrants, ethnic minority groups, the long-term unemployed/inactive, people with unstable housing situations, people living in rural/isolated areas and people with substance abuse disorders).
Carson et al 2012	England	N	Full case mix UCCs co-located with an Emergency Department. On a hospital site with access to diagnostics and a full range of clinical staff patients often do not recognise any distinction in the services and think of them as A&E. · Full case mix stand-alone UCCs. Remote from a hospital but with a full range of diagnostics and clinical staff. · Restricted case mix UCCs. Often similar to a walk-in centre but sometimes even more restricted. They may include minor injuries but	Carson D, Clay H, Stern R, Lawrence S & Carlisle D 2012 Urgent Care Centres: What works best? Primary Care Foundation. www.primarycarefoundation.co.uk

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			we found many had limited capability for dealing with fractures. Care is provided promptly · The patient's urgent needs are met (including reassurance where this is appropriate) · The scope of the service is clear · There is clear governance and management responsibility for improving quality and cost-effectiveness · The environment is appropriate for provision of good quality care and supports integration with other services · The process used supports these objectives · There are mechanisms for capturing and acting on patient experience and other feedback.	
Chen et al, 2015	USA	New York University Emergency Department Algorithm (NYU ED Algorithm) [3]. This algorithm was developed by a panel of ED and primary care physicians who analysed the records of approximately 6,000 ED visits in New York area hospitals in 1988 and assigned a value between 0 % and 100 % that represents the percentage of cases with a particular ICD9 code to be: (1) nonemergent (NE: immediate care not required within 12 h); (2) primary care treatable (PCT: care is	N	Contrary to popular belief, convenient access (in terms of travel distances) to hospital ED is correlated with less-urgent ED use among privately insured patients and self-pay patients in South Carolina, but not publicly insured patients. Unequal access to primary care appears to exist, as suggested by African American patients 'use of the hospital ED for primary care-treatable conditions while experiencing more frequent and more severe primary care-preventable conditions.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		required within 12 h, but could have been treated safely in an outpatient setting); (3) primary care preventable (PCP: emergency care is required, but could potentially have been avoided with timely and appropriate ambulatory care); and (4) emergent/unavoidable (EUA: emergency care required, and could not have been avoided with ambulatory care).		
Chen and Hibbert et al, 2015	USA	primary care treatable ("PCT") (treatment was required within 12 hours, but could have been provided safely in a primary care setting),	N	-
Chen et al, 2017	USA	N	walk-in clinics will be defined as standalone physical clinics not requiring advance appointments or registration, that provide basic medical care without expectation of follow-up, and are not traditional primary care practices or emergency rooms. Basic medical care means conditions that do not require advanced laboratory or imaging for diagnosis or complex procedures for treatment (Mehrotra 2009). Lack of follow-up means that walk-in clinics provide medical care primarily for acute conditions or occasionally one-o% issues in people with	Cochrane review. Walk-in clinics versus physician offices and emergency rooms for urgent care and chronic disease management.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			chronic disease but not ongoing, comprehensive management of chronic issues via a longitudinal patient-provider relationship as a primary care office would (Cassel 2012) walk-in clinics are outpatient medical units designed to provide acute treatment for low-risk conditions such as common coughs and colds. Walk-in clinics can also augment chronic disease management as an accessible setting for one-o% issues but are generally not suited for ongoing monitoring or prevention of long term complications. Compared to traditional physician offices and emergency rooms, walk-in clinics typically offer a more convenient experience in terms of location (typically a retail or community setting, not associated with a hospital), service (e.g. no ppointments required; transparent pricing), and hours (open after hours on evenings and weekends) (Ahmed 2010; Weinick 2010).	
Chmiel et al, 2011	Switzerland	o Access via single regional telephone number: Emergency Medical Service Telephone Switchboard (EMTS) o EMTS guides patient to GP or night doctor on duty o Access 24/7 o Between 10 p.m. and 7 a.m. the night doctor primarily provides the out-of-hours-care and the GP is on back-up service o From 7 a.m. to 10 p.m. telephone	N	Walk-in clinics versus physician offices and emergency rooms for urgent care and chronic disease management. We observed substantial differences between the two emergency settings in a non gate-keepinghealth care system. Knowledge of the distribution of diagnoses, their therapy, of diagnostic measures and of the factors which determine the patients 'choice of the ED or the GP-C is essential for the efficient allocation of resources and the reduction of costs.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		consultations, home visits and practice consultations provided by GP ○ From 10 p.m. to 7 a.m. telephone consultations and home visits provided by night doctor ○ Doctors on duty situated throughout the city, with one GP on duty for each of five Zurich emergency service areas ○ Handling of about 80'000 patients within a diameter of 7-12 km ○ Home visits until 10 p.m. using a fully equipped private GP car (with for example oxygen, intravenous drip, automatic defibrillation equipment) ○ Home visits from 10 p.m. to 7 a.m. using a fully equipped recognisable night-doctor's car		
Cowling et, 2016	England	N	Urgent care centres (UCCs) vary widely in form, both between and within countries. In the US, a service is considered an urgent care centre if it: primarily provides walk-in care; is open every weekday evening and at least one weekend day; and provides onsite x-rays and suturing for minor lacerations.1 The majority of these centres are staffed by physicians, commonly specialising in family practice, and nurses and physician assistants; most centres can provide fracture care and intravenous fluids.1 In England,	Most adults visiting the general practitioner-led urgent care centres at Charing Cross and Hammersmith Hospitals, in northwest London, can be managed within the urgent care centres A large absolute number of patients are still referred to the co-located emergency departments or other hospital specialty departments each year

