College van geneesheer-specialisten in de urgentiegeneeskunde[1] (M.B. dd. 10.06.99)

Collège des Médecins Spécialistes en Soins d'Urgence (A.M. du 10.06.99)

VERSLAG VAN DE ACTIVITEITEN VAN HET COLLEGE KWALITEIT URGENTIEGENEESKUNDE 2009

Het college kwaliteit urgentiegeneeskunde vergaderde 5 maal in plenaire zitting tijdens 2009.

Verder vindt U hierna een samenvatting van de activiteiten die door het college in 2009 werden gerealiseerd.

1. Ministerieel besluit i.v.m. de DIR-MED en het document i.v.m. de de noodplanning
   Op vraag van dhr. Van Hoegaerden formuleerden de individuele leden van het college hun bemerkingen op het document inzake de DIR-MED problematiek. Deze bemerkingen werden door Prof. V. d'Orio samengevat en bezorgd aan het FOD (zie bijlage 2.

2. Studie bij kinderen opgenomen na ernstig trauma in Vlaanderen
   In het kader van de PENTA-studie die in 2008 door dr. Patrick Van de Voorde werd uitgevoerd (zie eindverslag 2008) stelde hij in 2009 een visietekst op (zie bijlage 3) waarin de resultaten van de studie werden uiteengezet. Deze resultaten werden aan de Belgische wetenschappelijke en beroepsverenigingen van pediaters, aan de urgentieartsen en intensivisten evenals aan de respectievelijke colleges voor kwaliteitsbewaking voorgesteld. Ze zullen verder besproken worden in de nationale raad voor dringende geneeskundige hulpverlening.

3. Studie "Discharge without advice" (bijlage 4)

4. Studie rond het tijdstip van antibioticatoediening op spoedgevallendiensten (bijlage 5)

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5. Verdere planning onderwerpen voor 2010

1. **Enquête over de structuur en de activiteit van de spoedgevallendiensten in België, gegevens van het jaar 2009 (bijlage 6).**

   Doelstellingen:
   1. Algemene beschrijving van de activiteit op de spoedgevallendiensten in het jaar 2009.
   2. Beschrijving van de menselijke en technische middelen waarover de spoedgevallendiensten in België beschikken.
   3. Observatie van de evolutie sinds analoge studies uitgevoerd in 1996 door de beroepsvereniging van de geneesheerspecialisten in de urgentiegeneeskunde (BeCEP) en in 2000 door het College Kwaliteit.
   4. Het doel van deze studie is evalueren of patiënten die de spoedafdeling verlaten zonder gezien te zijn in rekening worden gebracht en of deze factor kan worden gezien als een kwaliteitsindicator.

   Inhoud enquête:
   De enquête bestaat uit zes delen:
   A. Basisformulier
   B. Kwantitatieve gegevens van de spoedgevallendienst
   C. Beschrijvingsgegevens omtrent de architectuur van de spoedgevallendienst
   D. Functionele en organisatorische gegevens van de spoedgevallendiensten
   E. Gegevens betreffende patiënten die de spoedgevallendienst vervroegd verlaten
   F. Gegevens betreffende kwalificatie en inzet spoedartsen

   De enquête werd gericht aan alle erkende Belgische spoedgevallendiensten met gespecialiseerde functie.
   De enquête dient online ingevuld te worden via www.emerqual.be.

2. **Enquête "Werkstress bij spoedgevallenartsen in België"**
   Suggestie van de voorzitter van de Besedim die zal besproken worden in het college Q

3. **Project "UREG"**
   Bespreking i.v.m. suggesties voor eventuele aanpassingen aan dit voorstel tot registratie vanuit de FOD volksgezondheid.

Verslag opgemaakt door prof. dr. Walter Buylaert, voorzitter a.i.

Bylage 2

Commentaires relatifs au *Plan mono disciplinaire d'Urgence et d'intervention pour la discipline 2 (PIM).*

Le Collège de qualité des soins d'urgence est évidemment favorable à la publication d'un tel plan qui vise à uniformiser au niveau fédéral, les modalités d'une intervention médicale en cas de survenue d'un événement d'exception. Toutefois, la modalité de coordination inter-provinciale n'est pas précisée et certains points méritent un complément d'information.

1°) Concernant la disponibilité des agents

a) Le Dir-Med
Le plan ne mentionne pas les honoraires de disponibilité. Nonobstant, il apparaît utile de préciser que la disponibilité du Dir-Med doit être honorée à un niveau supérieur à la prévision présentée par la Ministre dans son arrêté du 29 septembre 2008, soit 60 € /jour d'astreinte. En effet, le départ du Dir-Med en activité normale, prive le service d'urgence d'un de ses cadres et oblige ainsi ce service à un appel de renfort éventuel extérieur à rémunérer.

b) CS100 et coordination des flux de communication
Point 2.2.3 page 10 : Quelle est la formation pour le préposé aux procédures d'avertissement d'une alerte ? En cas de mise à disposition d'un préposé CS-100 au profit du PC-ops, comment gérer l'activité de l'AMU quotidienne ? Le plan prévoit-il un rôle de garde à cet effet ?

2°) Concernant la phase opérationnelle du PIM

Point 2.3.0 : page 11. Représentation schématique du site de la catastrophe
Le schéma ne tient pas compte de l'existence des évacuations sauvages, alors qu'il précise que la zone de régulation doit veiller à éviter une évacuation anarchique.

Point 2.3.2.5. : page 14.
a) Zone de tri.
Il apparaît indispensable dans un soucis de cohérence de souligner la corrélation entre les couleurs de la fiche Mettag en pré-tri et le scoring de T1 à T3 en zone de tri, d'autant plus que le tableau récapitulatif de la page 35 établit que le tri est réalisé en fonction des couleurs de la fiche Mettag et non en scores T1,2 OU 3.
Le plan prévoit la tenue d'un secrétariat en zone de tri (In), sans préciser qui l'assure et les moyens logistiques de le mettre en place.
b) Zone de soins.
Comment se fait la répartition entre les médecins qui assurent éventuellement le relevage de la petite Noria et la prise en charge du PMA ?
c) Zone de régulation.
La régulation détermine la nécessité d'une médicalisation des transferts hospitaliers, mais ne précise pas les moyens de cette médicalisation. Quels médecins sont impliqués pour les transferts?

