

Health Council of the Netherlands

A solid foundation is a must!

Quality at a basic Accident and Emergency Department
within a regional network



To the Minister of Health, Welfare and Sport

Subject : presentation of advisory report *A solid foundation is a must! Quality at a basic Accident and Emergency Department within a regional network*
Your reference : CZ/TSZ-3050168
Our reference : I-780/11/CP/db/876-B
Enclosure(s) : 1
Date : February 16, 2012

Dear Minister,

In response to your request for advice of 10 March 2011, it is my pleasure to present you with our advisory report, entitled *A solid foundation is a must! Quality at a basic Accident and Emergency Department within a regional network*. The advisory report has been produced by a specially appointed Committee and reviewed by the Standing Committee on Medicine.

You asked for advice on what expertise and support facilities need to be available in a basic A&E department in order to provide an appropriate standard of emergency care, and in particular to stabilise patients to such an extent that they can be taken to another hospital for follow-up treatment. Our answers to your questions are based on the findings of the Breedveld Working Group.

Having given detailed consideration to the terms “stabilisation” and “follow-up treatment”, the Committee came to the conclusion that it is necessary to look at how the entire acute care pathway operates. In order for this acute pathway to operate effectively it is important that distinctions should be made between the hospitals with “full”, “profile” and “basic” A&E departments (as proposed by the Breedveld Working Group) and that the pathway should be organised accordingly.

To achieve all this, it is necessary for binding agreements to be reached at regional level and for the health insurers to be involved in designing the system. It is then possible to realise cost benefits in parts of the Netherlands without exceeding the 45-minute accessibility requirement.



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Speed is not the only factor to be considered, however. It is sometimes better for patients if the ambulance takes them on to a hospital further afield with a “profile” or “full” A&E department, where specialist care is available on site. In the daytime, the majority of patients can receive effective care in the so-called “basic” A&E departments. During the quiet night-time hours, it is more cost-effective not to keep all of the basic A&E departments open, though an A&E department must always be accessible within 45 minutes.

The Committee makes a number of recommendations concerning quality assurance in A&E departments and regional division of labour in A&E. The advisory report also includes a recommendation for the entire acute care pathway. Finally, answers are given to the question of what support facilities are needed at hospitals with a basic A&E department.

I endorse the Committee’s findings.

Yours sincerely,

(signed)

Professor H. Obertop

Vice President

A solid foundation is a must!

Quality at a basic Accident and Emergency Department
within a regional network

to:

the Minister of Health, Welfare and Sport

No. 2012/02E, The Hague, February 16, 2012

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This report can be downloaded from www.healthcouncil.nl.

Preferred citation:

Health Council of the Netherlands. A solid foundation is a must! Quality at a basic Accident and Emergency Department within a regional network. The Hague: Health Council of the Netherlands, 2012; publication no. 2012/02E.

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ISBN: 978-90-5549-908-3

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Executive summary

A new framework for accident and emergency treatment

The credo of modern accident and emergency treatment is “Close by if possible, a little further away if necessary”. Speed is still of the essence, but it is no longer the sole measure of quality. It is sometimes better for patients if, rather than going to the nearest hospital, they are taken to one a little further away where they can immediately get the specialist medical assistance they need.

Accordingly, each Accident and Emergency Department (A&E) is not required to provide every possible type of care. Good quality, effective acute care benefits from a diversified mix of generally available basic quality and focused specialisation. The statutory standards for accessibility provide a guideline for dividing up tasks between individual hospitals.

In this context, in 2009 the Breedveld Working Group proposed a system consisting of three different types of A&E department. These were “full A&E departments” in university medical centres, “profile A&E departments” in hospitals with support facilities in the form of specialised care departments, and “basic A&E departments” whose activities primarily involve resuscitation, stabilisation, and the treatment of common, but not highly complex, acute problems.

A new quality standard

With this new framework as a starting point, the time has come to develop a corresponding quality standard. Significant progress has already been made in this regard. The Minister of Health, Welfare and Sport has now asked the Health Council of the Netherlands for advice on one particular element that requires special attention: support facilities in hospitals with basic A&E departments. Given that the full range of specialist care and specialist facilities is not available in such hospitals, it is important to identify what is needed for the provision of proper emergency care. This topic has already been addressed by a Health Council committee specially appointed for the purpose.

Effective organisation of the acute care chain

Ensuring the quality of care provided by basic A&E departments is not simply a matter of imposing requirements on care provision itself and on the support facilities in the rest of the hospital. A&E departments are part of a chain of acute care in which GPs and local medical centres, control rooms, obstetricians, ambulance services, and mobile medical teams each do their share. This chain, too, must operate effectively.

There are two central issues here. Firstly, acute care must be accessible to patients. It is a legal requirement that any citizen of the Netherlands must be able to reach an A&E department within 45 minutes. Everyday experience has indeed shown that this is feasible in virtually all parts of the country. Specific measures will need to be taken in those few areas where this is not the case. This could include cooperation with hospitals across the border, or the use of helicopters or mobile teams. Secondly, patients must be taken to the right place, one where appropriate acute care is available to them.

These goals can only be achieved if all links in the chain, in each region, cooperate more closely with one another. Each region must focus on achieving the most effective division of labour between basic A&E departments, profile A&E departments, and the A&E departments at university medical centres. Binding regional agreements are the key. The organisation of trauma care in the Netherlands can serve as an example in this regard.

It is not necessary for all basic A&E departments to stay open 24 hours a day, seven days a week. Decisions must be taken at regional level concerning the times at which basic A&E departments need to be open to treat common, but not highly complex, problems. During off-peak hours (usually at night), this task can be switched to “profile hospitals” (which selectively emphasise certain areas of

hospital care or certain target groups) or university medical centres with full A&E departments. This may require an exchange of services or specialisms. This would, of course, be subject to the necessary funding. Accordingly, it is important that health insurers be involved in regional consultations.

In this context, it is also important for the classification system developed by the Breedveld working group to be implemented in practice. The Committee recommends that Accident and Emergency Departments in the Netherlands be classified into basic A&E departments, profile A&E departments, and full A&E departments, depending on the facilities and skills available. These designations can then be linked to clear quality requirements, drawn up by learned societies.

Another buttress needed for the proper organisation of the chain is consistent triage. As yet, this is still lacking. Accordingly, the Committee urges that improvements be made in this area. However, many patients enter A&E departments without having first undergone triage. Inevitably, some people arrive at A&E departments without first seeing a GP or phoning a control room. Some of these A&E departments might not have the specialised support facilities that these patients require. Nearby ambulance stations could potentially provide rapid transfer to a profile A&E department or a full A&E department.

Effective support facilities for basic A&E departments

In the context of effectively organised acute care chains, basic A&E departments should, of course, also be capable of independently providing high-quality care. A clear mission statement would be very useful in safeguarding this quality of care. However, this has yet to be drawn up.

The core business of basic A&E departments is the treatment of common but relatively simple problems (such as acute appendicitis or uncomplicated fractures). There are many other clinical pictures, however, so where do we draw the line? Although their name suggests otherwise, basic A&E departments usually have to deal with all kinds of problems. These can include serious clinical pictures in which the nature of the problem is not immediately obvious, so diagnosis and monitoring are required. This will continue to be the case, regardless of how the distribution of tasks between the various types of A&E department is organised. Accordingly, learned societies will have to take on the task of drawing up a clear mission statement. They will also have to formulate concise and detailed quality requirements.

The Committee believes that it is essential for a registered emergency room physician and a certified emergency room nurse to be present. Until sufficient numbers of emergency room physicians become available (this is a new

specialisation), basic A&E departments must have experienced physicians who are capable of resuscitating and stabilising patients, and who are experienced in triage. However, there is more to care than stabilisation or resuscitation. Such patients then require further treatment, and they may even need to be admitted.

As a result, quality is not determined purely by the skills of those working in the basic A&E department itself. Support facilities in the other areas of the hospital are essential. In this connection, the Committee defines “support facilities” as the professional manpower and infrastructure available within the hospital as a whole for defined categories of patients requiring acute care, and for carrying out procedures involved in the treatment of such patients.

What is the minimum requirement in terms of available specialisms and facilities? Firstly, it is important that, where necessary, emergency room physicians can have rapid access to the following specialisms: gynaecology/obstetrics, surgery, internal medicine, cardiology, paediatrics, ENT surgery, neurology, anaesthesiology and radiology.

Supporting specialisms such as pharmacy, clinical chemistry, medical microbiology, and pathology must also be readily available. There must be a capability for rapid surgical intervention, so it is essential that an operating theatre team and an anaesthetist be available. Laboratory and X-ray facilities should also be readily accessible. There should also be a 24-hour postoperative care and observation unit for acute problems. This does not apply to intensive care. Patients requiring intensive care will have to be transferred to a profile hospital or university hospital.

Children need special support facilities. Those with suspected internal disorders must have rapid access to a paediatrician. Furthermore, in children of less than one year of age, paediatricians must be consulted about a range of other conditions, especially where child abuse is suspected.

If a basic A&E department is closed, then it is sufficient for an experienced physician (capable of performing resuscitation and triage) to be on hand, in case an in-patient’s condition suddenly deteriorates.

Finally, a quality assurance system is needed to safeguard quality. The quality assurance systems in place in most hospitals are, as yet, inadequate for this purpose.

Introduction

1.1 On-going quality improvement

Delay is not an option in emergency care. Patients who are suddenly confronted with alarming symptoms must receive the requisite care promptly. That means effective triage and rapidly available, appropriate medical assistance. Both of these elements have a crucial bearing on the patient's survival and on the nature and extent of any damage to health.

Within hospitals, it is the Accident and Emergency (A&E) departments that provide this type of care. In recent years great progress has been made in efforts to develop a clear standard for measuring acute care in hospitals, and thus to safeguard and improve the quality of care. The Dutch Health Care Inspectorate report *Haastige spoed niet altijd even goed* [Emergency care: Room for improvements]¹ prompted the establishment of the Working Group on Quality Assessment of A&E Care, chaired by Professor Breedveld, with input from all of the relevant stakeholder groups.

In December 2009 this working group's report, *Spoedeisende hulp: Vanuit een stevige basis* [Emergency care: Building on a solid foundation]^{2,3} was submitted to the Lower House of Parliament. The working group expects that the implementation of the recommended competencies for physicians and nurses in every A&E department will provide a substantial fillip to the quality of acute care. A further improvement should result from the distinction between basic, profile and full A&E departments in university hospitals. It is only the last two

types of A&E department that have the capacity to treat a number of complex acute conditions in sufficient volume to safeguard quality. This means that not every A&E department needs to be equipped for each type of treatment. Many urgent cases can be treated in a basic A&E department, and transport to a “profile” hospital or university medical centre slightly further afield is only indicated in certain cases.

This division of labour underlines the fact that an accident and emergency department, far from being a discrete entity, is closely linked with the rest of the hospital. After all, patients are frequently transferred to other departments, or assistance is sought from specialists. Thus there is an inextricable link between the quality of an A&E department and the specialisms and services in the rest of the hospital. Profile and full A&E departments are characterised by their comprehensive specialist support facilities. But what about the basic A&E departments? What sort of support facilities do they require in order to safeguard the quality of care?

This was the question that the Minister of Health, Welfare and Sport put to the Health Council. On 10 March 2011 the Health Council received a request for advice on this topic (see Annex A). The President of the Health Council duly set up a special committee to answer this question. The membership of the Committee can be found in Annex B.

1.2 Generally available basic standard of care plus focused specialisation

In the request for advice, the Minister expressed her wish that the findings of the Breedveld Working Group should be used as the basis for future policy. The Committee has duly taken these findings (summarised below) as the starting point for its advice.

Every A&E department must conform to a basic standard of care. In other words, there must be sufficient expert staff and equipment available during opening times to ensure that patients can be stabilised and resuscitated in the event of any medical emergency. Furthermore, there is a need for competency in identifying and (in most cases) treating a wide range of acute illnesses and injuries in people of all ages. By means of triage and (if necessary) referral the patient will receive assistance in the right place and from the right care provider.

Not every A&E department needs to be equipped to treat all emergency conditions 24 hours a day. Thus an A&E department may be closed during the night, provided adequate acute care is guaranteed at regional level.

Patients with a complex acute or specific condition will preferably be taken directly to a centre where further diagnosis and treatment can also take place. This may mean not opting for the hospital with the nearest A&E department, but the one where the requisite specialist expertise and infrastructure are available: i.e. either the “profile” hospital, where several service profiles are available, or the “full-service” hospital, where all profiles are available. The task of assessing the patient’s immediate care needs and deciding which hospital can provide that care is to be performed by the ambulance personnel or the mobile medical team.

A regional “map” shows where and at what time particular categories of patients can receive effective care and treatment. A distinction is made here between A&E departments that offer the basic level of care and those facilities – in and beyond the A&E department – which offer one or more basic-plus services for one or more specific patient categories in addition to the basic level of care.

Based on these principles, the Breedveld Working Group identified groups of patients that can be taken to a basic A&E department and groups that require more competencies and equipment. The specialisms required by the latter groups are as follows: cardiology, neurology/neurosurgery, surgery/orthopaedics, paediatrics, obstetrics/gynaecology and psychiatry.

In addition, the Breedveld Working Group provided the following breakdown of the tasks of the three categories of A&E departments.

The Committee will take these criteria and this A&E classification system into consideration in formulating its advice.

	Basic	Profile	Full
Patient care	<ul style="list-style-type: none"> • Triage • Stabilisation • Resuscitation, including airway management • Initiation of treatment or referral 	<ul style="list-style-type: none"> • Triage • Stabilisation • Resuscitation, including airway management • Referral/initiation of treatment • Full treatment for specific group of patients 	<ul style="list-style-type: none"> • Triage • Stabilisation • Resuscitation, including airway management • Referral/initiation of treatment • Full treatment for all patients
Coordinating tasks	No	No	Yes
Research (evaluative)	<ul style="list-style-type: none"> • Participation 	<ul style="list-style-type: none"> • Participation • Performance-related tasks for own profile 	<ul style="list-style-type: none"> • Initiation (UMC) • Performance • Coordination (UMC)
Training	<ul style="list-style-type: none"> • Formulation of training needs 	<ul style="list-style-type: none"> • Formulation of training needs • Provision of training for profile 	<ul style="list-style-type: none"> • Generation of training questions • Provision of training • Organisation of training

1.3 Report structure and explanatory notes

What implications do these criteria have for the Committee’s response to the request for advice? The questions that have been raised need to be addressed in a number of stages.

Emergency care as part of a continuum of care

Effective and cost-efficient emergency care is not only a question of rapid transport to the nearest hospital. Acute medical assistance is part of a continuum of care, each element of which is interlinked. It is therefore necessary to examine these links more closely in order to answer the main question. The Committee will begin, in Chapter 2, by giving an overview of the “chain of care” within which A&E departments operate and discussing recent developments in this field.

Optimising organisation within the care continuum

Acute care is better and more cost-effective if there is good cooperation between the links in the chain. This raises the question of what steps can be taken to further improve the organisation of emergency care – a question which the Committee considers in Chapter 3. Only when we have ascertained how interaction within the chain can be improved will it be possible to determine

what underlying expertise and infrastructure are required to support basic A&E departments.