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			the health service regulator considers urgent care centres to: be led by family practice physicians (general practitioners, GPs); provide extended opening hours or be open 24 hours a day, seven days a week; and provide urgent care on a walk-in basis, but not necessarily to patients with ‘non-urgent’ needs.2 Not all English UCCs have access to x-ray facilities or provide fracture care,3 whilst only some are located alongside hospital emergency departments (EDs). The UK Royal College of Emergency Medicine acknowledges both the significant variation in UCC design and system integration, and the lack of research on the role of UCCs.4 Despite this, it proposes that UCCs should be co-located with EDs to prevent patients without a clinical need for ED care from contributing to ED workload,4 particularly since a considerable number of visits to EDs each year could likely be managed by a general practitioner (GP).5-7 In other European countries, such as the Netherlands8 and Belgium,9 primary care cooperatives have been integrated with EDs, often for the same reasons as those given in England. In the US, whilst UCCs are typically independent physician offices, a considerable percentage of ED visits have been estimated to be treatable in UCCs.10 In northwest London, England, UCCs staffed by GPs and emergency nurse practitioners were first co-located with the EDs at Charing Cross and Hammersmith Hospitals in 2009.11 The centres were intended to reduce rates of ED visits and short-stay emergency admissions	

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			to hospital in particular. National policy also seeks to achieve this aim;12 the annual number of visits to accident and emergency (A&E) departments and emergency hospital admissions increased from 19.6 million to 21.7 million and 5.0 million to 5.3 million from 2008-09 to 2012-13 respectively.13 14 The ED at Hammersmith Hospital closed on 10th September 2014, as part of plans to centralise ED services in northwest London.15 16 The future of the ED at Charing Cross Hospital is uncertain,15 17 but the UCCs are likely to remain at both hospitals. The UCCs provided 'open access' urgent care services, for which an appointment was not necessary, seven days a week. Fulham UCC provided this service 24 hours a day, whilst Hammersmith UCC provided it from 8am to 10.30pm. Patients visiting the UCCs first registered with reception and were then allocated to a specific treatment stream by a GP (see Appendix 1). The streaming decision, taking approximately three minutes, determined whether a patient was immediately referred to the emergency department or initially managed in the UCC. This decision was underpinned by evidence based guidelines that were developed by a multi-disciplinary team including: GPs; emergency medicine consultants; gynaecologists; psychiatrists; and emergency nurse practitioners. The principles adopted in the development of the guidelines were: the UCCs would see any patient that a GP would see	

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			in their 'normal surgery' and would only refer to the EDs those patients that required an urgent opinion, as in routine general practice. The streaming guidelines evolved over time, through discussion of clinical cases and audits of ED referrals, and included updates of other guidelines such as those of the National Institute for Health and Care Excellence (NICE).18 The six streams were: 1. Emergency Department – a patient requires facilities present in the emergency department; 2. GP Priority – a patient is seen by a GP; 3. Minor Illness – a patient is seen by a GP or emergency nurse practitioner; 4. Minor Injuries – a patient is seen by an emergency nurse practitioner; 5. See and Treat – a patient is seen and treated by the GP Streamer; and 6. Reception Navigation – a patient is referred to another service by reception staff. Patients could not access the emergency departments without first seeing the GP Streamer in the UCCs unless they arrived by ambulance or had already been seen by their own GP who referred them to hospital. Further details on the service model have been described elsewhere.11 19 20	
Ebert et al, 2019	Denmark	N	The OOH service in Denmark is run by GPs organized in large-scale GPCs in four of the five Danish regions [15]. The fifth region has MH-1813, which serves as a publicly run call center using triage by nurses (approx. 80%)	-

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			and medical doctors with various specialties or in specialty training. The OOH service provides immediate access to healthcare outside normal office hours, i.e. between 4 p.m. and 8 a.m. on weekdays and during all weekends and holidays [15]. Depending on the nature and severity of the presented health problem, different types of care are provided: telephone advice, clinic consultation or home visit (by a doctor), or direct hospital admission by ambulance [14]. All citizens calling the OOH service must wait in queue, regardless of the health problem. The only other option for getting immediate help is the EMDC112, which is intended for life-threatening situations that require immediate medical response (e.g. ambulance dispatch	
Gnani et al, 2015	England	N	co-located with the emergency unit and department at Hammersmith and Charing Cross Hospitals, Hammersmith UCC is open from 08:00 to 22:00, and Fulham UCC is open 24 hours a day. On arrival at the GP-led UCCs, patients are registered at reception and are then triaged by an experienced GP who allocates the patient to the most appropriate clinical 'stream'. The streams comprise of one of the following categories: 'minor illness'; 'minor injury'; 'GP priority'; 'ED'; 'expected special patient'; and 'see and treat all preschool children are streamed as 'GP priority', or are seen in the 'see and treat' stream by a GP; they are not seen by an emergency nurse practitioner. Parents cannot	All children aged under 5 years, attending 2 GP-led UCCs over a 3-year period