Point 2.4.1.2 : page 19. Personnel d'intervention.
L'équipe PIT étant variable selon les régions, ne faut-il pas inventorier les sociétés d'ambulance qui emploient du personnel infirmier (équivalence au PIT)?

Point 2.4.2. Schéma hiérarchique.
Quelle est la liaison hiérarchique entre Dir-Med et Adj-Dir-Med ?
Lors de la phase alerte, le Dir-Med doit-il être tenu de se rendre obligatoirement sur le site de l 'événement ou celui-ci peut-il y déléguer son adjoint qui le tient ensuite au courant par téléphone, sachant que l'information initiale n'est pas toujours pertinente ?
Le FIST a-t-il une base légale ou est-il une proposition de certains centres ?

Point 2.4.5.1 : page 21. Moyens habituels D2.
Il est indispensable de préciser qui sont les médecins généralistes de permanence pour le CS100. Quels sont les centres concernés ?

Point 2.4.5.3 : Page 21. Moyens additionnels
Compte tenu de l'implication de médecins ; il convient d'ajouter « moyens et personnels ».
Le cas échéant, qui sont les médecins généralistes évoqués. Dans l'hypothèse où ces médecins sont réquisitionnés, qui assure leur remplacement en matière de poste de garde de médecine générale pour la demande normale ?
Quels seraient les vecteurs pour leur déplacement ? Y-a-t-il un honoraire pour leur astreinte ?

3°) Concernant la Cohérence du plan et la formation des intervenants.

Point 6.1. Formation
Certains points ne sont pas précisés par le plan, en particulier ;
Quel est contenu de la formation ? Quelle structure définit les besoins ? Le niveau à atteindre est-il au niveau provincial ou fédéral en fonction des risques lié au tissu industriel et risque Seveso régionaux ?
Qui assure le financement de la formation et qui doit-elle intéresser : équipes SMUR ? Equipes hospitalières ?
Critère d'assurance de qualité de la formation continuée du Dir-med et Adj-Dir-med ?

Point 6.2. Exercice
Quel est le financement pour la réalisation des exercices ?

Chapitre VII. Législation et historique
Comment l'AR du 2/04/65 peut-il traiter de la mise en œuvre des SMUR, à une époque où ceux-ci n'existaient pas ?

Bijlage 3

Emergency Care for children in Belgium: a working document

The primary focus of this text is to engage a discussion and then influence policy making. We will therefore present this text to the Belgian scientific and professional associations of pediatricians, emergency physicians and intensivists, as well as to the respective federal Colleges for Quality. The text is currently in English to facilitate discussion but will be translated in Dutch and French, once endorsed.

Introduction

Emergency Care...

The field of intensive care and emergency medicine is continuously evolving and our way of working and thinking has changed profoundly in the last 20 years. In the meantime, society has changed as well. In terms of healthcare, the focus on health and disease has clearly shifted from a biomedical to a more holistic "patient-centered" model. Beyond mere survival, long-term health has become the standard of value for medical care and given the continuous economic pressure on existing healthcare systems, outcomes are weighted against costs in obtaining them. Society thus demands that we, as a profession, are critical towards our own efficiency. Access to high quality emergency medical care is taken for granted by public opinion, and it is regarded as a duty of the federal government to ensure the availability of high-quality emergency medical services at any time. [15]

...For children

Children (from birth to 15, 16 or in some countries 18yrs of age) are not just 'small' adults; not only do they differ anatomically, physiologically and in physiopathology, they have specific psychological and social characteristics and needs; they demand specific (emergency department) logistics and specific (healthcare provider) skills and knowledge [6, 7]. For all these reasons, children are more vulnerable for 'healthcare' safety problems and more prone to 'suboptimal' care delivery. This in turn can have a significant impact on the long-term outcome and disability of (severely) ill or injured children. The duty of every country to assure adequate levels of care for all children in all circumstances ('the same (quality of) care for every child') is part of the International convention of Children's rights. Thus, all emergency departments who admit children should have adequately trained staff, sufficient material and policies in place [10].

Internationally, there is a growing tendency towards specific 'pediatric' emergency departments and 'pediatric' emergency physicians. These 'pediatric' emergency departments are linked to a pediatric hospital or are a well-distinct part of an adult emergency department (whether or not integrated logistically or anatomically). Whether or not integrated, is however of minor importance compared to the question how well these emergency departments are "prepared" to admit (severely) ill or injured children. There have been major concerns about the 'pediatric' preparedness of emergency departments worldwide and it is unclear whether this is the case in Belgium [16].

Injury as a 'key' example

Approximately 5 million deaths worldwide are attributed each year to injuries from all causes, representing approximately 10% of all deaths. In addition, millions of persons are disabled either temporarily or permanently every year as a result of injuries, exacting a substantial toll on families, communities, and societies. The optimal way to reduce morbidity, mortality, and economic consequences of injuries is to prevent their occurrence [13]. However, when prevention fails and an injury does occur, health-care providers must ensure that patients receive appropriate emergency care at the scene and are transported to an appropriate health-care facility for further evaluation and treatment.

Severe pediatric trauma is uncommon. This leaves health care workers at a higher risk of being unprepared and of providing suboptimal care [15]. Yet, it has been shown that timely and adequate medical care significantly reduces morbidity and mortality [13, 17]. It is thus important that all who are involved in the first hours of treatment of a severely injured child are well trained to do so and that the health care system is designed in such a way as to facilitate this.

To put this in a Belgian perspective, we provide data available for the Flemish region. The incidence of severe pediatric (0-17y) trauma for Flanders is approx. 1/1000/y [1]. This means that any of the accredited Flemish emergency departments has at most a chance of seeing a severe pediatric trauma once every two-three weeks. This change diminishes even further if we would only look at 'polytrauma' patients. On the other hand, if we look at Flemish MKG (minimal clinical data) data between 1999 and 2004, we see that overall 1 in 6 children needing intensive care, does not go to a dedicated pediatric ICU, but more specifically for pediatric trauma the number goes up to 1 in 2 [2].

Current Situation

Huge variability has been described in virtually any aspect of medical care. Where a certain degree of variability constitutes medical evolution (within the boundaries of studies and case-specific "informed risk-taking"), most often variability actually means "suboptimal care". While our knowledge about health and disease increases, the evidence that this knowledge is not applied in day-to-day care increases as well. More specifically for intensive care and emergency medicine, the last two decennia have been characterized by several innovative trials about the major impact of certain processes (e.g. early goal directed treatment in sepsis, low tidal volume strategies, timely and correct antibiotics...) [18]. Yet simultaneously more and more reports were published about the lack of compliance with these ("high-evidence") processes and about the overall percentage of suboptimal care, especially in case of emergencies [19, 20].