Support facilities needed for basic A&E departments

By looking at the entire continuum of emergency care the Committee then formulates its vision for the support facilities that are needed in order to safeguard and further improve the quality of the basic A&E departments. This is done in Chapter 5. Finally, in Chapter 6, it sets out its conclusions and recommendations.

The reports mentioned above are not the only publications used in the Committee's deliberations. Annex C gives an overview of other relevant publications, while Annex D reviews the organisation of emergency care in a number of other countries.

The acute care pathway

What is the healthcare landscape in which emergency care is provided in hospitals – and especially in hospitals with a basic A&E department? This is the key question to be answered in this Chapter. The Committee quantifies the demand for care and describes how the organisation of emergency care has evolved.

2.1 The links in the chain

If a patient suddenly develops symptoms that he or she cannot identify, a GP will often be called. The latter may decide (possibly after a consultation) that further diagnosis or specialist treatment is needed immediately and refer the patient to the hospital. The patient will then usually arrive at the A&E department (possibly by ambulance), where he or she will immediately be seen by the appropriate clinician. However, some people also arrive there without first seeing a GP. If, for example, the symptoms are very alarming, or after an accident, they will dial 112 and immediately ask for an ambulance. Some people also present at an A&E department of their own accord; they are known as self-referrers.

Thus there are various ways in which patients can end up in an accident and emergency department (see Figure 1). Clearly, hospital A&E departments are not discrete entities, but form part of a continuum of emergency care, which involves various care providers and organisations: the individual GP and the out-of-hours

GP centre (HAP); the primary-care midwife; the ambulance service and its central control room (CPA); and the A&E department of a hospital.

The extent to which the various links in this chain are used is shown in Annex E.⁴ In addition to the normal chain of emergency care in the Netherlands we also have an organisation known as Medical Assistance in Accidents and Disasters (GHOR).

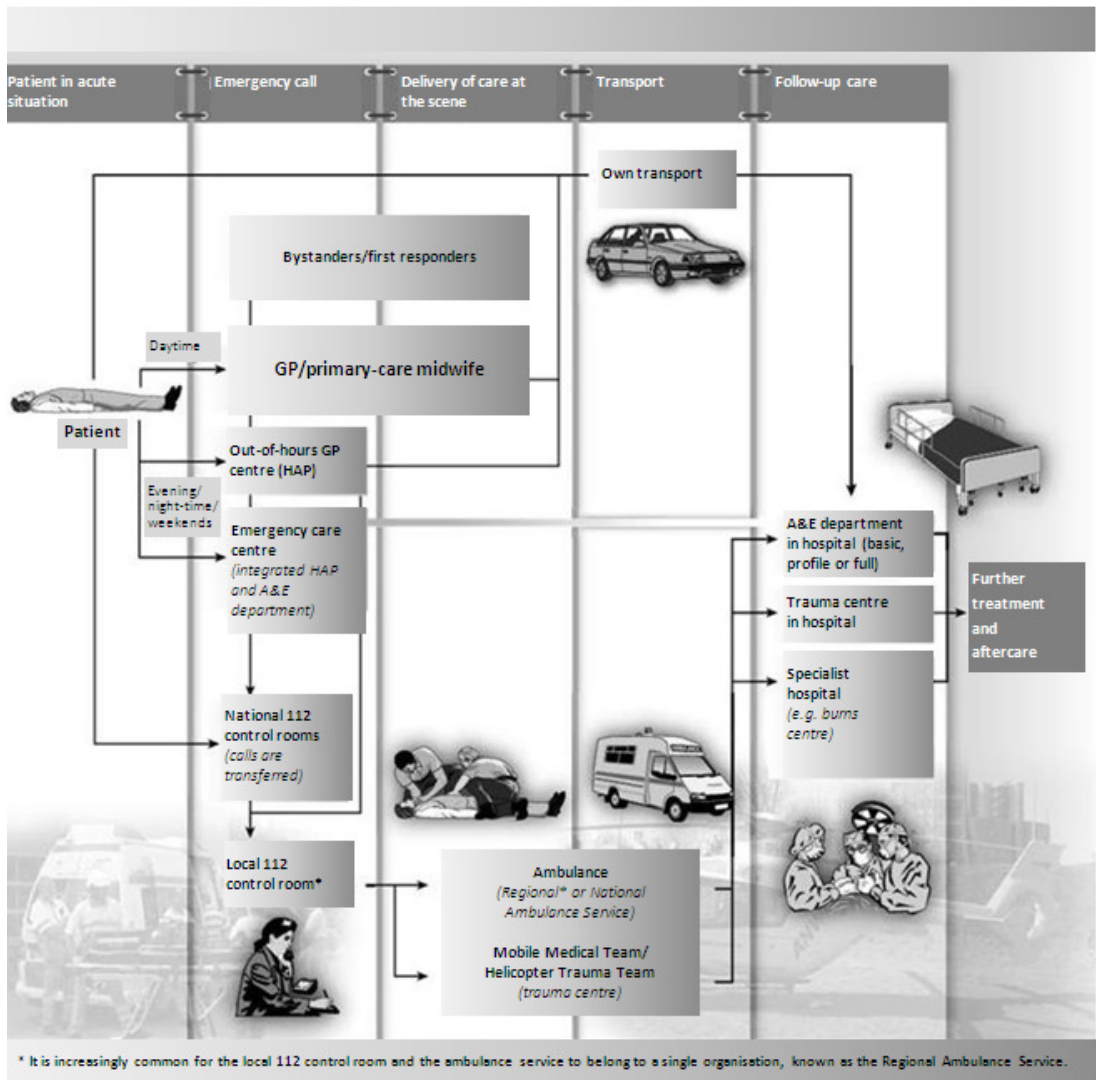


Figure 1 Acute care pathway.⁵

2.2 Extent and nature of the demand for care

Health problems result in between 6.9 and 7.2 million contacts with out-of-hours GP centres, A&E departments and ambulance services every year (see also Annex E). In 2008 out-of-hours GP centres had a total of 4.3 million patient contacts. A&E departments treated between 1.9 million and 2.2 million patients. In 2009 there were just under 694,000 emergency ambulance call-outs (70% of which resulted in transport to hospital) and 6,000 mobile medical team (MMT) call-outs.

16.9% of patients who have contact with an acute care provider also have contact with another health professional two or more times in the same week. The commonest combination is a consultation at an out-of-hours GP centre and treatment in an A&E department.⁶

Within general practitioner care, the patients are fairly often children and adolescents. In A&E there is an even mix of patients from different age groups, while ambulances are more often used for the elderly.

As for the problems that people present with, the out-of-hours GP centres and A&E departments appear to be largely complementary, especially in the more rural areas, whereas in the cities there is more overlap in care needs between these two care providers.

Among adults presenting at out-of-hours GP centres, the emphasis is on general, respiratory and digestive system complaints. A&E departments more often see musculoskeletal and cardiovascular complaints. Ambulances are often requested for cardiovascular and neurological problems.

Unsurprisingly, the picture is different among children. They mainly tend to visit the out-of-hours GP centre with infectious diseases and general complaints, and the A&E department with a physical injury or acute infection, whereas ambulances will frequently bring children to an A&E department with neurological and respiratory conditions.

Between 2 and 8% of the health problems for which people contact out-of-hours GP centres are judged by the attending GP or assistant to be either life-threatening or an emergency. The majority of problems are not serious. 11% of the health problems seen in adult patients presenting at A&E departments are judged to be life-threatening or emergencies. Among children visiting an A&E department, the presenting problems are judged to be an emergency in 5-22% of cases.⁷

65.5% of emergency ambulance call-outs are classified as “A1” deployments and 34.5% as “A2”. In an A1 deployment, there is a potentially life-threatening

situation or a risk of permanent disability, and the ambulance must arrive within 15 minutes. In an A2 deployment, there is a possibility of health impairment (perhaps serious), but no immediate threat to life, and no lights or sirens are used.

Over 40% of people who present at A&E departments do so on their own initiative, while nearly 40% have been referred by the GP. The remaining 20% come from other referrers, such as a company doctor, nursing home physician or midwife. Interestingly, the type of referrer can vary considerably from region to region, and there is also a noticeable difference between large towns/cities and more rural areas. This may be due in part to regional demographics and the amount of cooperation between out-of-hours GP centres and A&E departments.⁸⁻¹² Nationwide, the average number of visitors to an A&E department ranges from 10,000 to 20,000.¹³

2.3 Recent developments

The quality of acute care depends greatly on how the acute care pathway is organised and the degree of coordination. A further significant contributory factor is the speed with which assistance can be provided. Thus an effective response to a request for acute care demands good cooperation. Significant strides have already been made over the past few years in increasing efficiency and optimising the distribution of acute care. In this Section the Committee provides an overview of the principal developments.

A national network and regional coordination

The Netherlands is divided up into 11 regions, each with an accredited trauma centre. These centres are not only intended for providing large-scale care in emergencies. In the policy rules on acute care, the Minister of Health, Welfare and Sport has stated that every trauma centre must also fulfil its regional network role in relation to “standard” acute care. In this context, trauma care is regarded as a special form of acute care.

The origins of this system lie in a Ministry of Health, Welfare and Sport Policy Document on trauma care from 1997. Research into the response of health services to disasters and major accidents had shown room for improvement in the provision of medical assistance. Cooperation between different agencies was not ideal, with inter-agency coordination being virtually non-existent, and the quality of medical care depended on the location and time of the accident.

Since that time, 11 accredited level-1 trauma centres have been designated pursuant to the Special Medical Services Act (WBMV). These comprise all of

the UMCs plus three general hospitals in Tilburg, Enschede and Zwolle. The trauma centres are able to perform several emergency care procedures simultaneously and in a controlled manner. This “top-level” acute care structure enables them to scale up operations rapidly in the event of a disaster. Four UMCs have an emergency helicopter with a MMT.

The Regional Consultation on Acute Care (ROAZ) was created to ensure regional coordination. Since 2006 the ROAZ has been enshrined in the Healthcare Institutions Accreditation Act (WTZi) and its status is further clarified in the proposed Client Rights in Healthcare Act (Wcz). Partners in the acute care pathway, such as hospitals, ambulance services, GPs, midwives, the mental health services (GGZ), Medical Assistance in Accidents and Disasters (GHOR) and the municipal health authorities (GGD), are interlinked through the ROAZ, where they co-operate on projects designed to further streamline acute care pathways.

In this way the ROAZ can assist in the continuous improvement of the quality and accessibility of acute care by co-ordinating the activities of acute care providers and reviewing the range of acute care available within the region (who delivers what care, what is the capacity of each care provider, and what collaborative agreements are in place). The ROAZ is also involved in efforts to improve disaster preparedness by identifying bottlenecks and seeking solutions.

The 11 ROAZ organisations have also joined forces in a platform created under the umbrella of the National Acute Care Network (LNAZ). Cooperation and coordination of policy between the 11 acute care networks takes place through the National Acute Care Network.

The specialist emergency physician

Emergency physician is a new specialism. They undergo three years of training to enable them to deal effectively with any life-threatening emergency-care situation.¹⁴ Elsewhere in Europe this is a five-year course. An emergency physician specialises in acute care and triage, and independently undertakes the initial steps in treatment.^{15,16} If necessary, he or she will confer with medical specialists.

Prior to the emergence of the emergency physician, relatively inexperienced physicians were involved in this area. Many hospitals are now bringing their organisation of emergency care into line with this new development.^{15,16}

The *Capaciteitsorgaan*, a government advisory body on healthcare training needs, has analysed the need for emergency physicians using four scenarios.¹⁷ Based on these scenarios, it is estimated that between 400 and a maximum of 700

emergency physicians are needed in the Netherlands. By the fourth quarter of 2011, the Netherlands had 256 registered emergency physicians and there were thought to be 45 vacant posts.¹⁸

Given these figures, it was initially decided to have an annual intake of 43 junior doctors to be trained as emergency physicians. Nevertheless, the *Capaciteitsorgaan* advised the Minister that an intake of 59 trainees per annum would be justifiable in order to make rapid inroads into the backlog and that this would actually be advisable in order to develop the profession. In 2008 this number was duly approved.¹⁹

The emergence of out-of-hours GP centres

GPs are traditionally the first point of contact for medical care. For out-of-hours care, most GPs have organised themselves into a so-called “general practitioner services structure” (HDS). An HDS will also include one or more out-of-hours GP centres (HAPs), which provide services in the evening, at night and at weekends. The emergence of these out-of-hours GP centres is a further significant development alongside the advent of the emergency physician. After all, they offer the medical care that cannot wait until the next working day and are an important link in the acute care pathway.

Increasing cooperation between out-of-hours GP centres and A&E

The out-of-hours GP centres are often situated near the A&E department in a hospital. In recent years there has been discussion over the desirability of further integrating out-of-hours GP centres and A&E departments in order to improve the quality and efficiency of emergency care.²⁰ One argument advanced was that the public are frequently unsure which is the best form of emergency care to contact outside office hours: the out-of-hours GP centre, the A&E department or the ambulance service (via 112). It also seems that many patients avail themselves of costly specialist care, whereas the available information suggests that their acute care needs can be equally well met by the out-of-hours GP centre.²¹⁻²³

The gatekeeper role of the GP would probably be better utilised if there were to be more intensive cooperation between out-of-hours GP centres and the accident and emergency departments. The primary-care services – such as general practitioner care, dental care, paramedic care, obstetric care, general social work and primary mental health care – would in that case also play a key role in acute care. This approach may also serve to reduce the number of “self-

referrers”: people who present at an A&E department without first seeing another health professional.²⁴

It is hardly surprising, therefore, that there is growing cooperation between out-of-hours GP centres and A&E departments in more and more places in the Netherlands. In a number of places, shared triage is taking place in such situations. If necessary, the patient can then easily be referred to secondary hospital care or secondary mental health services.

All of this promotes efficiency. It is worth pointing out that cooperation between out-of-hours GP centres and A&E departments does not, generally speaking, increase the patient’s journey time by much (if at all). Figure 2 shows the geographical spread of the out-of-hours GP centres and A&E departments in the Netherlands. There are a total of 104 A&E departments and 128 out-of-hours GP centres. In addition, there are several GP cooperatives which provide these services in the evening, at night and at weekends from their own surgeries. In this case, the location of the out-of-hours GP centre varies according to which GP is on duty. Not all out-of-hours GP centres stay open after 23:00 hours at night. The map also includes the A&E departments that are closed at night.²⁵

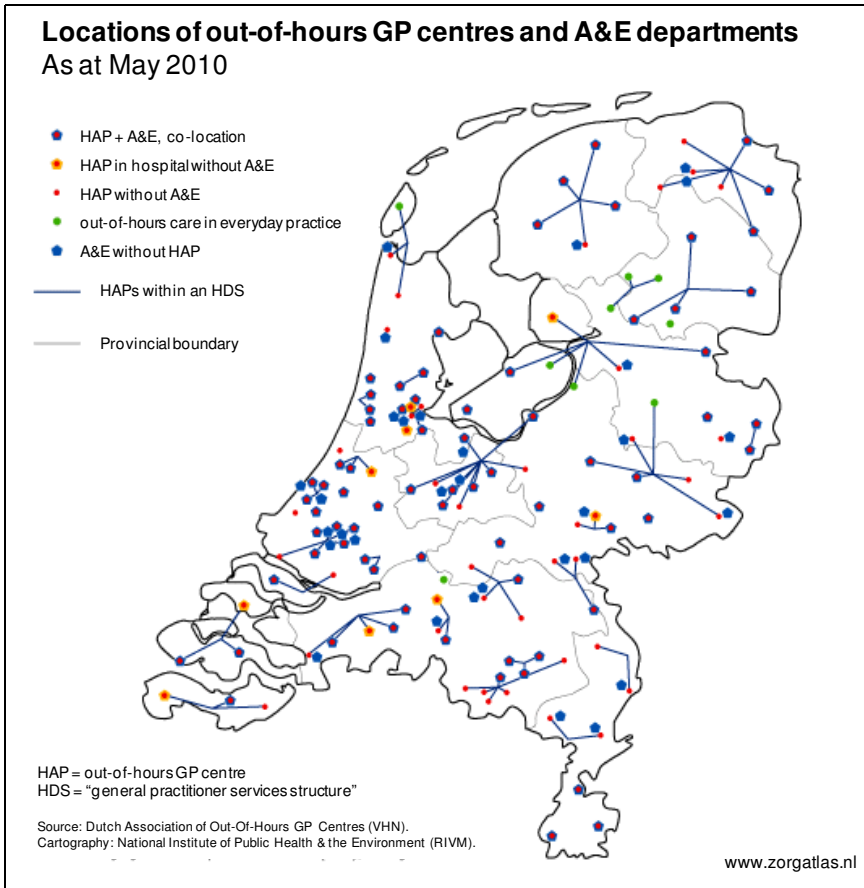


Figure 2.