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			access ED care without being first seen by a GP at the UCC	
Keizer et al, 2016	NL	General Out-of-hours primary care has been provided by large-scale GP cooperatives since the year 2000. Every GP has to do a minimum number of shifts at the GP cooperative to maintain registration as GP. Participation of 50–250 GPs per cooperative with a mean of 4 hours on call per week with compensation of about e65/hour. About 120 GP cooperatives in the Netherlands. Population of 100,000 to 500,000 patients with an average care consumption of 250/1000 inhabitants per year. Out-of-hours defined as daily from 5 p.m. to 8 a.m. holidays and the entire weekend. Patients are classified in urgency categories from high to low urgency (U1:2.1% U2:13.7% U3:35.3% U4:20.9% U5:27.5% in 2014).	N	-

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		Per shift GPs have different roles: supervising telephone triage, doing centre consultations or home visits. The triage is supervised by telephone consultation doctors: they can be consulted in case of doubt, and they check and authorize all calls. Location GP cooperative usually situated in or near a hospital. Distance of patients to GP cooperative is maximally 30 km. Accessibility Access via a single regional telephone number, meaning the first contact mostly is with a triage nurse (only 5–10% walk in without a call in advance). Telephone triage by nurses supervised by GPs: contacts are divided into telephone advice (40%), centre consult (50%), or GP home visit (10%). Facilities Home visits are supported by trained drivers in identifiable fully equipped GP cars (e.g. oxygen, intra venous drip equipment, automated		

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		external defibrillator, medication for acute treatment). Information and communication technology (ICT) support including electronic patient files, online connection to the GP car, and sometimes connection with the electronic medical record in the GP daily practice. Charging system Healthcare is largely covered by health insurance. All residents over 18 years pay a monthly premium to their health insurance provider. There is no premium for children. Employers pay a part of their employee's income to the tax administration for healthcare costs. Patients do not have to pay an additional amount for GP care, both inside and outside office hours. Residents over 18 years must pay an annual deductible (e375 in 2015) in case of use of healthcare (including emergency departments). This		

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		deductible is not applicable for GP care and also not for children		
Keizer et al, 2017	NL	N	general Out-of-hours primary care has been provided by large-scale general practitioner (GP) cooperatives since the year 2000 Every GP has to do a minimum number of shifts at the GP cooperative to maintain his/her registration as a GP. Participation of 50–250 GPs per cooperative with a mean of 4 h on call per week with a compensation of about €65/h About 120 GP cooperatives in the Netherlands Population of 100,000 to 500,000 patients with an average care consumption of 250 contacts/1000 inhabitants per year Out-of-hours defined as daily from 5 p.m. to 8 a.m., all public holidays and the entire weekend Per shift GPs have different roles: supervising telephone triage, doing centre consultations or home visits The triage is supervised by telephone consultation doctors who can be consulted in case of doubt, while also checking and authorising all calls Location GP cooperative usually situated in or near a hospital Distance of patients to GP cooperative is 30 km at most Accessibility Access via a single regional telephone number, meaning the first contact is mostly with a triage nurse (only 5–10% walk in without a call in advance) Telephone triage by nurses supervised by GPs: contacts are divided into telephone advice (38%), centre consult (52%), or GP home visit (9%) Facilities Home visits are supported by trained drivers in identifiable fully equipped GP	-

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			cars (e.g. oxygen, intra venous drip equipment, automated external defibrillator, medication for acute treatment) Information and communication technology (ICT) support including electronic patient files, online connection to the GP's car, and sometimes connection with the electronic medical record in the GP's daily practice Charging system Healthcare is largely covered by health insurance All residents over 18 years pay a monthly premium to their health insurance provider. There is no premium for children Employers pay a part of their employee's income to the tax administration for healthcare costs Patients do not have to pay an additional amount for GP care, both during and outside office hours Residents over 18 years must an annual deductible (385 euro in 2016) in case of	
Keogh, 2103	England	N	Support the co-location of community-based urgent care services in coordinated Urgent Care Centres. These will be locally specified to meet local need, but should consistently use the "Urgent Care Centre" name, to replace the multitude of confusing terms that are available at present. Urgent Care Centres may provide access to walk-in minor illness and minor injury services, and will be part of the wider community primary care service including out-of–hours GP services. Considering all local facilities in this way will mean that networks will need to examine the extent of duplication or gaps in service offered by all of these facilities currently. Urgent Care Centres may also be	-