If we believe that the things we do (or prescribe...) make a difference for a patient, then not doing them or doing them wrong makes a difference as well; even if not for that individual patient, then likely for the next, or the one thereafter (*'near-miss principle'*). Under the assumption that certain processes of care are associated with certain desired outcomes, the audit of these care *processes* becomes an important part of evaluating health systems.

One of the means of doing this is by *peer-review audit* [3, 15]. Peer-review audit has been under discussion, as it is felt to be subjective with a high inter-observer variability and a low reproducibility. However, when using strict guidelines for panel review, well-validated data and trained reviewers, the inherent degree of subjectivity associated with the methodology can be kept within limits. Structured panel review then has the power to identify problem areas to improve and needs to be addressed. Indeed, if one wants to pursue change, the first step most often is the perception of the problem.

As part of the PENTA [a PEdiatric Network around TraumA] research project, the medical care delivered to children and youngsters after severe trauma in Flanders (2005) was audited [1, 3]. Only clear deviations from 'standard' care were withheld as defaults, as far as there was 100% consensus between reviewers, sufficient evidence/consensus in scientific literature and sufficient data to evaluate the process at hand. In the 92 cases, 264 defaults were detected. In 19 cases, there was none or only 1 default. Yet, in about half of all cases (45/92) three or more defaults were withheld. Approximately 25% of all defaults were considered to have an impact on the individual patient's outcome. Suboptimal care was most often recognized in 'basic' areas of advanced pediatric life support. For instance, problems with adequacy of oxygenation were found in 38 of 92 cases. Suboptimal circulatory support was found in 29 cases. Inadequate CPR in 4 of 7 cases. Suboptimal burn care in 3 of 6 and inadequate analgesia in 27 of 89 relevant cases.

Similarly, an audit of medical management in pediatric emergencies (more than just trauma) was performed in another single center study [4]. For this 50 consecutive 'high-urgent' secondary transfers to the pediatric intensive care unit UH Ghent (2006) were evaluated. Here, we found suboptimal oxygenation and ventilation support in 16 of 49 relevant cases. Circulatory support was inadequate in 13 of 36 relevant cases. Neurological care and/or antiepileptic treatment were suboptimal in 13 of 33 relevant cases. Referral was considered to be inappropriately delayed in 11 of the 50 cases.

Performance improvement in pediatric emergencies: 'Pediatric Trauma Care' as a key example

Quality of care demands a critical evaluation not only of the 'pediatric' preparedness of acute care, but also of our ways of teaching (and on-going learning), and in the end of the organisation of our health care system and of our ways of evaluating it all. The medical profession should take other high risk professions (aviation, Formula 1...) as a mirror in this [34]. Continuous evaluation of the provided quality (and this is more than just the "client's opinion") is an inherent part of these high risk sectors.

Indeed, quality of care is more than just cost effectiveness, more than patient satisfaction, even more than evidence based medicine [11]. Medical care should be 'safe' (primum non nocere) but also equitable, patient centered, efficient, effective and timely [5]. In view of this it is essential that all front-line staff (pediatricians, ED physicians and nurses ...) delivering urgent care to children are competent in the basic skills required for safe practice in whichever setting they work a.o. triage and recognition of the critically ill child, pediatric immediate life support and first-hour stabilization, child protection issues, protocolised management of frequent or more rare but easy treatable pediatric emergencies, etc. [8, 9].

As described above, we identified significant flaws in current pediatric emergency and more specific trauma care. Audit however, is a means, not an end; the aim is performance improvement. To achieve this performance improvement, we need to change certain ways...[6].

Changing our ways of... TEACHING

How can we better prepare health providers for pediatric emergencies? First of all, we should try to better define "the barriers" to optimal care that currently exist. Is it merely about knowledge gaps? False beliefs or fear? Fact is that passive dissemination of information does not necessarily promote behavioral change [21, 22]. *Performance-based teaching* seems to be more effective, yet its effect tends to diminish rapidly over time [23, 24]. Courses like EPLS/APLS etc. could make an important difference as long as they are repeated regularly. Yet in Belgium (as in many other countries), there lacks a strong (societal) incentive for following any of these courses and thus, certainly not for *recertification.*

Changing our ways of... PREPAREDNESS

The quality of the care we provide (pre-hospital and in the ED), given the need of 24/7 preparedness, is that of the weakest link and should thus be measured at e.g. 04 am. The EMS (emergency medical services) system and hospitals that admit children with the need of acute care should be prepared to do so and this equally at night, in a weekend, on a very busy day etc.

As we stated before, severe pediatric illness/injury is uncommon and thus the risk of being insufficiently prepared is clearly higher [15]. Beside trained personnel, there is also a need for *basic protocols, standard procedures and care pathways and sufficient appropriate equipment*. Further, there should be *regular mock code and situational or hands-on training* for all personnel possibly involved in the care of a critically ill child.

More specifically this preparedness should be evaluated and optimized in view of mass casualty and *disaster planning* including available equipment, pediatric-specific planning (e.g. pediatric surge capacity, psychosocial support, pediatric disaster drills...).

Importantly, this preparedness demands sufficient available time for all involved health care providers to be trained and to adapt protocols, procedures and pathways. One of the specific aspects of emergency medical care is that the majority of the health care providers involved (ED physicians and nurses, pediatricians) are almost continuously occupied with patient care. Staff planning for a 24/7 permanency is primarily focused on having no gap in the clinical availability of the care providers, leaving limited space for planned training and protocol adaptation. Thus, an important step to reach improved preparedness is providing "time" to do so. Compared with fire fighters that also have an acute care permanency, their working time is far more focused on that "preparedness".

Changing our ways of... EVALUATION

In the last decennia, medicine has become more and more a highly technological science. Always new tools and discoveries have led to a profound optimism. Our abilities sometimes seem but limited by cost or ethical issues. 'What we have and what we can do' (complex techniques, new medications, fast, available...), also called *'the input'*, is then most important in the evaluation of the health care system. What happens to patients in daily reality, the quality of the care provided (*'the process'*) and how the patient is doing afterwards ('the *outcome'*) too often seem of lesser importance [25].