Streamlining care pathways

Acute care is not a question of speed alone, but also of getting the patient to the location where the most appropriate care is available. Efficient organisation is essential. All of the necessary steps have been taken in this area. In this Chapter the Committee discusses how the acute care pathway can be further improved.

3.1 Rapid access to the right care

Guaranteeing accessibility

Statutory regulations have been adopted in the Netherlands with regard to the accessibility of emergency care. These are based on a target time of 45 minutes by ambulance. The ambulance has 15 minutes to get to the scene of the incident from the time the call is received by the control room (in practice, the average actually appears to be 10 minutes). Then 5 minutes is allotted for stabilisation and patient loading. This leaves a further 25 minutes for transport to the nearest hospital with an A&E department. Whether this target of 25 minutes transport time is achieved depends on the distance between the scene of the incident and the A&E department.

The 45-minute requirement is stipulated in the Healthcare Institutions Accreditation Act (WTZi), which states that the healthcare institutions may only stop providing functions at a particular location (whether temporarily or permanently) if the 45-minute target time is not jeopardised.

To maintain the availability of existing emergency hospital care at locations that are necessary in order to meet accessibility requirements, the Dutch Healthcare Authority (NZA) applies the so-called “policy rule” (Annex G). This provides the possibility of granting a subsidy if the continued existence of a location is jeopardised due to operating problems.

Two standards are applied in relation to this policy rule. There is said to be “available emergency hospital care” if at least one emergency care nurse is present at the hospital location and a medical specialist can be on site within 15 minutes. This must apply 24 hours a day. There is said to be “accessible emergency hospital care” if a hospital’s A&E department can be reached by ambulance within no more than 45 minutes.

These are the standards that currently apply. However, the Committee has established that a few adjustments are desirable.

Firstly, careful consideration should be given to the time that elapses between the first call to the integrated control room and the moment of arrival at the scene of the incident. This is becoming more and more relevant as the number of emergency calls made by mobile telephone increases. The mobile 112 calls are received at a single central point in the Netherlands and from there they are put through to a regional control room. They must then be redirected to the Ambulance Service Central Control Room (CPA). All this will increase the average call time.

Furthermore, the term “loading time” does not convey the true situation when applied to ambulances. In practice, the ambulance crew are frequently also engaged in stabilising the patient or undertaking preparatory measures. The more smoothly this runs, the less critical the transport time becomes. According to national registry data, the average “loading time” in practice is 20 minutes (since there is far more to do than merely loading the patient), whereas the time allotted is 5 minutes.²⁶ The Committee finds that the legislation is no longer up to date on this point.

Moreover, the unloading time and handover time in A&E (and also, in the case of large-scale emergency service operations, the triage time) ought to be factored into the target time. This is not currently the case.

Getting the patient to the appropriate care

Speed is extremely important, as was stated earlier. Hence the need for a statutory basis. But speed is not the only objective in acute care. It is equally important that patients should present at the right place.

A 54-year old man has been complaining of chest pain for the past hour. The pain radiates out to the left arm. The GP suspects a myocardial infarction and arranges an ambulance. The ambulance arrives 12 minutes after the call was made. The ambulance crew does, indeed, see signs suggesting a myocardial infarction on the ECG recorded at the scene. The ECG is transmitted to the “profile” hospital, where the diagnosis is confirmed and a presumptive indication for angioplasty is established. The ambulance crew inserts a line and administers the appropriate medication for the presumptive diagnosis. Within 18 minutes of its arrival, the ambulance is able to set off with the patient to a “profile” hospital, where he can undergo angioplasty. This is not the hospital with a basic A&E department 10 minutes from his home but is at least a 25-minute ambulance journey away. Fifty-five minutes after the GP’s initial call the patient arrives at the profile hospital, where the cardiology team is ready to perform an angiogram and he undergoes angioplasty. He makes a successful recovery.

A patient with an ischaemic CVA does not require stabilisation, but there is every reason to undertake rapid thrombolysis (“time is brain”). Consequently, that patient must not first of all be taken to a hospital where this treatment is not possible. Direct transport to the appropriate “profile” hospital is crucial – even if it is further away. The same applies in the case of a patient with a traumatic intracranial extracerebral haematoma, who must be taken straight to a hospital that can perform an immediate neurosurgical intervention. In such cases, ambulance personnel may decide to extend the journey time in order to ensure better quality of care in a particular place.

It is precisely for this reason that the Breedveld Working Group has identified specific care profiles: treatments of acute problems that require expertise or equipment that is not available at every hospital. The university medical centres are considered to have all of these profiles in house; in other words they have a “full” A&E department. In addition, there are a number of so-called “Collaborating Top-Level Hospitals” (STZ hospitals) for which the same applies.²⁷

Taking both objectives into account

The first priority in acute care is speed. But no matter how important it may be, time is not the only consideration. It is also vital to get the patient to the most

appropriate care. In some cases a patient may benefit from a longer journey time if it means that, immediately after arriving at A&E, he or she can undergo a complex treatment that is not available everywhere. It is absolutely essential that a properly organised acute care pathway should take both of these care objectives into consideration. This requires effective interaction between all links in the chain.

3.2 Performance in practice

How does performance in practice match up to the objectives that have been set for acute care? On behalf of the Ministry of Health, Welfare and Sport, the National Institute of Public Health and the Environment (RIVM) has undertaken two studies of ambulance journey times, in 2008 and 2011.²⁸ The results show that between 2008 and 2011 the number of A&E departments that were not only open 24 hours a day, 7 days a week but also offered eight basic “gateway” specialisms* fell from 104 to 67.

Given these 67 A&E departments and the 196 ambulance stations, there are calculated to be 142,300 people in the Netherlands (i.e. 0.86% of the total population) who cannot reach such an A&E department by ambulance within 45 minutes.

The analysis has identified a number of A&E departments that play an important role in safeguarding accessibility, which have been designated as “sensitive” hospitals. Closure of these facilities would increase the number of people who are unable to reach an A&E department within 45 minutes. Of the 67 fully equipped and open A&E departments, 34 are located in “sensitive” hospitals.

The majority of people in poorly served areas live on the West Frisian Islands or in sparsely populated areas of the Netherlands (e.g. various nature reserves and areas bordering Belgium and Germany). It is worth pointing out, however, that the Committee has found no scientific data to support the adoption of the 45-minute limit.

* The 8 “gateway specialisms” (*poortspecialismen*): internal medicine, surgery, gynaecology/obstetrics, paediatrics, neurology, ENT surgery, ophthalmology and dermatology.

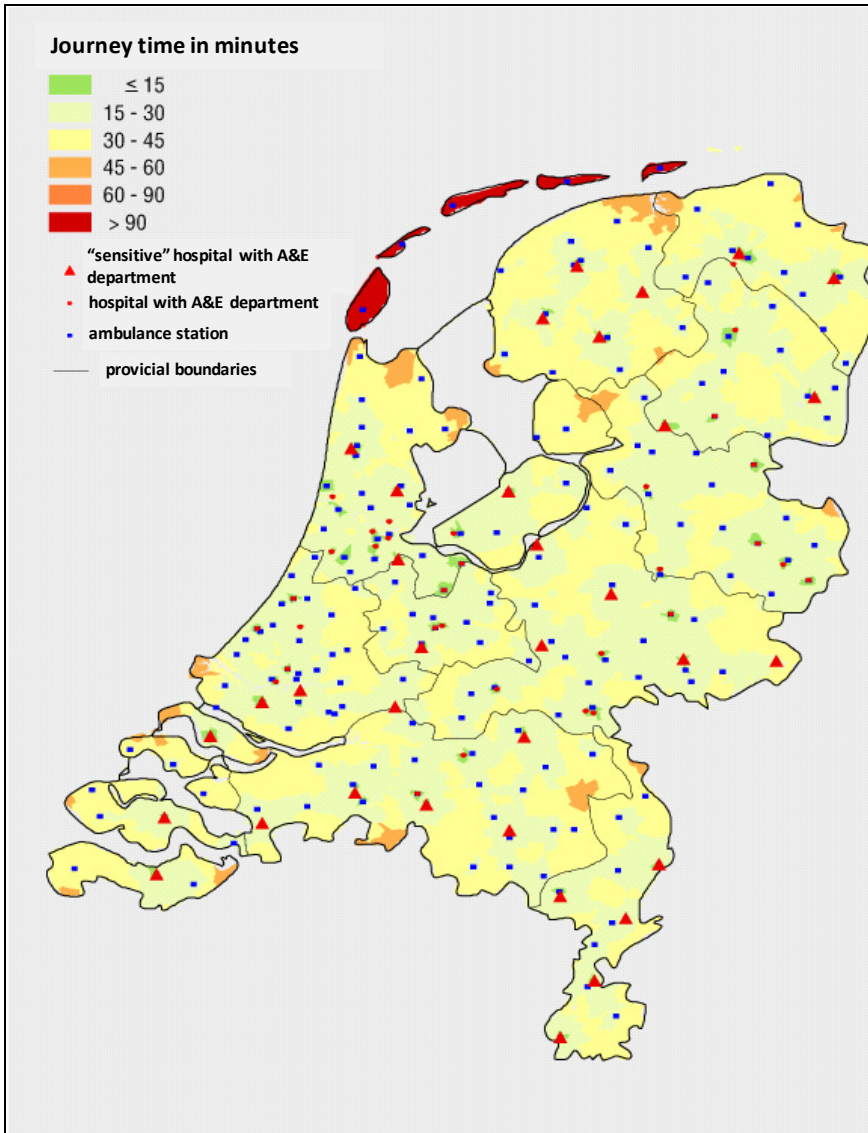


Figure 3 Average regional journey time in minutes.

3.3 Improving organisation

Getting patients to the right acute care quickly requires good organisation. How can the acute care pathway be arranged in such a way that accessibility and quality are safeguarded and further improved, yet the care is still cost-effective?

Clear requirements for every A&E department

The Breedveld Working Group recommended that hospitals and A&E departments should be classified into three types. With this as its starting point, the Committee emphasises the need to determine which category each hospital belongs to and what the associated requirements are. We have already seen how successful this has been in the development of the national network for trauma care.

The trauma centres have been stratified into three levels. Patient allocation is determined by evidence-based criteria.^{29,30} Level-1 centres are responsible for the care of all trauma patients with multiple serious injuries and also have the necessary facilities to fulfil this role. These facilities include full availability of trauma surgeons, anaesthesiologists, ICU, interventional radiologists and neurosurgeons, and comprehensive diagnostic and therapeutic facilities. There are 11 such centres in the Netherlands. Level-2 trauma centres are not required to provide certain facilities such as neurosurgery and chest surgery, since the severity of illness is lower than that of level-1 patients. A level-3 trauma hospital will mainly treat common conditions of low complexity. This classification system for trauma hospitals not only defines the minimum patient throughput but also the A&E department opening hours.

As demonstrated by the results, this transparency pays off. This had already been established in the United States, but can also be observed here in the Netherlands, where the creation of regional centres is leading to a decrease in mortality and a shorter length of stay.^{31 32}

As with the trauma centres, the Committee believes that all A&E departments should be categorised, with the categories in this case being “full”, “profile” and “basic”. This classification process should be undertaken in consultation between the governing bodies of the facilities within a region, using the existing trauma care network.

In this context the Committee points out that the responsibilities within the acute care pathway need to be clearly defined, especially with regard to the

National Acute Care Network (LNAZ) and Regional Consultation on Acute Care (ROAZ).

Experiences in the United Kingdom demonstrate that proper organisation, with clear allocation of responsibilities and clearly defined objectives, serves to improve quality and can lead to lower mortality and shorter length of stay. Re-admission numbers may also be reduced.^{33,34}

This does mean, however, that local, independent organisations may have to sacrifice some of their autonomy. This may, understandably, meet with some resistance. Nevertheless, the Committee believes that the regional model needs to be universally adopted. In this respect it points out that lessons can be learned from the creation of the regional fire brigades, which required the sacrifice of local autonomy in order to ensure comprehensive regional availability.

For specific medical conditions, good examples of streamlined acute care already exist in several regions.³⁵ However, the Committee believes that regional agreements for important medical conditions and feedback of results can bring about a considerable further improvement in care. Indicators are being developed with this in mind.³⁶ The profiles identified by the Breedveld Working Group must, in any event, be put in place, both in terms of availability and accessibility. These profiles are: trauma, childbirth, myocardial infarction, stroke, aneurysm of the abdominal aorta, children, acute psychiatric care, and acute respiratory insufficiency.

It may also be necessary to increase the number of profiles, for example by adding locations with specialist toxicology expertise and locations with a radiology profile in the event of large-scale disasters. In this context, one should also consider the specific regional risk profile (airports, chemical industry, etc.) at ROAZ level.

A 28-year old woman has given birth to a healthy son at home. The placenta does not separate spontaneously and there is substantial loss of blood. The midwife calls the control room and requests an emergency ambulance. Agreements have been reached within the region as to which hospital will deal with acute cases of this kind within the stipulated timeframe. The control room alerts the hospital in question. At that hospital, everything is prepared to ensure that the patient receives adequate care from the gynaecologist and the obstetrics department. The anaesthetist and the operating theatre team are put on standby in case the placenta and/or the bleeding require acute treatment in the operating theatre. The control room directs the ambulance to that hospital, where the patient receives optimal care and treatment.

Coordinated opening hours

The majority of the acute-care caseload consists of patients who have no need of the specialist “profile” care that is intended for more complex problems. Good basic A&E departments are therefore an essential part of the chain of care. If all of the patients with relatively simple problems were to rush to a profile or full A&E department, those services would become overloaded. This can be avoided by having a good geographical spread of basic A&E departments.

At night, however, the situation is different. Later in the evening, the caseload diminishes to such an extent that, generally speaking, the volume problem no longer arises for the “profile” hospital or the hospital with a full A&E department. Figure 4 shows average throughput over a 24-hour period. At quieter times, profile and full A&E departments can deliver the full range of acute care services without becoming congested. It is then not necessarily cost-effective to keep the basic A&E departments open 24 hours a day.