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			advantaged by co-location with hospital services, particularly in urban areas. Urgent Care Centres would not carry the emergency red sign, nor be considered the right place to go in a medical emergency, but would have protocols in place with the ambulance service if such events occurred.[p25]	
Le and Hsia, 2015	USA	N	open during extended weekday and weekend hours, accept unscheduled visits, and provide low-acuity to mid-acuity episodic care to patients who would otherwise seek care at emergency departments or by primary care practices. seek to address the demand for prompt and convenient care, emphasising convenience, shorter wait times, and less administrative hassle. partial solution to alleviate the strain resulting from the well-documented national shortage of primary and emergency care resources. majority of UCCs are physician-owned or backed by substantial venture capital investment. selective about their payer mix, and provide a lower share of their care to Medicaid and uninsured patients than do emergency departments. may refuse care to patients if they cannot pay. Finally, UCCs are subject to limited regulation and licencing requirements—for example, Arizona is one of the few states with regulations specific to urgent care.	While the growth of the urgent care industry may have other promising implications, policymakers should recognise that it may exacerbate disparities in access to acute care faced by poorer, uninsured patients, and may also have financial implications for providers that are providing overlapping services, such as emergency departments and primary care practices. UCCs may refuse care to patients if they cannot pay. Finally, UCCs are subject to limited regulation and licencing requirements—for example, Arizona is one of the few states with regulations specific to urgent care
Morton et al, 2018	England	three-part taxonomy proposed by the Primary Care Foundation6 describes three main operational	N	Published study protocol.

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		models: a general practitioner service located alongside or next to the emergency department; general practitioners working at the front of the department screening attendees and either treating or diverting to other places—effectively acting as a filter; general practitioner services fully integrated into a joint operation covering the whole range of primary care and emergency services.		
Moth et al, 2020	Denmark	N	Five administrative regions in Denmark are responsible for organising OOH-PC on weekdays from 4 pm to 8am, weekends, and holidays. In each region, OOH healthcare is provided by primary healthcare, emergency departments (EDs), and the prehospital emergency medical services (EMS) [12,16]. The OOH services in the two included regions use different organisation models. The Central Denmark Region has a, large-scale GP cooperative (GPC). GPs answer calls directly and perform the triage of patients, either giving telephone advice or referring the patient to a subsequent face-to-face consultation [1]. In the Capital region of Denmark, OOH-PC as an integrated part of the EMS is the entrance for non-urgent cases in the form of a medical helpline 1813 (MH-1813) staffed by nurses to perform the triage. The	This study aimed to examine motives for calling OOH-PC services in various age groups. Young adults more often perceive barriers and benefits, which may suggest a difference in expectations regarding the purpose of out-of-hours services and accessibility. Further research is needed to address this issue and further explore the potential gap between the citizens ‘expectations to the OOH-PC services and the prevailing health policies.

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			nurses use a computerised decision-support tool and also have the opportunity to consult a doctor. Patients receive telephone advice or are referred to a face-to-face consultation. OOH-PC is tax-funded.	
O'Brien et al, 2019	Canada	N	the Navigation Hub comprised of a hospital-based nurse and a care coordinator from a community service agency who fielded questions (by telephone and email) from participating PCPs and/or their clerical support staff from 9AM to 5PM on weekdays. It aimed to facilitate timely access to specialty medical care, diagnostic testing, and community and hospital services, including intensive case management for patients with complex care needs. When PCPs contacted the Navigation Hub, they were informed services they may not have been aware of which may be more appropriate for their patients, and might be advised of services or specialists with shorter wait times. As a result, patients in the intervention group for whom PCPs called the Navigation Hub may have received appropriate services slightly faster than the control PCPs. A GIM consultant was available by phone to answer clinical queries as well as provide urgent patient assessments in a short stay medical unit (Acute Ambulatory Care Unit, AACU). The AACU is staffed by a GIM physician, nurses, as well as a pharmacist and can provide assessment and work up of acute medical illness or management of exacerbations of chronic medical conditions. In the AACU, there is access to urgent blood work, rapid diagnostic imaging,	

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			non-invasive cardiac testing, subspecialty support, as well as the ability to give IV therapies including transfusions. To access the AACU, patients must be referred by a physician, be medically stable and able to return for outpatient follow-up. The unit does not take walk-in patients and does not have access to surgical support services. While the AACU operates 24 hours a day on weekdays, the GIM consultant was available from 8AM to 6PM. Access to a GIM consultant aimed to provide a more convenient and comprehensive approach to caring for patients who may have otherwise been referred to the ED. In addition, PCPs received access in their offices to Patient Results Online (PRO). PRO was a web-based application providing secure access to health information from participating hospitals and lab information systems across the Greater Toronto Area, enabling timely online access to hospital-based patient records (laboratory, imaging, and consultation notes). SCOPE PCPs received access to PRO before it became widely available to physicians across the province of Ontario; the current adaptation of PRO is named Connecting Ontario.	
Pope et al, 2017	England	NHS 111 is incorporated in a policy vision for 'a functionally integrated 24/7 urgent care service that is the 'front door' of the NHS and which provides the public with access to both	N	

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		treatment and clinical advice' (page 4,10) that has emerged following the Urgent and Emergency Care Review led by Sir Bruce Keogh.11 NHS 111 uses a computer decision support system (CDSS) called NHS Pathways to manage calls. Pathways is an algorithm built on an extensive library of current, regularly updated, clinical expertise combined with a real-time directory of services (DoS) available for patients who need to be seen. This software is unusual in the UK health system in that it was designed and developed by and continues to be owned and licensed by the NHS. Most other CDSS are developed and owned by private corporations. The Pathways CDSS is also licensed for, and used in UK NHS ambulance services, several of whom provide NHS 111 alongside their 999 emergency services. NHS 111 calls are answered by non-clinical staff who are supported by nurses,		