'Modern management' principles have become an inherent part of today's medicine. Consequently, one of the central themes is *'client'* satisfaction. No sane person can contest this: *patient satisfied, everybody satisfied.* Including the government. But what if 'client satisfaction' turns out to be most often function of that *'input'*: how long the waiting list, how nice the room or the doctor.... The 'client' lacks the necessary knowledge to really appreciate the quality of the provided care and what that care will mean for her or him in the long-term is definitely unclear.

Therefore, really evaluating medical care means equally looking at input, process and outcome.

This is only possible if we have timely and detailed high-quality *data*. For instance for the case of injury, these data make it possible to evaluate the care provided, monitor injury trends, guide policies and develop prevention measures. To be able to prevent injuries effectively, it is important not only to know how many fractures or head injuries have occurred, but also where, when, how, to whom and hopefully also why?

Changing our ways of... HEALTH CARE ORGANISATION

Especially for emergencies, timely and adequate medical care significantly reduces morbidity and mortality [26, 27]. It is thus very important that all who are in the position of possibly being responsible for the first hour of treatment of a severely ill child, are able to do so.

However, even the health-care professional who received repeated and thorough performance-based teaching, whatever his/her background, will have an actual exposure to severely ill children that remains (too) low. International data have proven repeatedly that centralisation is an absolute must for any uncommon and complex (severe) illness. Centralisation and dedication improves the quality of care provided and the outcome of an individual patient with regard to mortality but also morbidity [6, 8, 13, 14, 28-33]. If well organised, it is also cost-effective [6, 7, 8]. Therefore most countries have regulations in place concerning the organisation of 'dedicated' pediatric emergency and intensive care.

Any potential (pediatric) emergency care system should meet certain minimal standards and requirements. We propose the following:

- Any hospital and pre-hospital emergency medical service that might be confronted with severely ill/injured children should be *prepared* to do so *at any moment*. Defining dedicated hospitals cannot render it unnecessary for local teams to be able to do *'first hour* stabilization'. For instance, dedicated pediatric pre-hospital teams would suffer from insufficient exposure and important time issues.

- The balance (for e.g. pre-hospital triage) between distance and level of expertise will always be region-dependent [8]. The adagio is well-known: 'get the right patient in the right hospital at the right time'. We know that too long transport and on-scene times are bad for any severely ill/injured patient child or adult. However going directly to a dedicated 'pediatric' (trauma) center is clearly better for the severely ill patient and more cost-effective if the extra distance is within 'acceptable limits' [6, 13]. Adequate triage (based upon physiological parameters and in case of injury 'trauma mechanism') is thus important [13]. Where undertriage costs lives, overtriage can result in an overutilization of financial and human

resources, contributes to overcrowding and increases transport times. In a mass casualty situation, overtriage could even have an adverse impact on patient care.

- Dedicated pediatric trauma centers / emergency departments should at least have the following characteristics [6, 8, 10, 13]:
    - Sufficient caseload (with sufficient level of (injury) severity). To make this possible there should be an assessment of the existing caseload for the bigger region and then define the necessary amount of dedicated centers needed.
    - Multidisciplinary team, with the 24/7 availability of a.o. dedicated and pediatric emergency care trained pediatricians, emergency physicians, intensivists, anesthesiologists, surgeons and neurosurgeons. Including sufficient expertise in certain necessary tools/techniques e.g. pediatric advanced airway skills and mechanical ventilation, haemodialysis.... Including the availability of psychological and social service support and a direct (early) link with a dedicated pediatric revalidation center [7].
    - Dedicated emergency and intensive care departments with sufficient personnel, age appropriate equipment and logistics... including resuscitation room, observation and/or medium care unit, 24/7 radiology, microbiology and OR availability...[9]. Personnel are sufficiently trained (ATLS or ETC, APLS or EPLS...) and there is a continuous program of on-going training and recertification.
    - Specialized 24/7 emergency transport team. Since we speak for all hospitals of the 'first hour stabilization', transport teams should be able to have a short response time (preferably < 30').
    - Ongoing audit and quality improvement initiatives [8]
    - Child friendly (accessibility, information, logistics eg waiting room, treatment room...) and in accordance with the "care program Pediatrics"
- Dedicated pediatric trauma centers / emergency departments should at least comply with the following roles [6, 8, 10, 13]:
        - Centre of expertise for pediatric trauma/emergency care 24/7. With the availability of a 24/7 dedicated transport service and taking responsibility in a region-wide public health network concerning severe pediatric

illness/injury. In cooperation with the other hospitals in the region and including a link with 'first-line' health-care and pre-hospital medicine.

- Educational role for students but also for surrounding and referring hospitals, for pre-hospital healthcare workers. Including developing protocols, organizing courses, direct feedback of patient cases....
- Centre of research: basic, clinical and epidemiological; including process and outcome evaluation. Continuous data collection in view of policy guidance, preventive medicine etc...; for instance by means of trauma registry or case data series [6].
- Societal role including opinion making, information distribution and global education, injury prevention and surveillance...
- Coordinating role in regional pediatric disaster planning

- An **inclusive** region-wide public health network concerning severe pediatric illness/injury equally focuses on all health-care workers and hospitals that are part of the system. A network is essentially a multidimensional relationship and its strength is function of all linked partners. It equally recognizes the importance of the role of the dedicated referral center as well as that of the individual pre-hospital health-care worker and the referring department. It supports the quality and development of each of them.

Although the implementation of this inclusive and region-wide (pediatric) emergency network is mostly a question of re-organization, involvement and legislation, clearly there will be also a need for certain *financial* incentives to make it work.

First of all, pediatric emergencies are time and energy consuming. Given the fact that they are uncommon, yet '24 /7 preparedness' is absolutely necessary, the cost is significant. More specifically this also includes the organization of a region-wide secondary transfer system. Further, there is a need for on-going (performance-based) teaching and (re) certification. Organizing this teaching is demanding and expensive, and should be supported by governmental funding.

Worldwide, the money spent for basic research is many times higher than that for clinical evaluation. Yet, it has become clear that the greatest positive effect on morbidity and mortality can be seen by performance improvement and in that way it is clearly cost-effective [18, 19, 20]. Further research, a continuous evaluation of input as well as process and outcome, should be promoted (cf. supra). This demands the collection of high-quality data for epidemiological and audit purposes on a regular

basis. The PENTA project has shown that this is a very labour-intensive process, with a need for governmental support [1].