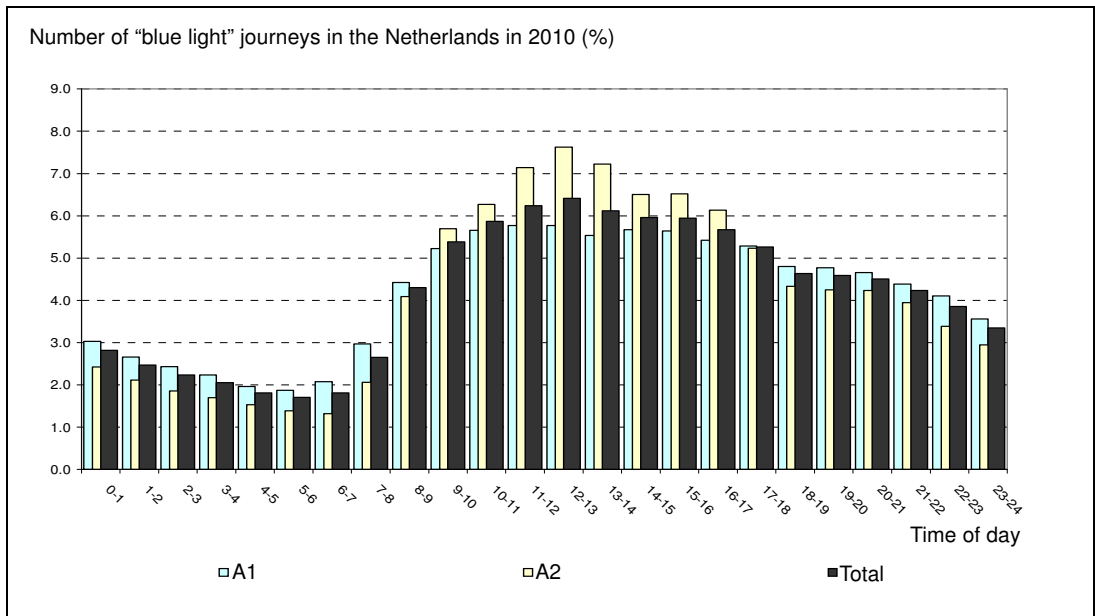


Figure 4 Number of “blue light” journeys in the Netherlands in 2010, by urgency level, over a 24-hour period. A total of 710,921 emergency ambulance call-outs took place in the Netherlands in 2010. Over 65% of them were classed as urgency level A1; the other call-outs were level A2. There are an average of 1,271 A1 call-outs and 677 A2 call-outs per day. The number of call-outs is highest around midday, when 115-125 A1 call-outs and 70-75 A2 call-outs are provided per hour. The quietest time of the day is between 5 and 6 o’clock in the evening. The pattern of A2 call-outs is somewhat different to that of A1 call-outs, with a relatively large number of A2 call-outs taking place around midday and in the afternoon. The number of A1 call-outs is relatively high in the morning and evening rush-hours. (Source: RIVM.²⁶)

Depending on patient numbers, it is therefore advisable to limit the provision of A&E services in off-peak hours, as is the case with the agreements reached within general practice and pharmacy services. Reciprocal arrangements at regional level may then result in an optimal division of labour. For example, the closure of basic A&E departments at certain times may make it possible to deploy specialists elsewhere. All of that region's acute problems can then be treated there, provided that the 45-minute target time is observed.^{37,38}

For areas that lie outside the 45-minute limit, the possibility of using other modes of transport should be explored. For example, the solution may be to reassign ambulance stations, so that options outside of the 15-minute travel limit are also considered. Consideration may also be given to the deployment of specific disciplines, such as emergency physicians and/or teams in helicopters.

Within the scheme that has been outlined above agreements need to be reached at regional level regarding the availability of beds, operating-theatre and ICU capacity, and emergency care for certain important medical conditions. Various initiatives have already been developed in this area. For example, agreements have been reached between GPs and specialists in the Rijnmond region, and ICT support has been utilised to generate information about bed availability.³⁹

ICT support can play an important role in the streamlining of acute care and evaluation of the results.⁴⁰ Particular opportunities lie in the field of telemedicine, with the possibility of transmitting data electronically at an early stage from the ambulance to the hospital, reviewing ambulance availability, and relocating ambulance stations in order to optimise availability.⁴¹

A GP is consulted one afternoon by a 28-year old woman who has had pain in her lower right abdomen for several hours. She is also feeling nauseous. On examination, he finds tenderness and rebound tenderness in this area. Suspecting appendicitis, he sends her to the local hospital, which has a basic A&E department. While on night duty, he encounters a similar situation in a man aged 34. The A&E department of the nearest hospital is closed at night, however, and he sends the patient to a hospital 25 kilometres further away.

Consistent triage

A further prerequisite for streamlined and appropriate regional allocation of acute care resources is triage. In point of fact, demand for acute care is extremely heterogeneous.^{42,43} This is manifested even in the way in which patients present for treatment. There are four identifiable groups of patients: self-referrers; people who turn up at a GP surgery or out-of-hours GP centre; people who call 112 from home or from a mobile phone; and people who are referred by another care provider or by the ambulance service.

Triage (whether conducted by telephone or physical) establishes how urgently the patient needs to be seen by a physician or other professional, and what would be the right place in which to provide the initial care. The decision-making is a dynamic process involving determination of urgency and assessing the patient's need for further treatment.

Various triage systems and training programmes are currently being used in the Netherlands, even though much has been invested in the development of a general standard: the Dutch Triage System (NTS).⁴⁴ Although that system appears to be suitable⁴⁵, further research is still needed with regard to specific use in the different forms of acute care. In point of fact, triage is performed in one of three (or more) settings: an ambulance-service control room, an out-of-hours GP centre or an A&E department. It is not clear how much coordination there is between the on-call out-of-hours GP centre, the ambulances and the on-call hospitals. Triage is also performed by various types of health professional: receptionists, nurses on the ambulance, nurses in the A&E department, duty GPs or emergency physicians.

Discussions are still on-going over who should perform the triage in A&E departments. What is clear, however, is that the patient will benefit from being triaged directly to an appropriate treatment pathway. It is probably possible to improve quality in this area through training and certification.

Surveying the triage situation as it currently stands, the Committee finds it regrettable that there is still no uniform approach. It is therefore necessary to reach clear agreements at regional level regarding triage, the training of the triagists and the patterns of referral. This will promote effective patient transfer. There is also a need for a system that feeds back results and records incidents (and “near incidents”). The recommendation that was made upon the presentation of the Dutch Triage System to the former Minister of Health, Welfare and Sport in 2006 – namely that the system should be embedded in an overarching quality assurance system – is as applicable today as it was then.

Suitable ambulance transport

An essential prerequisite for effective use of transport is an overview of ambulance availability, so that it is clear at any time where assistance can be provided.

Where consistent problems are encountered with availability, it may be necessary to relocate the operating base for the ambulances. This must be undertaken at regional level. Such relocations have already occurred in Amsterdam.^{38,41}

For a number of medical conditions, specific agreements need to be reached for each region with regard to initial assessment, consultation during transport, availability of beds and operating-theatre capacity. Treatment agreements would need to be reached for poorly accessible areas. For example, the GPs on the island of Terschelling have decided to stop facilitating home births.⁴⁶ This means that hotel accommodation and birth centres need to be arranged in order for a birth to take place on the mainland.

For border regions where the 45-minute target time is not achieved, consideration may be given to the service that might be available in Belgian and German hospitals (in conjunction with existing initiatives).^{47,48}

In other cases, for example in trauma patients or those requiring resuscitation, it will be necessary to assess whether the use of helicopters needs to be extended (in emergencies and otherwise), especially in less accessible areas.⁴⁹ The Committee has doubts about the implementation of the deployment criteria, and about the policy of only using the helicopters for transporting medical personnel and not for patients.

The Regional Ambulance Services can also be better equipped and the MMT can be deployed earlier. In Germany they have already introduced a mobile stroke unit with CT and laboratory facilities in the ambulance.

Size and through flow

Relatively little is known about optimal patient inflow into an A&E department. It is likely, however, that insufficient demand may adversely affect quality of care⁵⁰, whereas too many patients can place an excessive burden on resources, with similarly adverse effects.⁵¹ In this respect, the A&E department, the ICU and the operating theatre are traditionally viewed as bottlenecks in the hospital organisation. Better results are obtained if patients can be transferred without delay from one department to another.⁵²⁻⁵⁴

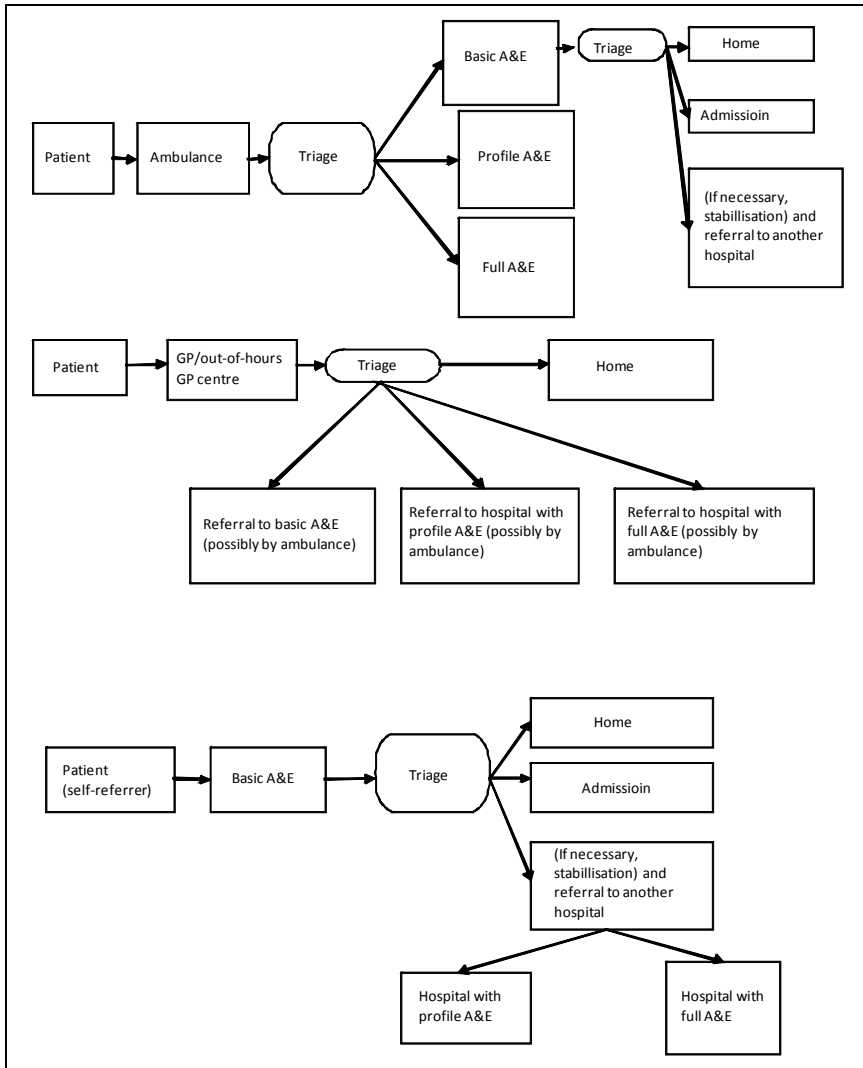


Figure 5 Referral flowchart.

Rapid transfer within hospitals

An acute situation may even arise where someone has already been admitted to a hospital if that patient's condition suddenly deteriorates. In the US, so-called Rapid Response Teams are used to optimise the quality of acute care within a hospital.⁵⁵ Similar initiatives are being developed in the Netherlands.⁵⁶

The right care for self-referrers

The Committee has discussed the problems surrounding self-referrers extensively. Because these people present at an A&E department without going through triage, it is possible that they will not arrive at the place that has the best care for them in-house. Figure 5 shows the pathway taken by self-referrers as compared with that followed by patients who arrive in A&E via another route.

According to the Committee, it is not possible to prevent patients from going to a basic A&E department of their own accord, even though they would be better off in a “profile” hospital or one with a full A&E department. In these cases, it might be possible to gain some time by having an ambulance station near the basic A&E department, so that self-referrers can still be taken quickly to the place with the right specialist care.

3.4 Conclusion

Good acute care should follow the maxim of “Close by if possible, a little further away if necessary”. Not all A&E departments can be equipped for all forms of acute care. Hence specialisation is an essential prerequisite for a high standard of quality and effective division of labour. Moreover, the rest of the hospital will not always have all of the appropriate follow-up care in house, no matter how broad their range of competencies. This is why the Breedveld Working Group proposed that facilities be classified into three types: full, profile and basic A&E departments.

The Committee finds this classification system useful. As a next step, it advocates that every A&E department in the Netherlands should now be classified on this basis (in a similar way to the stratification process in the trauma centres). In the case of the “profile” hospitals, we should establish what specific forms of “profile” care they provide.

An important task for basic A&E departments is to treat large numbers of patients with relatively simple problems. However, profile and full A&E departments are also quite capable of dealing with this caseload during quiet times – at night, for example. It is then more cost-effective to close certain services – subject to the 45-minute target time being met, of course.

Such a division of labour requires clear regional agreements, reciprocal arrangements regarding opening hours and available expertise, clearly defined responsibilities, effective arrangements concerning triage, and suitable transport services. Following the example of regional trauma care, intensive collaboration

at regional level would also be needed in acute care, together with binding agreements and clear governance.

It is inevitable that part of the patient flow will consist of self-referrers: people who present directly at an A&E department without having first been assessed to establish which acute medical facility would best suit their needs. A nearby ambulance station would be able to provide rapid transfer to a profile or full A&E department if required.

The support facilities needed by basic A&E departments

In the previous Chapter the Committee considered the organisation of the acute care pathway as a whole and recommended steps that may further improve the accessibility and quality of acute care. Now it can turn its attention to the branch of acute care on which the Ministry of Health, Welfare and Sport is requesting specific advice: the support facilities. The question to be answered is what professional staff resources and infrastructure are available within the hospital as a whole for particular categories of patients who require acute care and for the performance of procedures that are needed in order to treat these patients.

4.1 Interaction between basic A&E and support facilities

The accident and emergency department is not a discrete entity, but an integrated part of the hospital organisation. Although the life-saving and stabilising procedures take place in A&E, emergency care additionally requires a plethora of activities for which input is needed from other departments.

In this situation, the whole is more than the sum of the parts. For example, a basic A&E department is able to function because x-ray equipment, biochemical testing, etc. are available under the same roof and various specialisms can be called in.

The relationship between the basic A&E department and the support facilities in the rest of the hospital therefore has a crucial bearing on the quality of acute care.

For purposes of this report, the Committee understands “support facilities” to mean: the professional staff resources and infrastructure that are available within the hospital as a whole for particular categories of patients who require acute care, and for the performance of procedures needed in order to treat these patients.

4.2 Clear tasks and competencies

Given the vital interaction between the A&E department and the support facilities in the rest of the hospital, it must be clear which forms of acute care patients can expect to find in a basic A&E department. Knowing this will give us an idea of the specialisms and facilities that must be provided by way of support.