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		paramedics and general practitioners (GPs) (often one or two clinicians are available on each shift). The call handlers use the Pathways CDSS to assess accounts of symptoms, prioritise care needs and direct callers to services or self-care. Calls conclude with a 'disposition' which can range from sending an ambulance, arranging a home visit, booking an urgent primary care consultation or advising actions the caller can take to address their health problem.		
Qin et al, 2014	USA	N	The Urgent Care Association of America (UCAOA) defines urgent care (UC) as the delivery of ambulatory medical care that is provided outside of an emergency department on a walk-in basis (Urgent Care Association of America (UCAOA), 2011a, b). Urgent care centres (UCC) are unique health care providers, filling the gap in the USA between the hospital emergency department and the primary care physician. UCC's must meet five criteria established by the UCAOA. First, UCC's must offer acute care for common medical conditions. Second, they must operate on a walk-in basis without the need for a scheduled appointment, and must offer extended evening and weekend hours.	The purpose of this paper is to develop, validate, and use a survey instrument to measure and compare the perceived quality of three types of US urgent care (UC) service providers: hospital emergency rooms, urgent care centres (UCC), and primary care physician offices.

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			Operating on a walk-in basis relieves patients of the burden of scheduling appointments, and of encountering unanticipated service delays on arrival at their primary physician's office. Third, patients can be seen as soon as they identify the need for medical care, rather than potentially being forced to wait for several days for an appointment to see their primary care physicians, or to negotiate prior approval to see a particular physician that may not be a covered provider in their managed care plans. During a speech to the Emergence of Urgent Care Conference in 2008, Gollogly (2008) reported that UCC typically offer services until 8 p.m. every day, with some providing services 24 hours per day. Pemberton (2007) pointed out that extended service hours are a very important reason for patients to choose UCC over primary care physicians. Fourth, UCC's must also provide X-rays onsite. Finally, they must provide advanced procedures such as suturing and casting. While UCC's treat some medical conditions that are also treatable by a primary care physician, they often treat illnesses not critical enough to require a hospital emergency department visit, yet which must be treated immediately without waiting for a scheduled appointment with a primary care physician (Stern, 2005). A UCC is a unique health care provider, filling the gap in the USA between the hospital emergency department and the primary care physician (Pemberton, 2007; Weinick and Betancourt, 2007). UCC also offer	

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			complementary services that are usually not available from a primary care physician, such as treatment of minor traumatic injuries (UCAOA, 2008). Many UCCs in the USA also provide occupational medicine services, travel medicine services, and perform school physicals (UCAOA, 2011a, b), thereby serving other niche patient populations. UCCs are distinguished from emergency rooms because treatment of life threatening conditions and pregnant women in labour or with obstetrical emergencies are beyond the scope of UCC practice.	
Roy et al, 2020	India	UCP is the response before the next in–hours or routine (primary care) service is available. Urgent care is the range of healthcare services available to people who need medical advice, diagnosis, and/or treatment quickly and unexpectedly.[5] The focus of ideal "UCP": Good urgent care is: Patient and public centered; focuses on good clinical outcomes, e.g., survival, recovery, lack of adverse events and complications through service integration; A good patient experience, including ease of access and convenience; timely; supports innovation;	Urgent care Practice is a specialty focused on the delivery of ambulatory (outpatient) care in a dedicated medical facility outside of a traditional emergency room. Urgent care centers primarily treat injuries or illnesses requiring immediate care.[4] For those with more serious but nonlife threatening emergencies, we should ensure they reach and are treated in centers with the best expertise and facilities to maximize their chances of survival and recovery. There should be set norms of triage, referral guidelines, and locally appropriate referral information.	Framework for development of urgent care services towards strengthening primary healthcare in India – Joint position paper by the Academy of Family Physician of India and the Academic College of Emergency Experts.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		available 24/7 to the same standard. The 4Rs of urgent care are Rescue, Resuscitate, Relate, and Refer. For people with urgent but nonlife threatening needs, we must provide responsive, effective, and personalized services at the community level, preferably in or as close to people's homes as possible, minimizing disruption for patients and their families		
Rubin, 2012	England	N	practitioner led service to adults and children aged 2 years and over who may be suffering from a minor injury or illness. Both have access to basic X-ray facilities on site. The GP OOH service is co-located at one of the sites but patients require an appointment to gain access. Patients attending these MIUs do not have to be registered with a Sunderland GP.	Minor Illness and Injury Units (MIUs) are becoming a key element in the Urgent Care strategies of Primary Care Trusts. They are intended to both improve access to primary care and to reduce the workload of hospital emergency departments. Their efficiency in resolving patients' needs for health care has been questioned. We sought to describe subsequent health care utilisation among people attending two MIUs in Sunderland, UK. Although most people attending Minor Illness and Injury Units are treated and discharged, subsequent use of health care services is common and in a third of cases is unscheduled. This calls into question the effectiveness of MIUs as an alternative to general practice but may reflect a need for better signposting of patients to the service best suited to their needs.
Rutten et al, 2017	NL	General Out-of-hours primary care is provided by large-scale general practitioner cooperatives (GPC)	N	Although most people attending Minor Illness and Injury Units are treated and discharged, subsequent use of health care services is common and in a third of cases is unscheduled. This calls into question the effectiveness of MIUs as an alternative to general practice but may reflect a