Recommendations: there is a need for ....

- An audit of the 24/7 preparedness of Belgian ED regarding severe pediatric emergencies/injury.
- An obligatory 'pediatric paragraph' in ED and EMS (emergency medical services) organizational documents and disaster plans (i.e. describing and evaluating the impact for children of decisions made and proposing age-specific measures and actions).
- More performance-based teaching, within the own hospital as well as on a regional level and regular recertification. Courses like ETC, EPLS, APLS, ATLS or equivalent should be made obligatory (and at least partly reimbursed).
- Continuous data collection and evaluation of process and outcome. By means of case data series within an established trauma registry. Development of this in cooperation with existing (European) initiatives (e.g. OIVO) and with implementation of existing databases (like the MUG/SAMU registration).
- The development of an **inclusive** pediatric emergency/severe trauma health-care system, whether as part of the 'healthcare program pediatrics' or separately. This could be piloted in a certain region. The installation of a steering committee at a regional level that includes experts from different disciplines and from different hospitals in the region. The installation of an advisory group at the federal level for conceptualization, support during implementation and for continuous project surveillance. This latter group again incorporates experts from all disciplines (f.i. pediatricians, emergency and intensive care physicians, surgeons) and all types of hospitals (f.i. teaching vs. non-teaching, <500 beds vs. > 500...) involved.

The greatest of faults is to be conscious of none... (Thomas Carlyle, 1795-1881)

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Bijlage 4

Quality College of Emergency Physicians

A study about people who leave the Emergency Department before they are supposed to do so

Preliminary report (V1.1 - August 2009) prepared by Philippe E.R. Lheureux
on behalf of the Quality College of Emergency Physicians

1. Background

Emergency departments become busier in many countries throughout the world, most often without any possibility to expand their structural capacity (registration desk, waiting room, exam room or bays, observation beds) or their medical, nursing or other staffs. Many studies have shown that mainly the number of patients with lower acuity increases.

Facing this situation, EDs need to implement functional changes of their procedures to improve the flow of patients and avoid overcrowding, while maintaining quality of care. Then serial reevaluations are needed to confirm expected improvements after implementation of new programs and continuous quality assessment (monitoring).

There is no universally accepted operational definition of overcrowding. However, the definition proposed by Rowe and co-workers[1] appears useful in this perspective: overcrowding is « a situation in which the demand for emergency department services exceeds the ability of a department to provide quality of care within acceptable time frames ».

If such a definition is accepted, it means that at least three elements are needed for monitoring purposes:

- tools to measure operational ED crowding;
- quality indicators of the ED process;
- measurement of total length of stay (LOS) in the ED, but also of the various time intervals during the ED process (critical steps of the ED process).

1.1. Measurement of ED crowding

Instruments have been developed and validated for measurement and monitoring of ED crowding. Ideally, such tools should be characterized by reproducibility and real time availability. In most busy EDs, a computerized patient tracking system is used and crowding scores can be calculated by integration of hospital and ED electronic data. Indeed, the most complete scores take many operational factors into account including daily/hourly ED staffing, ED treatment spaces, current patient volume, patient acuity or hospital occupancy (total number of inpatients in the hospital/total number of hospital beds, at a given time).

An example is the EDWIN score, developed by Bernstein and co-workers[2]. It can be viewed as "a patient triage unit per attending physician per available bed" and is calculated as:

$$\Sigma n_i t_i / N_a (B_T - B_A)$$

[1] Rowe BH et al, Acad Emerg Med 2006

[2] Bernstein et al, Ann Emerg Med 2003

where
- the numerator is the sum of the Emergency Severity Index triage categories (ti) of all active patients (ni) in the ED. ED patients who are admitted are counted as a hold and removed from the numerator
- the denominator is the cross-product of the number of treatment bays (BT) minus the number of admitted patients (holds) (BA) multiplied by the number of attending physicians (Na) working each hour

The ED Occupancy Rate, suggested by McCarthy and co-workers[3] is the ratio of the total number of patients present in the ED to the number of licensed beds in the ED. It is much simpler, especially for non computed calculation and has been shown to have good correlation with both the EDWIN score and ED quality indicators such as the rates of ambulance diversion and patients leaving the ED without being seen by a physician (LWBS).

Although ED crowding appears as a worldwide phenomenon, factors mainly involved may not be identical everywhere. These factors may be schematically categorized as patient-related, hospital-related, ED related or community-related (Table 1).

Table 1 – Factors that may be involved in ED crowding

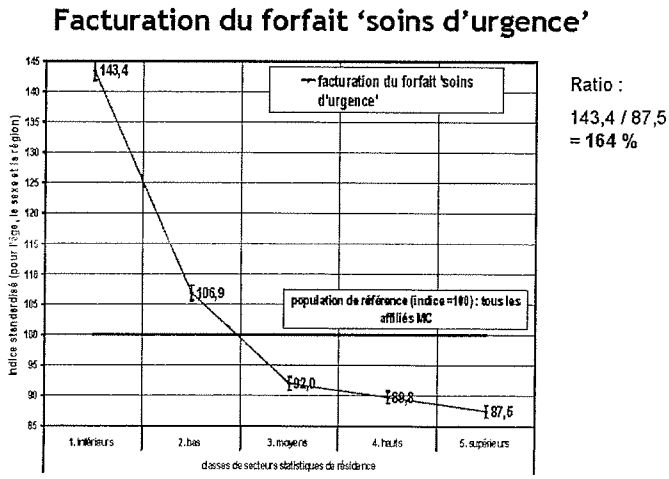
- Patient factors:
  - Aging patient population requiring more extensive medical intervention
  - Cultural and language barriers between patients and ED staff
  - Higher patient volumes, mainly those with lower acuity
  - Increase in patient acuity (later visits, age…)
  - Increased use of EDs by uninsured patients (safety net)
- Hospital factors:
  - Delays in obtaining subspecialty consultations in the ED
  - Delays due to radiographic and laboratory evaluations
  - Decrease of inpatient bed availability and prolonged retention of admitted inpatients in the ED
  - Development of an increasing number of (sub)specialties
  - Delays in obtaining follow-up appointments in outpatient clinics
  - Lack of alternatives to ED visit: open outpatient clinic, one-day hospital facilities, direct admissions in specialty wards…
- ED factors
  - Decrease of the number of EDs
  - ED medical and nursing shortages, especially experienced personnel
- Community factors:
  - Increase in the country's population (sometimes seasonal: holidays, winter sports, seasonal flu…)