Defining roles

One way of determining the care remit of basic A&E departments is by comparing the care that these facilities provide with that provided by university medical centres (full A&E) and “profile” hospitals (profile A&E). In the latter two cases, the care to be provided to categories of patients with complex acute problems is clearly defined. Thus a pragmatic definition would be that everything that does not fall within the remit of these two categories can be classified as “basic” care. This means that a basic A&E department is suitable for:

- care of patients who require acute life-saving interventions that do not have to be performed by a “profile” hospital or patients who have not reached a “profile” hospital (e.g. self-referrers, in which case arrangements may be made for suitable transport to another location)
- stabilisation of patients (where appropriate)
- admission and treatment of common and relatively simple problems (high volume, low complexity)
- observation and diagnosis of acute problems.

Commonly occurring and relatively simple problems include such medical conditions as acute appendicitis, epileptic seizures, urinary calculi, cuts that need to be stitched, uncomplicated fractures and nosebleeds.

Not all medical conditions are so easy to categorise, however. Where is the line to be drawn between high-volume care for relatively simple problems and low-volume care in patients with complex conditions?

In the Committee's opinion, this distinction needs to be clarified, and this is primarily a task for the learned societies.

It is also important that the learned societies should specify, very precisely and in some detail, what they consider to be the minimum quality requirements for the “profile” areas (and, to a lesser extent, also for other areas). They must also identify the different profiles required by each “profile” hospital. The way in which trauma care has been organised can usefully serve as an example here.

Providing the appropriate competencies

It is therefore necessary to clearly identify which forms of highly specialised care a basic A&E department does not have to provide, since these services can be better and more cost-effectively delivered by a profile or full A&E department. Nevertheless, a basic A&E department must be capable of providing appropriate care for a wide range of acute conditions.

Stabilisation – a task often associated with the basic A&E department – is not always relevant. For example, relatively simple acute problems can be treated straight away. In other, more complex cases one must consider what further steps are indicated. This may apply in the presence of a combination of symptoms that is alarming, but not immediately diagnosed: for example, the patient is “unwell”, has a fever, abdominal pain or headache. These will usually be patients who are ill (perhaps seriously) but whose primary diagnosis is not straightforward and unequivocal. In order to make a probable diagnosis in a case of this kind, an emergency physician will frequently need to consult several specialists.⁵⁷

Even a hospital with a basic A&E department must therefore have at its disposal sufficient competencies to make decisions on complex problems. The outcome may either be that the patient is allowed to go home, that he or she is admitted to the hospital with the basic A&E department (for observation or treatment), or that he or she is referred to a hospital with a profile A&E department, where additional diagnostic evaluations and treatment can take place.

Vigilance is needed here. Potential pitfalls are: spending too long over the diagnosis, delaying the transfer, performing endoscopies that are not indicated, poor-quality CT scans, etc. One solution might be a rating system for assessing complexity. In addition, systematic feedback is needed on transfers, and a database of complications needs to be maintained.

Subject to these provisos, the Committee believes that a facility with a basic A&E department must have the competencies in house to perform the following tasks:

- resuscitation and stabilisation
- initiation of treatment in the case of relatively straightforward problems
- primary diagnosis of complex problems
- referral of patients with complex problems.

Thus the large majority of patients are treated close to home.^{38,58}

This does not mean that a basic A&E department must stay open 24 hours a day, seven days a week, as the Committee had previously concluded. Thus it is possible for an A&E department in a region to be closed during the night, provided that another facility can be reached within the legally required timeframe. But if a basic A&E department is open then a registered emergency physician and a certified emergency care nurse must, in principle, be present.

Until such time as sufficient trained emergency physicians are available, a basic A&E department may also be staffed by an experienced physician who is able to resuscitate and stabilise a patient and who has experience with triage. Most importantly, the basic A&E department must possess the competencies stipulated by the Breedveld Working Group.

By getting the learned societies to formulate minimum quality requirements for certain clearly defined tasks and, in addition, ensuring that every basic A&E department has appropriate competencies in resuscitation and triage (even in complex cases), it will be possible to deliver optimal acute care in all such departments.

4.3 Necessary support facilities

Support facilities for adult patients

Given the range of medical conditions that may present in a basic A&E department, the emergency physician must be able to consult the relevant specialisms rapidly. Thus it is only the A&E department itself that must meet certain requirements. The same applies to the specialisms and infrastructure in the rest of the hospital.

This will be easier to achieve during the daytime, when the whole system is, as it were, intact. All of the specialists are in the hospital and diagnostic facilities (laboratory, x-ray) are open. The on-duty emergency physician must then, in all cases, be confident that he or she can rapidly access the following specialisms: gynaecology/obstetrics, surgery, internal medicine, cardiology, paediatrics, ENT surgery, neurology, anaesthesiology and radiology.

Table 1 Overview of A&E support facilities.

Specialisms available within a short time	Available	Rapidly consultable supporting specialisms	Immediately accessible
Gynaecology/obstetrics	Operating theatre team	Pharmacy	Laboratory facility
Surgery		Clinical chemistry	X-ray facility
Internal medicine		Medical microbiology	
Cardiology		Pathology	
Paediatrics			
ENT surgery			
Neurology			
Anaesthesiology			
Radiology			

It must also be possible to consult the following supporting specialisms rapidly: pharmacy, clinical chemistry, medical microbiology and pathology.

The Committee can imagine that these tasks may, in some hospitals, be fulfilled by a junior doctor with sufficient competencies who has been declared capable of performing this type of consultation.

In view of the support facilities that a surgeon is considered to require, it is also essential that an anaesthetist and an operating theatre team should be available. The emergency physician (and his consultative support) should also have direct access to laboratory and X-ray facilities.

The Committee has given detailed consideration to the timeframe that is to be applied in all these cases. It has found various times (15, 20, 30 minutes), which vary from one specialism and medical condition to another, but none of them are empirically validated. Nor, in most cases, has consideration been given to the competency of any attending junior doctor.

The Committee therefore chooses not to recommend a specific number of minutes that should apply in all cases. Evidently, however, speed is always desirable. In the Committee's opinion, it is up to the learned societies to incorporate desired response times for specialisms within hospitals with a basic A&E department in the quality standards.

Support facilities for young patients

Special support functions are required for children. All children who present at a basic A&E department with suspected internal disorders must be seen by (or under the supervision of) a paediatrician.

In the case of children under one year of age, a paediatrician must also be consulted for other conditions, particularly if there is any suspicion of child

abuse. Preliminary training for triagists ought, in any case, to include components specifically geared towards acute problems in children.⁵⁹

Support facilities when A&E is closed

The situation changes completely when the hospital's basic A&E department is closed. Then clinical patients with problems that are very common and fairly straightforward, patients from the observation unit and (possibly) patients in the recovery room will remain in the hospital. In such cases, the Dutch Health Care Inspectorate (IGZ)'s assessment framework states that an experienced physician must be available who is capable of performing resuscitation and triage. Given the terminology used in the request for advice ("crucial for the minimum quality standard") and the comments made in the request for advice on life-saving interventions and stabilisation, this is deemed sufficient.

Required facilities

Furthermore, the hospital with a basic A&E department must offer 24-hour postoperative care and an observation unit for acute problems that is capable of providing adequate temporary support of vital functions. The Committee does not consider that an ICU facility is necessary within such a structure. For high-risk interventions, patients must be transferred to another, better equipped facility in the region, and transfer is also indicated in unexpected situations that require intensive care, in which case rapid transport must be arranged.

Required quality assurance system

If these support facilities are to function properly, it is essential that the A&E department should have a quality assurance system. Most regions and hospitals have shortcomings in this area, according to the Dutch Health Care Inspectorate.⁶⁰ This situation must change.

Nor is there a care management plan specifying which patients are to be treated in the A&E department and which are not. This care management plan must be agreed with other stakeholders, the ambulance service(s), the GPs and out-of-hours GP centres and the neighbouring hospitals, and it must be adopted as mandatory within the ROAZ. This care management plan will govern the way in which the A&E department carries out its work and manages its human and physical resources.

The A&E department's care management plan cannot be viewed in isolation. It must form part of the care management plan of the hospital as a whole and that of its other departments, and it must be coordinated with the Hospital Disaster Management Plan (ZiROP).

Preparation for large-scale emergency assistance

Situations that require large-scale emergency assistance (e.g. disasters and large-scale industrial or other accidents) happen unexpectedly and can arise anywhere. The health services should prepare themselves for such eventualities. In the context of a large-scale health emergency, basic A&E departments are obliged to continue providing care even in the event of a breakdown of public utilities, equipment and ICT resources. Rapid activation of the hierarchical structure and administrative information system is also extremely important.

4.4 Conclusion

In this Chapter the Committee has responded to the request for advice about required support facilities. In this context, the Committee understands "support facilities" to mean: the professional staff resources and infrastructure that are available within the hospital as a whole for particular categories of patients who require acute care, and for the performance of procedures that are needed in order to treat these patients.

Although the name suggests otherwise, basic A&E departments are, in practice, confronted with all manner of problems, ranging from broken legs to other indeterminate but potentially serious conditions. This is notwithstanding the division of labour between the different types of A&E departments. During its opening hours, a basic A&E department must have sufficient resources to treat the straightforward cases in house, make well-founded decisions about the complex cases and respond in an expert manner in the event that resuscitation is required.

The Committee therefore recommends a two-pronged approach. Firstly, every A&E department within the regional acute care pathway must be clearly identified as being either a basic, profile or full A&E department. Learned societies must determine which tasks and quality requirements are associated with basic A&E status and which are associated with profile status.

Secondly, every basic A&E department must possess the appropriate competencies that enable it to make the right decisions even in complex cases.

This system must not only be geared towards adult patients but also towards children.

The Committee has discussed extensively the response time needed for specialisms within hospitals with a basic A&E department.

As there is no scientific evidence to support a general standard, it chooses not to recommend a specific number of minutes that must apply in all cases. Needless to say, however, speed is always desirable. In the Committee's opinion, it is up to the learned societies to incorporate desired response times for specialisms within hospitals with a basic A&E department in the quality standards.

The care that is to be provided in a basic A&E department must be safeguarded by a quality assurance system and it must also be available in the event of disasters.

Recommendations

More than the sum of the parts

In this advisory report the Committee has considered what should be the next steps in on-going efforts to improve the quality of emergency care in the Netherlands, focusing on the so-called basic A&E departments. It has identified the competencies that need to be guaranteed in such a basic A&E department, and the support facilities (in the form of specialisms and infrastructure in the rest of the hospital) that this requires. If coordination between the basic A&E department and the rest of the hospital is optimal then the whole will be more than the sum of the parts and the quality of acute care can be further improved. This is what the first set of recommendations is about.

Basic A&E departments (and the hospitals behind them) also operate within the context of a greater whole, i.e. the acute care pathway, with its profile and full A&E departments, GPs and out-of-hours GP centres, ambulance services, midwives and control rooms. The Committee has therefore taken a close look at that pathway too.

In this context, it calls for a clear and binding regional division of labour between basic, profile and full A&E departments. If there is effective coordination, the whole will be more than the sum of the parts in this case too. Specialist emergency care is available in “profile” hospitals and university medical centres, while problems that are common and more straightforward are

treated in a basic A&E department, which does not necessarily have to be open 24 hours a day.

This approach increases both quality and efficiency. The second set of recommendations is therefore aimed at strengthening this regional division of labour.

In addition to the regional approach, the Committee has also formulated recommendations that will serve to improve the quality of the acute care pathway in other ways. These recommendations can be found in the third set of recommendations.

Together, these recommendations have the potential to further advance modern emergency care in the Netherlands. However the emphasis is no longer on speed alone. The motto is: “Close by if possible, a little further away if necessary”. Optimal cooperation within hospitals, within regions and throughout the continuum of care will enable people with acute health problems to quickly access the place that can offer them the most appropriate form of emergency care.

Recommendations for quality assurance in basic A&E departments

1 *A basic A&E department must have broad competencies*

Although the name suggests otherwise, a basic A&E department must be able to deal effectively with a broad range of acute cases, ranging from relatively simple, common problems to resuscitation, stabilisation and initial diagnosis of patients with alarming and complex problems. The existence of the so-called profile and full A&E departments does not alter the need for broad competencies.

2 *An emergency physician and nurse must be available during opening hours*

In principle, this means that an open A&E department should be staffed by a registered emergency physician and a certified emergency care nurse. If an emergency physician is not yet available (this being a new specialism), there must be an experienced physician who is not only able to deal with simple problems but can also resuscitate and stabilise patients and initiate appropriate treatment in patients with complex medical conditions. Outside basic A&E department opening hours, the hospital must always have an experienced physician available who is able to perform resuscitation and triage, in case a patient who has already been admitted should require acute care.

3 *Rapid access also needed to a number of specialisms*

The quality of care in a basic A&E department is closely related to the availability of specialisms and infrastructure in the rest of the hospital: i.e. the support facilities. In this context, the whole is more than the sum of the parts. However, the fact that some elements are missing can have an adverse impact on the quality of acute care, and sometimes even on patient health. In an open basic A&E department it is therefore important that the team should have rapid access to the following specialisms: surgery, anaesthesiology, cardiology, paediatrics, ENT surgery, gynaecology/obstetrics, neurology and radiology. It must be possible to get tests performed rapidly. Timely availability of specialisms, supporting services and infrastructure is also necessary outside the opening hours of the basic A&E department.

4 *Learned societies must formulate more detailed requirements*

As there is no evidence on which to base a general standard, the Committee will not stipulate a specific number of minutes within which the relevant specialisms must be available either during opening hours or at other times – although speed is, of course, required. An empirically validated timeframe for each specialism is desirable, however. Other requirements also need to be fleshed out. This is a job for the learned societies. A firm hand is needed here. Experience shows that detailed standard-setting is otherwise not always embraced with universal enthusiasm.

Recommendations for a regional division of labour between A&E departments

5 *A&E departments must seek an optimal division of tasks within a region*

The Committee calls for an optimal regional division of labour between basic A&E departments, profile A&E departments (where more complex care is available) and full A&E departments at university medical centres. This may serve to further promote efficiency, especially in densely populated areas (notably in the west of the Netherlands). This means that it is necessary to establish what category each A&E department belongs to, what tasks are performed there, and what requirements should be imposed. When making regional plans it is essential to consider the availability and accessibility of specialist “profile” care and the regional risk profile for large-scale incidents and disasters. It is also necessary to identify which service profiles are guaranteed in which “profile” hospital. Reciprocal arrangements may need to

be made at regional level in order to achieve an optimal division of labour.

6 *Basic A&E department opening hours also offer potential for division of labour*

Much emergency care is relatively straightforward. During the daytime, basic A&E departments are therefore the obvious places to provide this care. In the evening and at night, however, demand for this type of care diminishes substantially. It is therefore not always cost-effective to keep every basic A&E department open 24 hours a day, seven days a week. During night-time hours, relatively straightforward care can be provided at a hospital with a profile or full A&E department without causing volume problems. Care providers, emergency services and potential patients will then need to be fully informed of this situation.

7 *Mandatory regional control is needed*

The Committee suggests that efforts to expand regional coordination of emergency care could be modelled on the organisation of trauma care. A clear allocation of responsibilities is crucial. The National Acute Care Network (LNAZ) should be assigned nationwide responsibility for planning, organisation and quality assurance policy. ROAZ should take the lead at regional level. Mandatory cooperation means that care providers must sacrifice some of their autonomy.