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		Out-of-hours is defined as daily from 5 p.m. to 8 a.m. the entire weekend, and public holidays. Participation of 50–250 GPs per cooperative with a mean of 4 h on call per week Population consists of 100,000 to 500,000 patients At present there are 121 GPCs with yearly about 4 million contacts. 200.000 self-referral contacts a year are registered at the GPCs (5%). Location Distance of patients to GPC maximally 30 km 56% of GPCs is co-located with the ED of a hospital, forming an Emergency Care Access Point, 7% is located on the site of the hospital premises (without collaboration), 11% in the vicinity of the hospitals and 26% elsewhere Accessibility Access generally via regional telephone number. First contact is mostly telephonic with a triage		need for better signposting of patients to the service best suited to their needs.

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
		nurse (90–95%), infrequently as self-referral. Telephone triage by nurses supervised by GPs: contacts are divided into telephone advice (38%), centre consult (52%), or GP home visit (10%). Triage outcomes (NTS: Dutch Triage Guidelines): Life threatening (U1) 2%; Acute (U2) 15%: Urgent (U3) 38%; Routine (U4) 18%; Advice (U5) 27% The GPC in an ECAP is mostly responsible for the face-to-face triage of self-referrals (54%). The ED is responsible for face-to-face triage in 21%. In 15% the triage is performed according to the patients choice. The remaining 10% has a deviant organisation. In the Netherlands, adult patients have to make an annual deductible (€385,- in 2016) for hospital care and diagnostics. GP and GPC care is fully covered, without a co-payment. Facilities Glucose testing and urine examination can be		

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		performed at all GPCs. An ECG is available in 26%, conventional radiology in 19% and routine laboratory test in 37–65%.		
Ruud et al, 2017	Norway	N	The clinic is the only government-run emergency outpatient clinic open 24 h a day, 7 days a week and is located in the centre of the city. The general emergency outpatient clinic is staffed by general practitioners and is operated by the Municipality of Oslo. general emergency outpatient clinic handles patients in need of emergency health care without the need for a referral. Patients arrive either alone or with their relatives, register their problem and wait their turn pursuant to a triage code (walk-in patients), or are brought in by emergency services (ambulance, police or emergency outreach teams). Walk-in patients are seen by a specialist nurse for registration and triage before waiting to be seen by a doctor. Patients brought in by emergency services enter the general emergency outpatient clinic via a separate entrance, and they are treated according to the level of urgency of their condition	Access to immediate primary health care provided by a regular general practitioner (RGP) can reduce patients' use of emergency health care services. _ The main reason for attending a general emergency outpatient clinic was difficulty obtaining an immediate appointment with an RGP. _ A frequent reason for native Norwegians attending a general emergency outpatient clinic during the daytime is having an RGP outside Oslo. _ Lack of affiliation with the RGP scheme is a frequent reason for attending a general emergency outpatient clinic among immigrants.
Seeger et al, 2019	Germany	N	The organization of OOH primary care differs not only between countries, The dominant model in the Netherlands, Denmark und Switzerland is GPC, while the practice-based service model, where the individual physicians look after their own patients, is popular in Austria, Greece and Turkey [12]. In Norway strict	-

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			gatekeeping is fundamental, so patients are not allowed to visit the ED directly, they must first contact a primary care center in case of emergency [	
Sexton et al, 2021	International	N	Urgent care is the 'the range of responses that health and care services provide to people who require – or who perceive the need for – urgent advice, treatment or diagnosis' [3]. Within urgent care, different types of services utilise telephone-based digital triage, including national or regional help-lines, out-of-hours centres and emergency care providers. Examples of telephone-based services include England's National Health Service (NHS) 111 service, Scotland's NHS 24 service, Denmark's medical help line (MH1813), Australia's Health Direct and the Mayo Clinic telephone service based in the USA [4–9]. Digital triage within these services involves a care service staff member using a digital triage tool to generate algorithm-based care advice, based on a patient's symptoms. Advice typically takes the form of signposting within defined levels of urgency to specific services, such as an emergency department (ED), out-of-hours centre, general practice (GP) appointment or self-care advice	This is the first systematic review to evaluate service user experience, service use and clinical outcomes related to the use of telephone-based digital triage in urgent care settings. It will evaluate evidence from studies of wide-ranging designs. The narrative synthesis approach will enable the integration of findings to provide new insights on service delivery. Models of urgent care continue to evolve rapidly, with the emergence of self-triage tools and national help lines. Findings from this review will be presented in a practical format that can feed into the design of digital triage tools, future service design and healthcare policy.
Smits et al, 2014	NL	General Out-of-hours primary care is provided by large-scale general practitioner (GP) cooperatives Participation of 50–250 GPs per cooperative with a mean of 4 hours on call per week	N	-