[3] McCarthy et al. Ann. Emerg Med 2008

- Escalating standards of care
- Limited access to primary care resources
- "Consumer" behavior: immediate access to care at any time, whatever the severity of the problem
- Need for the universal solution, whatever the kind of the problem
- Confidence in the hospital structure, rather than in individual relationships

ED overcrowding may result in many detrimental effects as miscommunication between health care providers and patients, increased ED length of stay (LOS), or prolonged delay for "boarding" of admitted patents. These in turn may prompt patients to leave without being seen by a physician (LWBS) or to discharge themselves against medical advice (AMA). Increased use of ambulance diversion and gridlock is another adverse effect of overcrowding: it results in longer transport times, delays to initial medical evaluation (prolonged « medical free interval ») and decreased availability of ambulances for other sick patients. Miscommunication may occasionally be the activating factor of verbal or even physical violence against the staff.
Staff attrition may result from the increased perception of workload and the misperception of performance and quality: "burnout" conditions and increased ED staff turnover are then commonly observed. Overcrowding also affects teaching, continuous education and research which are all important to maintain quality of care over time.
Finally, all these effects contribute to compromise clinical care and patient safety, and ED failures will result in an increased frequency of complaints and medico-legal issues.
Additionally, people with low income, poor mental health or illegal status who often use ED as only medical contact are at risk to suffer from the failure of the "safety net" function. The importance of such "safety net" of Belgian ED's is clearly underlined by a study achieved by the *Mutualités chrétiennes* showing that people with low income are important users of ED facilities, as compared with people with higher revenues (figure 1).

Figure 1



From J. Hermesse[4]

[4] J. Hermesse, Secrétaire Général ANMC, Certificat interuniversitaire en Management Médical (CIMM) ULB/UCL, 25 avril 2009

1.2. Quality indicators of ED management

The rates of leaving without being seen (LWBS) and the rate of discharge against medical advice (AMA), which are the topic of this report, are classical quality indicators of ED management. Other indicators that have been used are the length of stay (LOS), the percentage of patients with long stay in ED (ex: $\geq$ 3 hours) or the unscheduled returns of patients within 48 hours for the same reason as the initial visit. Other elements for analysis are the quality of medical records and mailing, the sentinel events tracking (especially debriefing or near incidents or accidents), the rate and nature of patient's complaints, or the patient's satisfaction.

1.3. Critical steps of the ED process and need for uniformized definitions in Belgian EDs

These steps must be defined according the organisation of the ED. Actually, it may be difficult in Belgium as the ED process is not uniformly organized, especially regarding triage (no triage, nurse based triage, physician based triage or both), fast track (within the ED or associated service staffed with general practioners), use of observation units…

In the US, the Emergency Medical Treatment and Active Labor Act (EMTALA)[5] requires hospitals and ambulance services to provide care to anyone needing emergency treatment regardless of citizenship, legal status or ability to pay. As a result of the act, patients needing emergency treatment can be discharged only under their own informed consent or when their condition requires transfer to another hospital better equipped to administer the treatment. The Medical Screening Exam (MSE) is a defining event in emergency care[6]. It consists of collecting "the medical history, examination, ancillary tests and medical determinations required ascertaining the nature and extent of an emergency medical condition"[7]. An example of MSE recording sheet can be found in figure 2.

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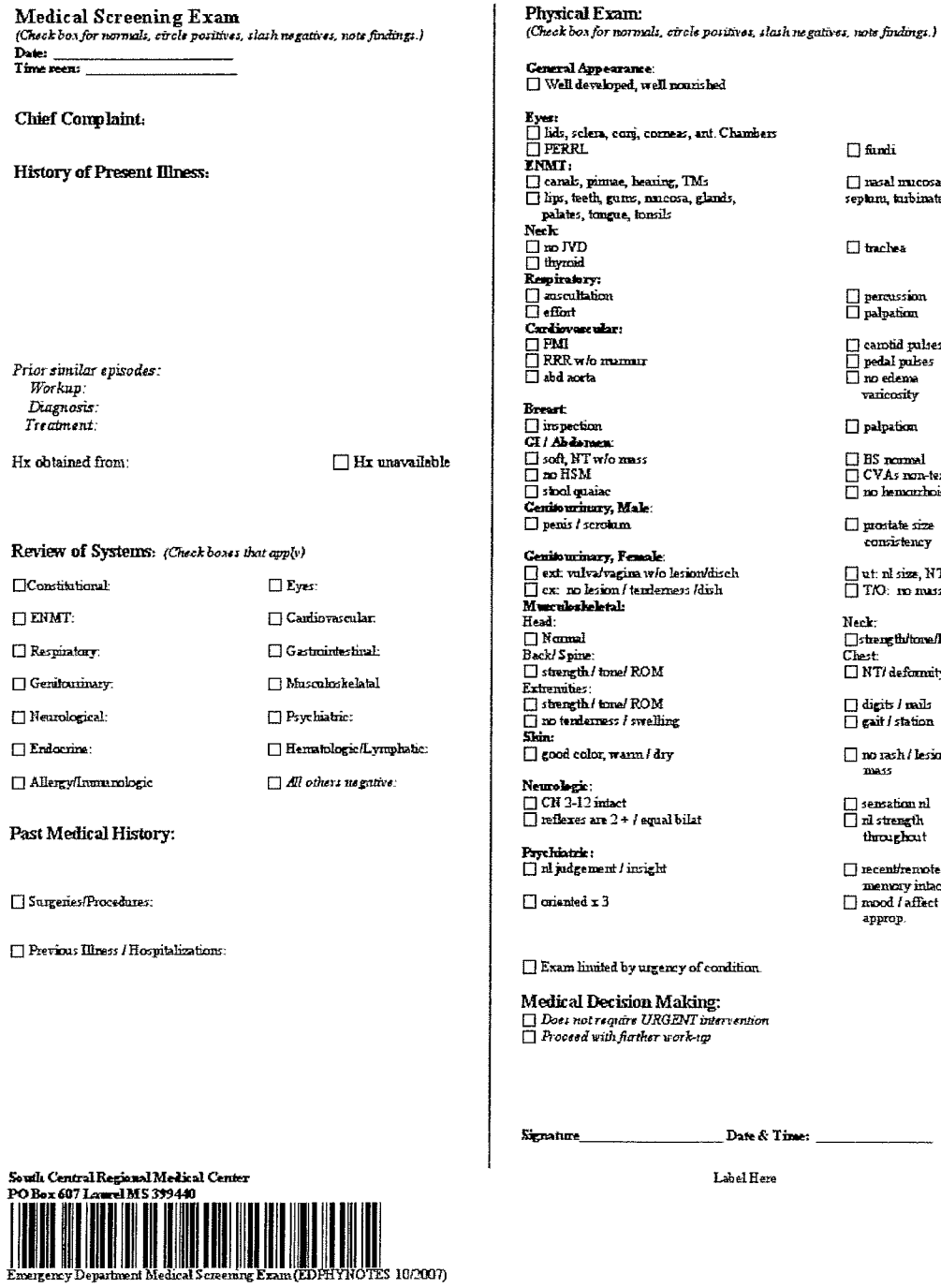
[5] United States Act of Congress (42 U.S.C. § 1395dd) passed in 1986 as part of the Consolidated Omnibus Budget Reconciliation Act