8 *Funding must support regional cooperation*

Optimal regional division of labour may result in certain changes. For example, it may prove cost-effective for one hospital to discontinue relatively costly, inefficient services, while another hospital is actually able to introduce more services. The funding structure must allow this. It is therefore important that health insurers should also be involved in the cooperation that takes place within the ROAZ.

Recommendations for the entire acute care pathway

9 *Accessibility can be improved in a few regions*

Almost everywhere in the Netherlands, people can reach a suitable A&E department within 45 minutes. For those few areas where this does not apply, alternatives need to be considered. For example, the Committee envisages reassigning certain ambulance stations and mobile deployment of other disciplines, such as emergency physicians. The use of helicopters should also

be considered. In border areas, agreements can be made with facilities over the border.

- 10 *Ambulance stations near basic A&E departments ensure rapid transfer*
Not everybody comes to a basic A&E department after having first consulted a health professional. There are also people who present there directly – the so-called self-referrers. In some cases, however, these patients require complex specialist “profile” care. Ambulance stations near a basic A&E department can then ensure a rapid transfer.
 - 11 *Research needed on the accessibility of “profile” care*
There is currently still too little data available about the accessibility of so-called “profile” care (the acute care for which people have to go to a profile or full A&E department). Further research is therefore needed in this area.
 - 12 *Professional groups must clarify and supplement the care profiles*
The Breedveld Working Group has already named care profiles for which the minimum quality requirements need to be further elaborated. This is a task for the professional groups. It is also incumbent on them to investigate whether additional care profiles are needed.
 - 13 *A consistent approach to triage is needed*
If there is to be a proper division of labour between the three types of A&E departments, it is essential that an evidence-based triage system should be used for the entire acute care pathway. This also requires specific consideration of triage in children. The Committee finds that this consistency is still lacking. Steps must therefore be taken nationwide to coordinate the current triage system, the training of triagists and the patterns of referral. Organisation must then be improved at regional level.
 - 14 *The norm for “loading time” must be adjusted*
The Committee finds that the Healthcare Institutions Accreditation Act (WTZi) is out of date with its target time of five minutes for loading patients in ambulances. In practice, the ambulance crew are frequently also busy stabilising patients and undertaking preparatory measures, which extends the loading time to 20 minutes. This is not a problem, however. On the contrary, the more efficiently this is done, the less critical the transport time becomes. The statutory requirement therefore needs to be adjusted.
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15 *Remote imaging can further streamline patient transfer*

Transmission of information using modern techniques (such as remote imaging) can play an important role in further streamlining acute care. From a technical standpoint, the Committee therefore envisages the possibility of intensifying the diagnostic (and perhaps even therapeutic) procedures performed in the ambulance by further facilitating communications between ambulance and A&E.

16 *More cooperation desirable between out-of-hours GP centres and A&E*

The Committee also calls for further cooperation and integration of out-of-hours GP centres and A&E departments, which should also include consistent use of triage protocols. In addition, there should be a system that feeds back the results and records “near” incidents.

17 *Need for an across-the-board quality assurance system*

Quality assurance systems are needed throughout the continuum of care. However, the majority of hospitals with A&E departments still lack such systems, let alone that there is a record-keeping and quality assurance system for the entire acute care pathway. Such a system is urgently needed in order to monitor and improve quality.

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- A Request for advice
 - B The Committee
 - C Miscellaneous reports
 - D Emergency care systems abroad
 - E Acute care flowchart
 - F Abbreviations

Annexes

A

Request for advice

On 14 March 2011 the President of the Health Council received a request from the Minister of Health, Welfare and Sport for advice on support functions for accident and emergency departments. The Minister wrote (letter ref. CZ/TSZ-3050168):

Dear Ms Gunning-Schepers

I am writing to request your advice on the support functions that a hospital accident and emergency department needs to have in order to provide adequate and appropriate initial care and treatment for patients who require acute care.

Background

In October 2009 the Working Group on Quality Assessment of A&E Care published the report “Spoedeisende hulp: Vanuit een stevige basis” [Emergency Care: Building on a Solid Foundation]. The report is the end result of a two-year quality assurance programme which saw healthcare managers and professionals joining forces to draw up quality standards for A&E departments. This working group included representatives of all stakeholder groups involved in emergency care.

The report Emergency Care: Building on a Solid Foundation describes the minimum level of services (the “profile”) that a hospital A&E department must provide in order to safeguard the quality of care delivered in A&E. Every open A&E department must conform to a basic standard of care (“basic A&E”). The description of basic A&E is expressly based on the competencies that physicians and

nurses must offer. The report also makes several concrete suggestions concerning training programmes and/or courses that can provide those competencies. One of the requirements is that the A&E department must have sufficient expertise and equipment available during opening times to identify, stabilise and resuscitate patients in any medical emergency.

For further information about the quality requirements I would draw your attention to the attached working group report entitled Emergency Care: Building on a Solid Foundation.

The formulation of quality requirements for a basic A&E department marks an important step in improving the quality of care in A&E. I am therefore delighted that these quality requirements have been drawn up by the stakeholder groups themselves. By formulating the quality requirements the working group has indicated that more work remains to be done. The provision of high-quality care in A&E is closely connected with the direct availability of expertise and facilities in the rest of the hospital, i.e. the so-called "support functions". Although the working group has underlined the importance of identifying these support functions, it has not commented on them in its report. In view of the need to define the parameters of its assigned task, the working group has confined itself to commenting on the quality requirements in terms of the available competencies in A&E.

These support functions do need to be identified, however. This is necessary firstly in order to calculate an availability contribution for basic A&E services in the future. Furthermore, a clear description is needed in order to determine the extent of the guarantees that the government can apply after a provider is declared bankrupt.

Request for advice

I would therefore request that you advise me as to what expertise and facilities need to be available in a basic A&E department in order to stabilise the patient's health to such an extent that it is safe to proceed with follow-up treatment (possibly after transporting him/her elsewhere).

Needless to say, your advice should be based on the criteria formulated by the Working Group on Quality Assessment of A&E Care in October 2009. In addition, I would ask you to proceed on the assumption that it must be possible to reach a basic A&E department by ambulance within 45 minutes (after the emergency call has been received).

I would emphasise once again that your advice should only extend to the expertise and facilities that are strictly necessary for care in a basic A&E department that is aimed at reducing life-threatening risks by stabilising the patient's condition.

Given the important bearing that this advice has on the laws and regulations concerning continuity of care and the availability contribution that will be submitted to the Lower House of Parliament later this year, I would ask that you let me have your final report by December 2011 at the latest. In

addition, I would ask you to submit your initial thoughts on this matter before summer in the form of an interim report.

Yours sincerely,

The Minister of Health, Welfare and Sport,

(signed)

Ms. E.I. Schippers

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The Health Council and interests

Members of Health Council Committees are appointed in a personal capacity because of their special expertise in the matters to be addressed. Nonetheless, it is precisely because of this expertise that they may also have interests. This in itself does not necessarily present an obstacle for membership of a Health Council Committee. Transparency regarding possible conflicts of interest is nonetheless important, both for the chairperson and members of a Committee and for the President of the Health Council. On being invited to join a Committee, members are asked to submit a form detailing the functions they hold and any other material and immaterial interests which could be relevant for the Committee's work. It is the responsibility of the President of the Health Council to assess whether the interests indicated constitute grounds for non-appointment. An advisorship will then sometimes make it possible to exploit the expertise of the specialist involved. During the inaugural meeting the declarations issued are discussed, so that all members of the Committee are aware of each other's possible interests.

Acknowledgements

- Ms. J.E. van Dijk has done a considerable amount of preparatory work for the Committee as part of her studies of Biomedical Sciences at Radboud University Nijmegen.
- G.J. Kommer, a researcher at the RIVM, gave presentations on the accessibility model during the Committee's second and third meetings.
- During the advisory procedure, working visits have been made to Groningen University Medical Centre in Groningen, Haaglanden Medical Centre in The Hague and Rijnland Hospital in Leiderdorp. Discussions were held about the request for advice with a delegation from the executive board of the Netherlands Society of Emergency Physicians (NVSHA), during which the views of the NVSHA were canvassed.

Miscellaneous reports

Reports and studies have regularly been published in recent years on the subject of acute care. The following is a brief overview:

Ministry of Health, Welfare and Sport (2002): The accessible hospital

This Policy Letter discusses the term “basic hospital”. According to the Netherlands Board for Healthcare Institutions (CBZ), a basic hospital concentrates on the common forms of hospital care. In such a hospital:

- all of the basic “gateway” specialisms and the essential supporting specialisms are represented
- a basic package of diagnostic and therapeutic facilities is available
- clinical nursing and day hospital services are provided
- 24-hour emergency care can be provided
- ICU/CCU facilities are available with facilities for respiratory support
- outpatient care, clinical care and day-case treatment can be provided.

A basic hospital offers all “standard” and emergency secondary healthcare services. It should be able to deliver 80-85% of hospital care (i.e. the full range of care apart from university medical centre and “top-level” tertiary care functions. The Minister believes it would be worth engaging in further discussion on this matter with the learned societies.

The CBZ also indicates which “gateway” specialisms and services are available in a hospital of this kind. This will be a range of interrelated functions and services, since the provision of emergency care requires sufficient availability of both the basic specialisms and the supporting specialisms. Conversely, as soon as a specialism (such as paediatrics) disappears, emergency care is undermined.

Based on these distinguishing characteristics, the Policy Letter (dated 1 February 2002) formulated the minimum criteria for classification as a basic hospital, adding an Annex tentatively indicating which hospitals can be regarded as basic hospitals. The minimum criteria are: at least 25 “gateway” specialists and a catchment population comprising at least 72,500 inhabitants.

The Lower House of Parliament then declared that the hospitals designated as basic hospitals must be maintained. The Minister of Health, Welfare and Sport underlines the importance of basic hospitals, both from a human perspective and due to important role they play in safeguarding accessibility. Basic hospitals are the cornerstone of hospital care in the Netherlands.

Council for Public Health and Health Care (RVZ 2003): Acute care⁶¹

This report advocates that the ambulance journey times should be reduced from 15 minutes to 8 minutes. In addition, it calls for the establishment of a single, nationwide telephone service for acute medical assistance. The Council also recommends that resuscitation techniques should be taught in schools.

Dutch Health Care Inspectorate (IGZ 2004): Accident & emergency care: room for improvements¹

This report follows on from a study on the accessibility and quality of the A&E departments. The principal conclusions are as follows:

- There have been substantial improvements since 1994 in a number of areas, such as coordination by the Ambulance Service Central Control Room (CPA) and cohesion within the continuum of care. However, other areas still fall below standard. For example, efforts to achieve a unified vision across the care continuum remain unfulfilled, cross-sectoral evaluation is inadequate, and there is no cross-sectoral quality assurance system.
 - Although progress has been made with regard to special transport, too many problems are still being encountered. Availability of MICU transport is still unsatisfactory as the conditions needed to achieve a truly nationwide MICU
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network have yet to be fulfilled. This is jeopardising the transportation of seriously ill, unstable patients under expert supervision. Transport of psychiatric patients is also the victim of insufficient capacity and planning. Consequently patients are sometimes transported to crisis centres over very large distances.

- The development of the trauma care networks is proceeding more slowly than desired. The added value of the mobile medical team (MMT) is still insufficient in terms of quality, since an expert MMT cannot be guaranteed in the evening and at night.
- There is a disconnect between the level of ambition and what is actually possible in some hospitals. A number of hospitals are insufficiently equipped to stabilise all categories of patients in the A&E department. In everyday practice this shortfall is absorbed by the ambulances and referrers.
- The accessibility and quality of emergency care are variable. Expert triage has not yet been introduced in all A&E departments. Nursing expertise and availability are well managed and guaranteed in most hospitals, but medical expertise less so. Generally speaking, the physicians are not subject to any specific competency requirements, nor are there any assessment criteria for independent functioning. In addition, ultimate responsibility for medical management is inadequately regulated. The hospitals also have insufficient insight into logistical processes and patient flows in A&E, which prevents good care management. The quality assurance policy for A&E departments is still in its infancy.
- Facilities in the A&E departments are inadequate. In a number of A&E departments they do not keep in step with technological developments and the growing number of visitors.

Ministry of Health, Welfare and Sport (2008): Opting for accessibility and quality of care⁶²

For certain forms of care (including acute care) the geographical spread of healthcare services has changed since the introduction of market forces into healthcare in 2006. This is due to the ensuing mergers and expansion of the range of care provided. In some cases, locations have been closed, thereby jeopardising the accessibility of care.

The policy proposals in the acute care arena include the establishment of minimum standards for accessibility of acute general-practitioner care and obstetric care (including telephone accessibility), the formulation of quality

criteria for A&E departments (which could also include criteria for timeliness), the development of scaled-down forms of acute primary care for rural areas, and further expansion of the national network of MMTs with helicopters that are available 24/7.

Netherlands Court of Audit (2008): Collaboration-oriented thinking in the workplace⁵

Effective interagency collaboration does occur within the delivery of acute care (ambulance care and emergency first aid) in the Netherlands, even though there is no explicit control over this. In most cases, the people working in each individual segment know what they have to do and what the requirements of the next link in the chain are. Key factors that promote this interagency collaboration are:

- the manifest urgency of the problem
- the shared medical background and expertise of the health professionals involved
- the specific, healthcare-oriented nature of the organisations involved
- the small number of organisations involved.

The Minister of Health, Welfare and Sport adopts a “hands-off” approach to the management of acute care delivery, as befits the professionalised, autonomous nature of the professional groups involved. This involves ensuring the availability of the services that enable the professional groups to deliver acute care; formulating quality requirements or getting the professional groups to formulate them; and verifying that performance matches up to those requirements.

According to the Netherlands Court of Audit, there are three areas in which the acute care pathway can be further improved – and these improvements are already underway in some cases:

- ambulance journey times regularly exceed the norm
- it is not always clear for patients whether they should access acute care via an out-of-hours GP centre or via a hospital
- the quality of acute care delivery is not always sufficient.

Dutch Healthcare Authority (NZA 2008): *Met Spoed!* Advisory report on the improvement of the regulation of acute care⁶³

This report contains the results of a study on the funding structure for acute care. One problem appears to be that funding is directed at the organisation and not at performance. The present systems of remuneration put up barriers, and there is only a limited incentive for care providers and health insurers to operate efficiently. Furthermore, the NZA notes that providers receive different forms of remuneration for the same service.

Dutch Federation of University Medical Centres (NFU, 2010): Acute care⁶⁴

In a report on acute care the NFU calls for:

- further professionalisation of the “top-level” tertiary infrastructure for acute care
- the explicit role of the emergency physician
- stratification of A&E departments
- integration of doctor services and A&E departments.

It also states that a system of collective, socially acceptable standards is urgently required in order to ensure good accessibility and availability of doctor services and A&E departments.

Ministry of Health, Welfare and Sport (2010): Discussion Document on Acute Care in 2015

This widely circulated report defines acute care as any form of curative medical care that cannot be postponed. Acute care must therefore be constantly and rapidly available. This demands a different approach – and also, in some areas, a different form of government control – from that adopted in plannable/elective care.