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		Circa 125 GP cooperatives in the Netherlands Population of 100,000 to 500,000 patients Out-of-hours defined as daily from 5 p.m. to 8 a.m. and the entire weekend Location GP cooperative usually situated in or near a hospital Distance of patients to GP cooperative maximally 30 km Accessibility Access via a single regional telephone number, meaning the first contact mostly is with a triage nurse (only 5-10% walk in without a call in advance) Telephone triage by nurses supervised by GPs: contacts are divided into telephone advice, centre consult, or GP home visit Facilities Drivers in identifiable GP cars that are fully equipped (e.g. oxygen, intra venous drip equipment, automated external defibrillator, medication) Information and communication technology (ICT) support including electronic patient files, online connection to the GP car, and sometimes connection with		

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		the electronic medical record in the GP daily practice		
Southern et al, 2007	Canada	N	Urgent care is open to the public 14 hours a day, seven days a week (including all holidays) from 08:00 to 22:00. It is not an emergency room. Clients are treated for health concerns that are urgent but not life threatening. Most clients are treated and sent home or referred to their family physicians. Those who require admission or immediate additional health services are transferred to acute care sites. Located within urgent care is a mental health urgent care (MHUC) team that works seven days a week from 08:30 to 00:45 to provide family-focused care for all ages. The team provides mental health diagnostic assessment and intervention for clients presenting with problems such as depression, suicidal ideation and psychosis, as well as psychosocial care for clients presenting with medical issues such as miscarriage, cardiac problems, domestic violence and fractures. The MHUC team consists of six baccalaureate-prepared nurses (4.38 full-time equivalent positions) and a nurse clinician (0-73 FTE). A psychiatrist is available on-site two half days a week to provide clarification of diagnosis, medication and treatment recommendations. A mental health manager responsible for several CHR programs is located off-site and is accountable to the formal CHR mental health administration. The nurses recruited to the MHUC team have a unique skill set including psychiatric assessment and	-

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			intervention, physical assessment skills and a commitment to family nursing. Several of them have worked in CHR psychiatric emergency rooms or in-p3tient settings and some continue to work relief in these areas. They are deeply committed to collaborative health care. In the service delivery model, the nurses work independently and interdependently to full scope of practice. Clients are seen first by the urgent care triage nurse, who scores their concerns according to the Canadian Emergency Department Triage and Acuity Scale (CTAS) (Beveridge et al., 1999). The sickest patients are referred first to the urgent care physician; the others go directly to the MHUC team. The MHUC nurses assess the client, formulate a diagnosis and then either refer back to the urgent care physician for in-patient or emergency department admission or discharge the client home with suggested interventions plus referrals to CHR or community resources (see Figure 1). Thus, the urgent care and MHUC teams work collaboratively to provide easily accessible, competent care	
Søvsø, bech et al, 2020	Denmark	general practitioner cooperatives (GPC) as OOH services.21 GPs operate the GPC and through telephone triage, they assess what the patient is in need of; telephone advice, consultation, home visit, or a	N	Several sociodemographic factors were associated with contacting a healthcare service outside office hours and with contacting EMS rather than OOH-PC. Old age, low income, low education and low socioeconomic status were of greatest importance.

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		direct referral to the hospital.22 The Capital Region of Copenhagen is primarily urban and home to 1,789,000 inhabitants, with the Medical Helpline 1813 (MH-1813) available alongside EMS as OOH services.21 Nurses handle the majority of calls at the MH-1813, together with physicians of different medical specialties. They perform triage by systematically using a computerized decision support tool to decide whether the patient is in need of telephone advice, a clinic consultation, a home visit, or a direct referral to the hospital. MH-1813 carry out home visits, whereas the clinic consultations take place in hospital emergency departments.23 As well as answering direct calls, the physicians also act as consultants for the nurses		
Søvsø et al, 2020	Denmark	In Denmark, the OOH services consist of a nationwide EMS and two different types of OOH-PC –	N	We aimed to investigate and compare the prevalence of patient contacts, subsequent hospital contacts, and the age-related pattern of hospital diagnoses following an out-of-hours contact to EMS or OOH-PC services in Denmark.

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		the general practitioner cooperatives (GPC) in four of five regions and the Medical Helpline 1813 (MH-1813) in the Capital Region of Copenhagen only. They all perform telephone triage and calling is mandatory prior to further health care access. EMS is similarly organized nationwide, whereas OOH-PC have different organizations. The patient or bystander makes the initial choice of whom to contact for help. Due to patient help seeking behaviour and limitations of telephone triage [3–5], patient populations of both services may overlap, i.e. patients in need of emergency care are seen by services intended for less urgent medical situations and vice-versa. Most studies investigating help seeking are based on the involved health care personnel's assessment of the medical relevance of the choice [6, 7]. The need for hospital contact, especially hospital admission,		EMS contacts were fewer, but with a higher percentage of hospital contacts, admissions and prevalence of circulatory diseases compared to OOH-PC, perhaps indicating that patients more often contact EMS in case of severe disease. However, hospital diagnoses only elucidate severity of diseases to some extent, and other measures of severity could be considered in future studies. Moreover, the socio-demographic pattern of patients calling OOH needs exploration as this may play an important role in choice of entrance.