[6] Emergency Department Performance Measures and Benchmarking Summit: The Consensus Statement 2006 (http://www.qualityindicators.ahrq.gov/news/EDPerformanceMeasures-ConsensusStatement.pdf)

[7] Oregon Legal Glossary, Or. Rev. Stat. § 743.801 (2007). https://www.oregonlaws.org/ors/743.801.html

Figure 2 – An example of MSE recording sheet[8]



Medical Screening Exam
(Check box for normals, circle positives, slash negatives, note findings.)
Date: _____
Time seen: _____

Chief Complaint:

History of Present Illness:

Prior similar episodes:
Workup:
Diagnosis:
Treatment:

Hx obtained from: ☐ Hx unavailable

Review of Systems: *(Check boxes that apply)*

☐ Constitutional: ☐ Eyes:
☐ ENMT: ☐ Cardiovascular:
☐ Respiratory: ☐ Gastrointestinal:
☐ Genitourinary: ☐ Musculoskelatal
☐ Neurological: ☐ Psychiatric:
☐ Endocrine: ☐ Hematologic/Lymphatic:
☐ Allergy/Immunologic ☐ *All others negative:*

Past Medical History:

☐ Surgeries/Procedures:

☐ Previous Illness / Hospitalizations:

Physical Exam:
(Check box for normals, circle positives, slash negatives, note findings.)

General Appearance:
☐ Well developed, well nourished

Eyes:
☐ lids, sclera, conj, corneas, ant. Chambers
☐ PERRL ☐ fundi
ENMT:
☐ canals, pinnae, hearing, TMs ☐ nasal mucosa, septum, turbinates
☐ lips, teeth, gums, mucosa, glands, palates, tongue, tonsils
Neck:
☐ no JVD ☐ trachea
☐ thyroid
Respiratory:
☐ auscultation ☐ percussion
☐ effort ☐ palpation
Cardiovascular:
☐ PMI ☐ carotid pulses
☐ RRR w/o murmur ☐ pedal pulses
☐ abd aorta ☐ no edema varicosity
Breast:
☐ inspection ☐ palpation
GI / Abdomen:
☐ soft, NT w/o mass ☐ BS normal
☐ no HSM ☐ CVAs non-tender
☐ stool guaiac ☐ no hemorrhoids
Genitourinary, Male:
☐ penis / scrotum ☐ prostate size consistency
Genitourinary, Female:
☐ ext: vulva/vagina w/o lesion/disch ☐ ut: nl size, NT
☐ cx: no lesion / tenderness /disch ☐ T/O: no mass, NT
Musculoskeletal:
Head: Neck:
☐ Normal ☐ strength/tone/ROM
Back/ Spine: Chest:
☐ strength / tone/ ROM ☐ NT/ deformity
Extremities:
☐ strength / tone/ ROM ☐ digits / nails
☐ no tenderness / swelling ☐ gait / station
Skin:
☐ good color, warm / dry ☐ no rash / lesion / mass
Neurologic:
☐ CN 2-12 intact ☐ sensation nl
☐ reflexes are 2 + / equal bilat ☐ nl strength throughout
Psychiatric:
☐ nl judgement / insight ☐ recent/remote memory intact
☐ oriented x 3 ☐ mood / affect approp.

☐ Exam limited by urgency of condition.

Medical Decision Making:
☐ *Does not require URGENT intervention*
☐ *Proceed with further work-up*

Signature_____ **Date & Time:** _____

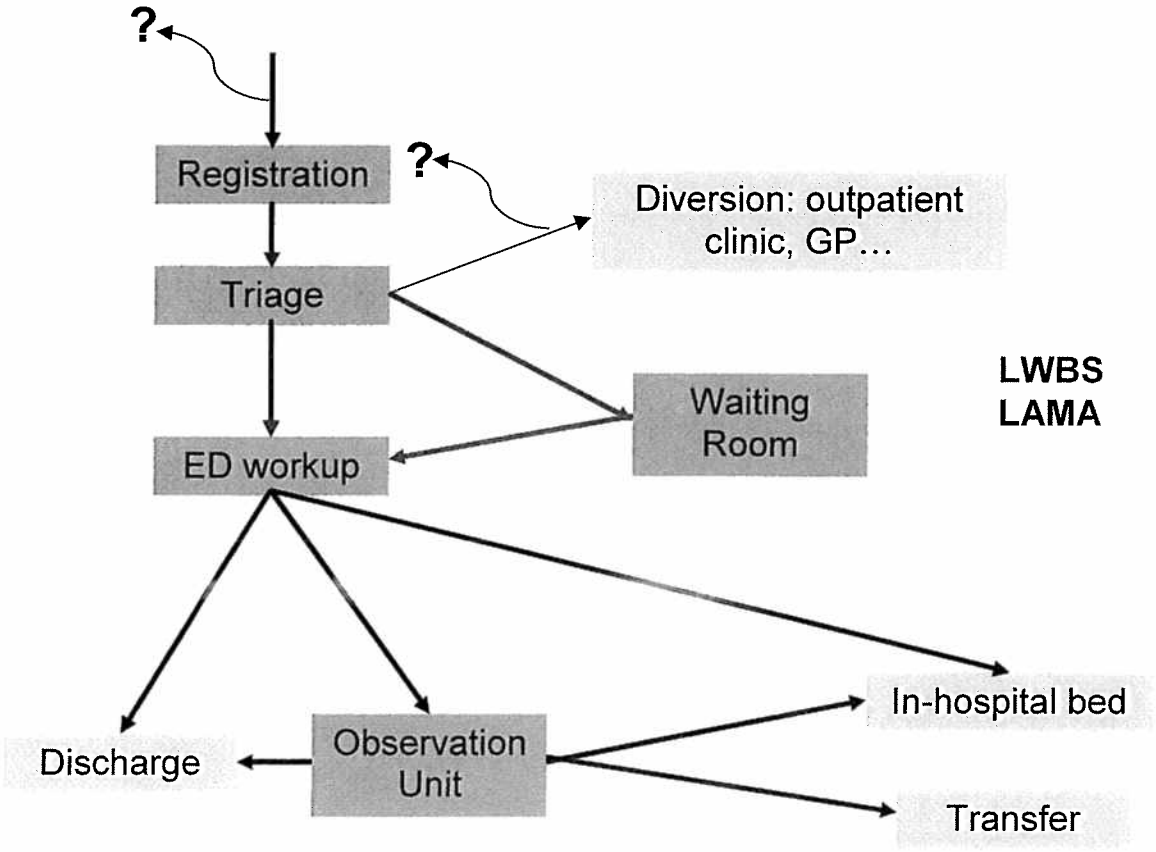
South Central Regional Medical Center
PO Box 607 Laurel MS 39440
Label Here
Emergency Department Medical Screening Exam (EDPHYNOTES 10/2007)