Acute care is delivered by GPs, obstetric caregivers, ambulance services, accident and emergency departments of hospitals, trauma centres (with their mobile medical teams), mental-health crisis services, acute home care, and – of

* *Met Spoed*: A Dutch phrase literally meaning “with speed” but used here as a play on words to connote emergency care.

course – countless other healthcare personnel (such as junior doctors, specialist nurses, etc). Cooperation within acute care and between acute care and the other healthcare services is essential if the right care is to be delivered at the right time, in the right place and by the right health professional.

The report introduces two nationwide telephone numbers, so that members of the public in need of emergency care are in no doubt of how telephone access is organised. This applies to all forms of acute care that are mentioned in the introduction (i.e. including the mental-health crisis service).

A distinction is made between two forms of mobile acute care: care that has to be provided to the patient at the scene and care for which patient transport is (or is not) required.

What acute care services are available in your area?*

- you will always have basic acute care in your area. In other words there are facilities offering basic acute care 24/7 which can be reached by car (your own car or a taxi) within 30 minutes
- these facilities also have a walk-in clinic
- every A&E department also has a basic care function, but not every facility with basic acute care has an A&E department
- you can reach a basic A&E department by ambulance within 25 minutes. In other words your condition can be stabilised, but this A&E department will not necessarily specialise in your particular problem
- agreements with the ambulance sector that the patient will be taken further by ambulance to a specialist hospital if the problems permit
- in 2011 the Health Council is addressing the question of what infrastructure a basic A&E department should have. This means looking at the support functions and available specialisms of a basic A&E department
- a possible option for sparsely populated or poorly accessible areas is to transport the patient by helicopter ambulance (NB: this is not a “trauma helicopter”!) as an alternative to keeping an A&E department open
- use of ambulances in rural areas for basic care/home care
- needless to say, this should be in accordance with the 45-minute target specified in the Healthcare Institutions Accreditation Act (WTZi)
- what other forms of acute care are available in a trauma region?

* Within the context of the 45-minute target time.

Every ROAZ region has:

- one trauma centre for the care of multi-trauma patients
- one specialist (or “profile”) centre to provide emergency care for neurological conditions, cardiological conditions, mother and baby care, ...
- one mental-health crisis service.

These centres may therefore be further away than a 25-minute ambulance journey. The underlying rationale is that quality and efficiency of care are improved by not making these forms of care too widely available.

Acute obstetrics forms part of acute care. Obstetric care will only be delivered by those hospitals that are able to meet the required standards. This may mean that journey times exceed 45 minutes in some areas, thereby increasing the risks associated with home births in some regions.

By 2015 safety standards, guidelines and protocols will have been established which form the basis for the quality assurance policy in acute care. In addition, urgency and allocation of care will be determined at national level on the basis of consistent triage:

- the standards to be met by basic and profile A&E will be precisely defined
- standards will have been set for the support functions (e.g. for the required ICU facilities and diagnostics) underlying each A&E department profile, specifying the time within which they must be available
- a telephone call requesting acute care will be answered within 30 seconds
- those involved in providing obstetric care (including professional groups) will assess the standards of obstetric care proposed in *Een goed begin* [A Good Start] and adopt them
- the mental health services will set minimum standards to be met by a regional mental-health crisis service.

Everybody will always receive consistent triage which leads to the right care, regardless of where they present with their problem.

Ministry of Health, Welfare and Sport letter dated 21 April 2011:
Continuity of care

This letter is about crucial care and its consequences. Crucial care is understood to mean care whose unavailability (whether temporary or because it is too far

away) may result in serious health impairment or (in the case of long-term care) seriously interfere with a client's daily functioning.

The government has an extra responsibility for these forms of care, in addition to its overall responsibility for the healthcare system. This means that if the health insurer or health care office, despite its best efforts, is unable to maintain availability of these forms of care, the government will ensure that they are continued. As far as curative care is concerned, this applies to ambulance care, basic emergency care (basic A&E), acute obstetrics and the mental-health crisis service.

According to this letter, acute care refers to all forms of curative medical care that cannot be postponed. However, not all forms of acute care fall under the definition of crucial care, the reason being that the temporary absence of an out-of-hours GP centre which provides basic acute healthcare will not directly lead to serious health impairment. In cases of medical emergency, the patient's own GP is responsible for providing basic acute care, and in life-threatening situations the basic A&E department should be accessible by ambulance within 45 minutes.

The Minister states that her responsibility for the entire acute care pathway consists in setting the parameters for the efficient and effective delivery of care. She wishes to help ensure that the cooperation between stakeholders that is necessary in order to safeguard the accessibility and availability of acute care also actually materialises and that health insurers reward these forms of collaboration. What she has in mind is further stimulation of joint triage arrangements between A&E departments and out-of-hours GP centres, with a view to facilitating an efficient and effective patient throughput. Standard-setting may be an option.

Continuity of curative care refers to the need to maintain the availability of four care functions of the required standard:

- 1 mobile stabilisation and treatment: It must be possible to reach 97% of the population within a 15-minute response time and an ambulance must be at the scene within 15 minutes of the call being received in at least 95% of emergency calls
 - 2 basic emergency care (basic A&E): The basic A&E department must be accessible within 45 minutes after an emergency call. The Health Council will advise us (the Minister and the Lower House) in December as to what expertise and facilities need to be available in a basic A&E department in
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- order to stabilise the patient's condition to such an extent that follow-up treatment (possibly requiring transportation) is appropriate
- 3 acute obstetrics: A health professional who can deliver acute obstetric care in the event of a life-threatening situation must be accessible within 45 minutes by ambulance. According to the standards set by the practitioners themselves, it must be possible to begin the required specialist medical treatment within 15 minutes after a life-threatening situation has been diagnosed
 - 4 mental-health crisis care: There should always be one crisis service per ROAZ (Regional Consultation on Acute Care) region that handles the initial diagnosis, referral and care of patients who are experiencing an acute psychiatric crisis. The Minister is considering whether an advisory report such as the one referred to above for basic emergency care is required for crisis care.

Council for Public Health and Health Care (RVZ) advisory report, October 2011: "Medical specialist care in 2020: Close to home and far away"^{40,65}

The landscape for medical specialist care in 2020 will look very different from how it looks today, contends the RVZ. Looking ahead to medical specialist care in the year 2020, we see care networks in which different types of health professionals cooperate, both among themselves and with their patients, in order to deliver integral care.

Although the healthcare networks will be organised in different ways and their composition will vary over time, they will share a regional approach when it comes to delivering care. After all, healthcare must be provided close to home wherever possible and further away only when absolutely necessary. In concrete terms, this means that people must have 24/7 access to a local health centre from which the entire care chain – from first-line to chronic medical care – is coordinated.

Turning this future vision into reality will require a substantial, but primarily healthcare-focused, scaling up of "first-line" care and the rollout of health centres equipped with medical-specialist facilities across the country. Hospitals will have to make choices regarding their function profiles. They will no longer each offer the full range of medical specialist care. This is why they will always be part of a healthcare network that will also include a university medical centre (UMC) or specialist-care hospital.

The UMCs will cooperate much more intensively than is currently the case. The same level of cooperation will be seen among the specialist-care hospitals and the university medical centres and hospitals. This will involve several dozen institutions that will have shared among themselves the “top-level” tertiary referral and highly specialised medical functions on the basis of a national system. This will be covered by the label “general”. Hospitals without this label will operate within a care network.

Finally, a multi-level accident and emergency service will have to be established. This care chain will consist of a general practitioner (HAP, HAP+), ambulance services, clinical accident and emergency services, intensive care and trauma care. The accessibility and availability of the general practitioner in emergencies will need to be improved substantially, in first-line care, but also through the GP’s physical presence in the accident and emergency department.

Given the significant implications of the new landscape, this emergency care network will not evolve of its own accord. Although the current healthcare system and the government’s policy proposals aimed at substantially shifting the risks involved in providing care on to the shoulders of the healthcare providers and healthcare insurers provide a good basis for change, they are not, in themselves, enough to bring about the desired situation. Further action will be needed in order to achieve this goal, according to the RVZ.

Public quality standards will also be required. The quality assurance agency that is currently being established should therefore be accorded the powers needed to bring about – and, where necessary, enforce – observance of quality standards by the health professionals concerned. Professors of medicine must play a leading role in this process, particularly in relation to compliance with norms and standards.

Hospitals will have to make choices regarding the care that they provide, focusing on the care in which they excel and letting other institutions provide other types of care. The healthcare insurers also have a role to play in these types of decisions, but their role is not an exclusive one. Healthcare providers can reach cooperative agreements with one another, and they can also agree on the division of care functions.

However, such cooperation must only occur on the condition that it advances the quality of care. Healthcare providers will need to substantiate these agreements in advance and present their proposals to the Dutch Healthcare Authority (NZA), which will assess the effects on the quality, accessibility and effectiveness of the healthcare provided. In testing compliance with the prohibition on cartels, the Netherlands Competition Authority (NMa) will follow the opinion of the NZA.

In order to bring about multi-level accident and emergency services, the accident and emergency function of hospitals must be governed by legally binding regulations that provide for geographical distribution, regional budgets, performance criteria and care standards. Only large (i.e. general) hospitals and university medical centres have accident and emergency departments. One large accident and emergency service centre per region would be sufficient. The healthcare providers in an accident and emergency network divide the various tasks within the multi-level accident and emergency services in accordance with a legally binding protocol. Emergency assistance (not clinical accident and emergency services) will form part of

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Emergency care systems abroad

Every country and every healthcare system has its own system of acute care. In this Annex we take a closer look at the emergency care systems in various countries.

Two models

Broadly speaking, there are two systems of emergency care in Europe: the Anglo-American model and the Franco-German model. The difference between these two models is based on the overall role that is played by the physician and the place where the care is provided.

The Anglo-American model is staffed by medical/technical professionals and paramedics. They are responsible for providing emergency first aid and medical care at the scene. The patient is then transported to the Accident and Emergency department of a hospital, where emergency physicians provide whatever further care may be necessary. In this model emergency care is regarded as a separate medical specialism.⁶⁶

In the Franco-German model, the emergency care team includes an emergency physician, who goes to the scene of the accident and provides pre-hospital medical emergency care there. As medical/technical professionals and

paramedics are usually at the scene of the incident earlier, they provide emergency first aid until the emergency physician arrives.

In this model, the pre-hospital care is characterised by the performance of life-saving procedures and preparing for and providing safe patient transport. Patient triage occurs at the scene and transport is arranged to the most appropriate facility.⁶⁷

United Kingdom

The ambulance services in the UK are considered to be among the most influential in the world. They use two different forms of organisation, each of which is broadly on a par with the other and has its own particular advantages and disadvantages.

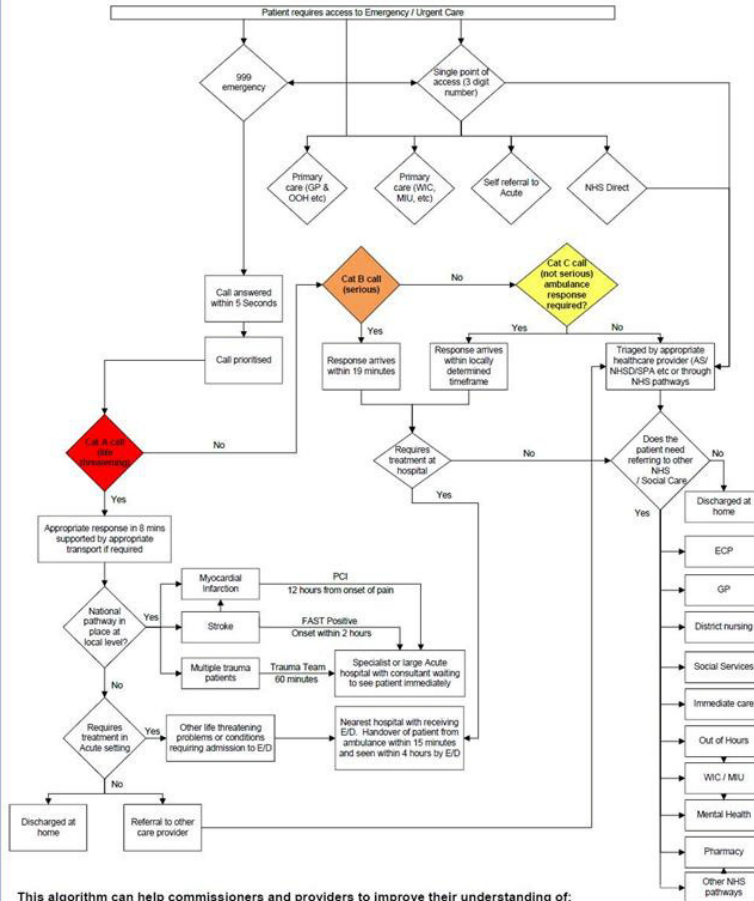
The primary deployment of paramedics (the first variant) results in an efficient use of advanced equipment and is monitored by means of performance indicators. When physicians are the first responders (the second variant), the triage systems are more complex but this also means fewer unnecessary journeys. Experiences are shared in order to improve performance in both cases.

A graded response strategy for urgent cases in British hospitals scores the risk of clinical deterioration as low, medium or high. The desired course of action for each type of risk is given in a flowchart, with the high-risk group being transferred to a so-called “critical care area” for monitoring, tests and treatment. There is no further specification of available competencies and test facilities.

The UK National Institute for Health & Clinical Excellence (NICE) has drawn up various guidelines for accident and emergency services and for the care of acutely ill patients in hospital, including the emergency department. The guidelines are evidence-based.⁶⁸

For several years the UK has had a so-called Acute Medicine Task Force, which operates under the auspices of the Royal College of Physicians. In 2007 this group published a comprehensive report containing recommendations concerning acute medical care.⁶⁹ The report identifies the need to improve the care given to people with acute medical problems within the National Health Service in order to ensure that care is of a consistently high quality (both in and out of hours) and accessible.

EMERGENCY CARE ALGORITHM



This algorithm can help commissioners and providers to improve their understanding of:

- access pathways into Emergency Care Systems; and
- potential solutions to improve emergency care access and reduce delays across the whole health and social care system.

The algorithm provides easily identifiable pathways, with national target times. It can help users to:

- pinpoint where delays in the system occur
- identify alternatives to areas of access that are under pressure
- support high performance by providing both Commissioners and Providers with a holistic view of the whole emergency / urgent access system.

The algorithm can be used as a visual aid to help thinking or in conjunction with the Good Practice guidelines produced by the Emergency Services Review.

Authors: K Prior & P Baker

June 2009

Thus views in UK do not differ greatly from those held in the Netherlands, in so far as attention is also being drawn to the need for specific emergency physicians and special pathways of care for patients with such conditions as acute myocardial infarction and stroke.

The Task Force report recommends the development of a network of “major acute hospitals” for the provision of emergency care, with consideration being given to specific demographic characteristics and timely accessibility. Local hospitals should continue to provide standard clinical care.

In addition, a few hospitals other than the major acute hospitals must have A&E departments that offer acute undifferentiated care and direct emergency care. The functions available will depend on local needs, available competencies and accessibility in terms of travel time. Within such a hospital the Acute Medical Unit (AMU) is the central department for this type of care. The quality of care provided in the AMU in the first 48 hours is an important determinant of prognosis and ultimate outcome.