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		is a marker of the severity of the condition.		
Turnbull et al, 2011	England	N	Calls were initially answered by call operators who took basic demographic call details. An out-of-hours GP based at a PCC telephoned the caller back to triage the call. Calls were primarily managed by asking patients to attend the PCC, providing GP telephone advice or by home visit. Patients are typically deterred from dropping in at a PCC without telephoning first for an appointment, although in practice, it is difficult to turn people away	-
Weinick et al, 2009	USA	N	Extended hours, availability of unscheduled appointments, and the range of services they provide, urgent care centers are uniquely positioned within the health care system to address the overflow of acute care patients from primary care as well as low- to mid-acuity emergency department patients [decrease non-urgent emergency department use without a concomitant increase in hospitalizations; that urgent care center patient populations tend to look more like those in physician offices than in emergency departments; that these centers are busiest during the winter months; and that they can be more cost-effective for providing urgent care than an emergency department health care organizations that are not emergency departments, but typically (a) provide care primarily on a walk-in basis; are open (b) every evening Monday through Friday and (c) at least one day over the weekend; (d)	While their hours and scope of services reflect some characteristics of emergency departments, urgent care centers are in many ways similar to family medicine practices. As the health care system evolves to cope with expanding demands in the face of limited resources, it is unclear how patients with episodic care needs will be treated, and what role urgent care centers will play in their care.

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			provide suturing for minor lacerations, and (e) provide onsite x-rays. urgent care center with physicians (more than 95 percent of all centers) has 4.8 on staff, with 1.8 working full time. Notably, family physicians are the specialty that most commonly provide care at urgent care centers. half of all centers employ nurse practitioners and physician assistants (2.4 on staff on average if there is at least one), and slightly fewer than half employ at least one registered nurse (47.9%). Four out of five urgent care centers employ at least one medical assistant or other clinical staff member, with an average of 5.3 such employees at those centers that do use them (2.8 full time). On average, urgent care centers saw 314 patients during the week preceding their response to the survey (Table 3), resulting in an average of 65.4 patients per urgent care physician per week. This is slightly lower than the national average of 84.4 visits per family physician per week, though comparable to the figure for family physicians in some regions of the country (e.g., 63.9 per week in the Mountain region) [19]. Approximately one in five urgent care centers have more than 450 patient visits per week (21.7%). The large majority of centers provide onsite laboratory tests that are waived under the Clinical Laboratory Improvement Amendments (CLIA) (87.2%), with nearly two in five providing tests designated as moderate under CLIA, and 1 in 5 performing tests onsite that require full	

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			laboratory certification. Tests that are waived under CLIA are simple laboratory tests with a low risk of error as determined by the U.S. Food and Drug Administration, such as urinalysis by dipstick to check glucose levels. Tests designated as moderate are those with greater complexity and level of error than waived tests, but are not so complex as to require full laboratory certification [20,21]. commonly include fracture care (provided by 4 out of 5 urgent care centers), pain management (including prescribing and/or dispensing medications to manage acute and/or chronic pain), primary care, immunizations, and routine school and sports physicals. Seven in ten urgent care centers can provide intravenous fluids when needed. In addition, nearly half of urgent care centers (48.6%) provide prescription pharmaceuticals that are pre-packaged for dispensing a full course of treatment in doctors' offices rather than in pharmacies ("point-of-care" dispensing)	
Yee et al, 2013	USA	N	Urgent care centers provide care on a walk-in basis, typically during regular business hours, as well as evenings and weekends, though not 24 hours a day. UCCs commonly treat conditions seen in primary care practices and retail clinics, including ear infections, strep throat and the flu, as well some minor injuries, such as lacerations and simple fractures. In contrast to emergency departments, UCCs generally are not equipped to deal with trauma, provide	-

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			resuscitation or admit patients to a hospital—all reasons for seeking ED care. UCCs are typically staffed by physicians, generally with backgrounds in primary care or emergency medicine, and some also have nurse practitioners or physician assistants working under physician supervision. visits generally cost less than emergency department visits, though they tend to be on par with primary care office visits.4 tend to be located in more populous, higher-income areas. Urgent care industry respondents stated that they typically target locations that attract a lot of vehicle or foot traffic and that are visible from major roads. They also tend to place UCCs in more-affluent areas, particularly in suburbs with a concentration of people with employer-sponsored coverage, a young population or rapid population growth. “Urgent care is a volume-driven model, so a certain population density must be present for the UCC to capture sufficient volume to breakeven. That’s a big reason you see UCCs in the suburbs of larger metro areas,” o 2012, 35 percent of UCCs were owned by physicians or physician groups, 30 percent by corporations, and 25 percent by hospitals. Another 7 percent were owned by non-physician individuals or franchisors. Urgent care centers fill an access gap by providing walk-in care, especially during evening and weekend hours, for patients without a primary care physician or those unable to	

Author	country	Urgent Primary Care (UPC) definition Y/N	Urgent Care Centre definition Y/N	Notes for UPC/UCC
			schedule a timely PCP appointment. While urgent care centers don't increase the overall number of primary care clinicians because they draw from the existing supply of PCPs, they may improve access to primary care services by offering more convenient availability, especially during evenings and weekends, when primary care offices are typically closed. 5 UCC providers reported not wanting to manage patients long term or provide care that requires intense care coordination, such as for chronic conditions.	