The Task Force report looks specifically at the development of so-called regional trauma networks, which are to arrange the planning, coordination and delivery of acute and emergency care. Not every hospital will have to provide the full range of functions. It is impossible to offer the highest quality of emergency care in every hospital.

Instead, clear agreements must be reached with regard to certain life-saving interventions, particular types of specialist care and complex diagnostic procedures. The networks that provide these services should therefore have strong leadership, together with a clear mandate and accountability.

United States

The healthcare system in the United States, with for-profit hospitals and the insurance system that existed until recently, creates a specific dynamic within the emergency care arena.

Large groups of uninsured individuals only have access to this type of care, resulting in overcrowded accident and emergency departments, with long waiting times before admission can take place. This situation also impacts on

ambulance transport. Not surprisingly, there are manifestly adverse effects on the quality of acute care.

A further issue is geographical accessibility. In an effort to curb the number of hospital closures in the US, a financial compensation scheme was introduced in 1997 which aimed to guarantee accessibility of care in sparsely populated rural areas. This scheme maintains so-called “critical access hospitals” (CAHs). These are facilities with no more than 25 beds, an average stay of less than 96 hours, and 24-hour availability of emergency care. There are now around 1,300 CAHs.

These hospitals play a crucial role within communities. Nevertheless, a recent study found that these facilities had significantly lower performance than non-CAHs in 8 out of 12 quality indicators. The CAHs had fewer intensive care units and cardiac catheterisation laboratories, and they had significantly lower scores for the treatment of acute myocardial infarction, congestive heart failure and pneumonia. 30-day mortality rates for all of these conditions were significantly higher in the CAHs. They scored highly for patient satisfaction, however.⁷⁰

In a recent editorial in the JAMA, Lipsky and Glasser therefore called for a multi-pronged strategy, with more research into best practices for rural areas, cooperation with academic medical centres on training and education, and the use of assistive technology such as e-ICUs, e-consults and telemedicine.⁷¹

A few years ago the Institute of Medicine (IOM) subjected the organisation of emergency care to further scrutiny in a series of reports. It was established that emergency care and trauma care did, indeed, undergo substantial development over a number of years, but that the emergency departments have, in addition, acquired various new functions, some of them inappropriate.^{69,72} Furthermore, much valuable time is lost due to the organisation of ambulance care and the overcrowded hospitals, which frequently close their doors to new admissions.

As far as hospitals in sparsely populated rural areas are concerned, a shortage of emergency physicians, traumatologists and other on-call specialists was identified. The IOM advises the government to broker alliances between these facilities and academic medical centres in order to create a consultation function, to exploit the potential of e-health, to facilitate transfer and transport of patients, and to promote continuous professional development.

The IOM also calls for regionalisation of emergency care. There is, claims the Institute, sufficient evidence that regionally organised care and triage to facilities with more expertise and resources are more cost-effective for various conditions. This is, however, subject to the proviso that both patients and care providers are clear about which function is being offered by which facility.

Accordingly, the IOM advocates that emergency care units should be stratified in a similar way to trauma centres. In point of fact, experience has already been gained in the United States with classification of emergency departments. The Institute also emphasises the need for better coordination and better accountability, which would require the use of performance indicators for emergency care.

Germany

Healthcare in Germany is also going through a period of change. Between 1991 and ... the total number of hospital facilities (including private hospitals) fell from 2,411 to 2,139. The number of private hospitals rose from 358 to 570. From a professional perspective, there is a debate over whether care should be organised around the individual specialisms or more patient-oriented. As in the Netherlands, discussion is ongoing in Germany over centralisation of care, including emergency care,^{73,74} with the position of the specialist emergency-care physician still being a key issue. A notable difference here is the fact that the ambulances are manned by physicians.

Sweden

Sweden has a system built around integrated control rooms and, in common with the majority of EU countries, uses the 112 emergency number. The ambulance system in Sweden has changed in recent years. Until a few years ago, there was a general ambulance system and also additional ambulances that provided assistance to patients with acute cardiac problems. That system has now been abandoned. Nowadays every ambulance has sufficient expertise to undertake resuscitation and defibrillation. The underlying principle is that the necessary assistance should be provided straight away, and not simply that the patient must be taken to a hospital as quickly as possible.

Sweden has 90 hospitals that are publicly funded and controlled. In addition, there are 950 regional “primary care clinics”. Urgent and emergency care is

provided by walk-in clinics and by GPs in the regional clinics. Patients are often transferred from these walk-in clinics to emergency care units at large hospitals. The organisation of emergency care differs from hospital to hospital, depending on the nature of the establishment in question.

When triage is performed in a hospital that has an Accident and Emergency department, a distinction is made between: general medical, surgical and acute problems. Paediatric, obstetric/gynaecology, ENT and ophthalmology patients are sent to the respective departments. As is the case elsewhere, there is an ongoing debate in Sweden about whether a separate role should be created for the emergency physician, in line with the European Curriculum.⁷

Conclusion

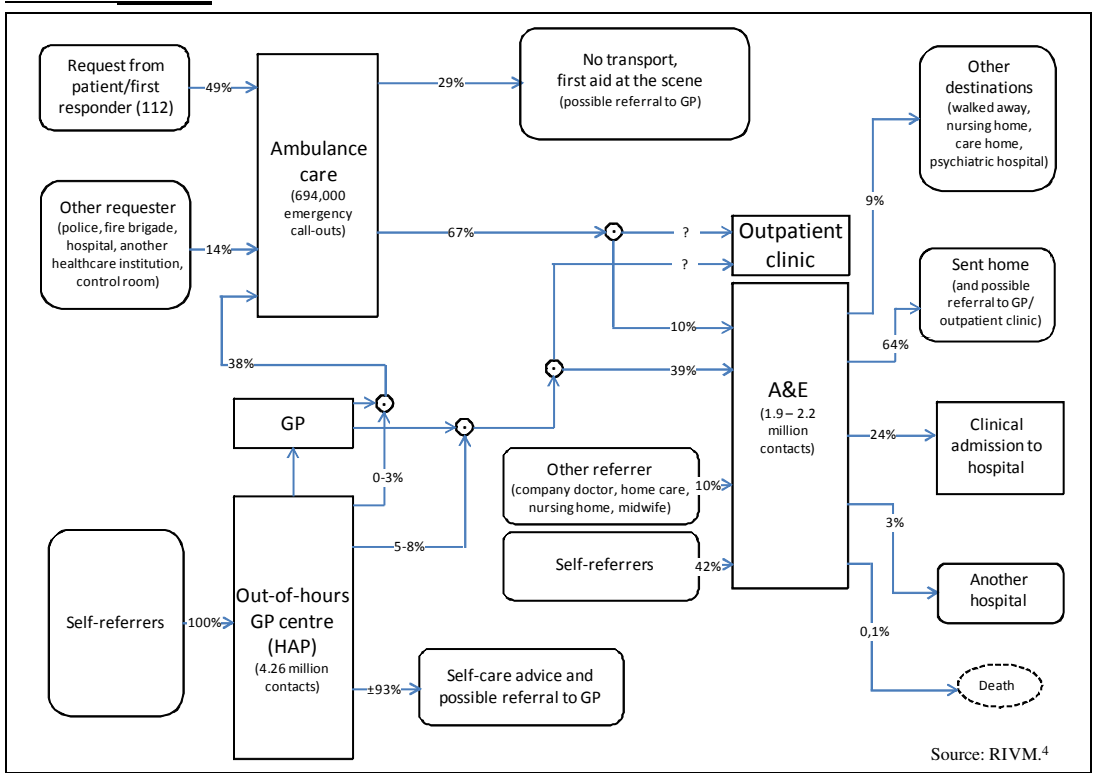
Virtually all of the foreign publications on the organisation of emergency care state that it is practically impossible to deliver the same level of emergency care everywhere.

Another very noticeable common thread encountered when comparing foreign systems of emergency care is the argument that these systems must be organised at regional level. Furthermore, many countries have in recent years recognised the emergency physician as a specialism in its own right and built it into the emergency care system.

A final interesting point to emerge from our study of acute care systems is the fact that there is just as much debate about the correlation between volume and quality abroad as there is in the Netherlands. It is often found that insufficient volume leads to insufficient quality.

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Acute care flowchart



F**Abbreviations**

AIOS	<i>Assistent in Opleiding tot Specialist</i>	Specialist registrar (trainee specialist)
CBZ	<i>College Bouw Zorginstellingen</i>	Netherlands Board for Healthcare Institutions
CPA	<i>Centrale Post Ambulancevervoer</i>	Ambulance-Service Central Control Room
GHOR	<i>Geneeskundige Hulpverlening bij Ongevallen en Rampen</i>	Medical Assistance in Accidents and Disasters
GGZ	<i>Geestelijke gezondheidszorg</i>	Mental health services
HAP	<i>Huisartsenpost</i>	Out-of-hours GP centre
HDS	<i>Huisartsen Diensten Structuur</i>	General Practitioner Services Structure
IOM		Institute Of Medicine
IGZ	<i>Inspectie voor de Gezondheidszorg</i>	Dutch Health Care Inspectorate
LNAZ	<i>Landelijk Netwerk Acute Zorg</i>	National Acute Care Network
MICU		Mobile Intensive Care Unit
MMT	<i>Mobiel Medisch Team</i>	Mobile Medical Team
NZA	<i>Nederlandse Zorg Autoriteit</i>	Dutch Healthcare Authority
PSHOR	<i>Psychosociale Hulpverlening bij Ongevallen en Rampen</i>	Psychosocial Assistance In Accidents And Disasters

<i>RAV</i>	<i>Regionale Ambulance Voorziening</i>	Regional Ambulance Service
<i>RGF</i>	<i>Regionaal Geneeskundig Functionaris</i>	Regional medical officer
<i>ROAZ</i>	<i>Regionaal Overleg Acute Zorg</i>	Regional Consultation on Acute Care
<i>SEH</i>	<i>Spoedeisende hulp</i>	Accident and Emergency
<i>SMH</i>	<i>Spoedeisende Medische Hulpverlening</i>	Emergency medical services
<i>STZ</i>	<i>Samenwerkende Top Ziekenhuizen</i>	Collaborating Top-Level Hospitals
<i>TWAZ</i>	<i>Tijdelijke Wet Ambulancezorg</i>	Interim Act on Ambulance Care
<i>UMC</i>	<i>Universitair Medisch Centrum</i>	University Medical Centre
<i>WBMV</i>	<i>Wet Bijzondere Medische Verrichtingen</i>	Special Medical Services Act
<i>WPG</i>	<i>Wet Publieke Gezondheid</i>	Public Health Act
<i>WVR</i>	<i>Wet op de Veiligheidsregio's</i>	Act on Safety Regions
<i>ZiROP</i>	<i>Ziekenhuis Rampen Opvang Plan</i>	Hospital Disaster Management Plan
<i>ZN/KPZ</i>	<i>Zorgverzekeraars Nederland/ Kontaktcommissie Publiekrechtelijke Ziektekostenverzekeringen voor ambtenaren</i>	Dutch Association of Health and Social Care Insurance Companies/Statutory Civil Servants' Contact Committee on Medical Expenses Schemes

Policy Rule CI-895

Availability Subsidy

1 General

- a The policy rule applies to healthcare institutions as referred to in Article 1 (A, 1) of the Decree on the Scope of the 1992 Healthcare Charges Act (WTG).
- b The policy rule will enter into force on 1 January 2006 and apply retroactively until that date if notice of its publication in the Government Gazette takes place after this date.
- c Period for which the policy rule applies: indefinite.
- d The term of the adopted policy rule I-821 with regard to the items specified below and the categories of healthcare institutions indicated under 1a is amended from indefinite to “up to and including 31 December 2005”.
- e The sums specified in this policy rule are based on the level of wages and prices in 2005.

2 This policy rule may be cited as the “Policy Rule: Availability Subsidy”. Basic principles and definitions

The aim of the policy rule is to maintain the availability of existing emergency hospital care at locations that are necessary in the interests of accessibility. To this end, the policy rule provides the possibility of granting a subsidy in the event that operating problems should jeopardise the continued existence of such a location. The following terms are used in the application of this policy rule:

– Available emergency care: There is said to be available emergency care if at least one emergency care nurse is present at the hospital location and a medical specialist can be on site within 15 minutes. This must apply 24 hours a day.

– Accessible emergency hospital care: There is said to be accessible emergency hospital care if a patient can reach the location of a hospital where emergency care is available by ambulance within no more than 45 minutes' journey time. This 45-minute period includes the time taken for an ambulance to reach the patient and the subsequent transport of the patient to the hospital location. The RIVM has conducted a study (commissioned by the Ministry of Health, Welfare and Sport) into journey times to hospital locations with an accident and emergency department. This study (Letter report 116/03VTV/LZ, September 2003) indicates which locations satisfy the accessibility requirements according to the above definition. The fact that a location is mentioned in this study does not mean that there will be entitlement to additional funding. The award of additional funding is subject to the conditions laid down in Section 2.2 of this policy rule. At present, 98.8% of the population can be regarded as having accessibility according to the above definition. In order to further increase accessibility it would be necessary to establish additional hospital locations. Such an approach is not cost-effective in view of the limited number of people that would potentially be reached. The policy rule is therefore aimed at maintaining existing hospital locations that are necessary in the interests of accessibility.

2 Granting additional funding for accessibility

2.1 Hospitals that comply with the conditions specified in Section 2.2 may receive an increase in the acceptable costs to cover the costs of service availability at a particular location.

2.2 Conditions

2.2.1 Available emergency care according to the definition specified in Chapter 1 must be achieved at the location for which the subsidy is agreed.

2.2.2 The hospital that receives the additional funding should ensure that there is a sufficient capacity of medical specialists to satisfy the requirements set out in Chapter 1. Under the quality requirements stipulated by the Dutch Health Care Inspectorate (IGZ), this means an absolute minimum of 2.5 FTE specialists per section for 24-hour availability. This requirement may also be fulfilled through cooperation with other hospital organisations or locations.

2.2.3 The catchment population of the location for which the subsidy is granted is less than 72,500. Calculation of the availability subsidy in year t should be based on the average catchment population over the years t-2, t-3 and t-4.

2.2.4 If there is a possibility that maintaining the availability of emergency care at the location in question might result in operating deficits which jeopardise availability, the hospital and

health insurers may, in the local consultations, reach agreements about the manner in which availability is arranged and about the amount of the costs thus incurred.

2.2.5 The funding must not be used for purposes other than those for which it has been granted. The costs that have been agreed by local stakeholders will subsequently be re-calculated within the maximum amount specified per location in this policy rule.

2.2.6 The funding can only be granted if there is agreement between the provider and the insurers in the local consultations.

2.2.7 Local stakeholders are entitled to create other solutions that satisfy the basic principles of this scheme and are less costly or more cost-effective. This should be stated in the agreements.

3 Extent of additional funding

3.1 The additional funding will not exceed the sum of €112,85 per member of the catchment population per location. The total number of potential service users factored into the calculation is determined as being the difference between the maximum figure of 72,500 and the catchment population of the location. An application for the availability subsidy should include a document from Prismant containing the catchment population figures.

3.2 The sum given in Section 3.1 includes an allowance for the wages and the fees of the medical specialists. Where there is a so-called “local initiative” of self-employed specialists, this sum does not cover the lump sum.