[8] From http://www.scrmc.com/PDF/ED%20Medical%20Screening%20Exam.pdf

It has been suggested that "people who leave the Emergency Department before they are supposed to do so" can be classified according to this event:
- Patients Leaving Before the Medical Screening Exam (PLBM): any patient who leaves the ED before initiation of the MSE, expressed as a rate of occurrences per 100 visits.
- Patients Leaving After the Medical Screening Exam (PLAM): to any patient who leaves the ED after their MSE, but before the provider documented treatment complete, expressed as a rate of occurrences per 100 visits.
- Patients Leaving Against Medical Advice (LAMA): any patient recognized by the institution and leaving after interaction with the ED staff but before the ED encounter is officially ended. This differs from PLAM in that it includes documentation of patient competence, discussion about risks and benefits, and completion or refusal to complete a document confirming the intent to leave against the recommendation of medical care staff.
Other classifications have of course been proposed.

In Belgium, the lack of uniformity in the ED organization after administrative registration makes necessary to define several common events in the ED process, allowing measurement of time intervals and categorization of patients leaving the ED before they are supposed to do so accordingly. A scheme is proposed in figure 3.

Figure 3 - The ED process



? represent patients who may leave without control (before registration or after reorientation); black = regular discharges; leaving during red processes = leaving without been seen; discharge during blue processes = discharge against medical advice

– **Patients leaving without being seen (LWBS)** would be defined as all the patients registered at the administrative desk of the ED and leaving before the first contact with the physician responsible for completion of the ED workup (red arrows on figure 1). In ED where a triage (staffed either by nurses or by doctors) has been set up, these patients could be further divided into two subcategories: leaving before or after triage. Agreement about definition should also include details about the calling procedure (ex: the patient does not answer three consecutive calls by a physician or a nurse and there is a 30 min interval between any two consecutive calls).
– **Patients leaving against medical advice (LAMA)** would be defined as all patients who check themselves (parents for children) out of the ED against the advice of the physician responsible for completion of the ED process, regardless the patient has accepted or refused to sign a form stating that he/she is aware that he is leaving the facility against medical advice and that risks may result from this decision (blue arrows on figure1). Such a signed form is usually thought to limit liability of the hospital and doctors in case there are complications. It is advisable to mention the LAMA discharge on patient's chart too.
– A third category could be defined as **patients who eloped** (leaving the ED without notification) after entering the ED evaluation. In some papers, such patients are defined as FTC (failure to complete): a FTC patient presents to the facility for clinical evaluation, leaves without completing the visit, and does not notify clinical staff before leaving. In most studies however, such patients appears to have been pooled with LWBS patients.
LWBS, LAMA and eloped patients are already part of the ED registration and included in data that have to be provided to the Public Federal Service – Public Health, Food Chain Safety and Environment as choice items in the field "exit of the ED" (against medical advice 02, leaving without notice or eloped 03, leaving without seeing the physician 04). Therefore, if such definition are accepted and used in every Belgian ED, no change would be required in the current ED registration, but a better uniformity of the registration procedure would be ensured.

Figure 5 - AMA discharges by provinces and by years (2004-2006)
To be noted gaps between regions of the country: index of Flemish provinces is always < 1, index of Brussels Region is always > 1, index of provinces of Wallonia are often around 1 or above.

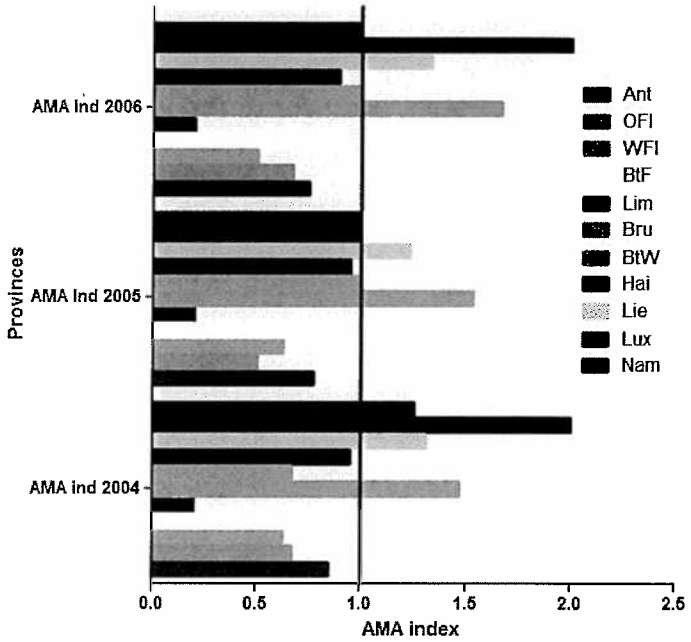
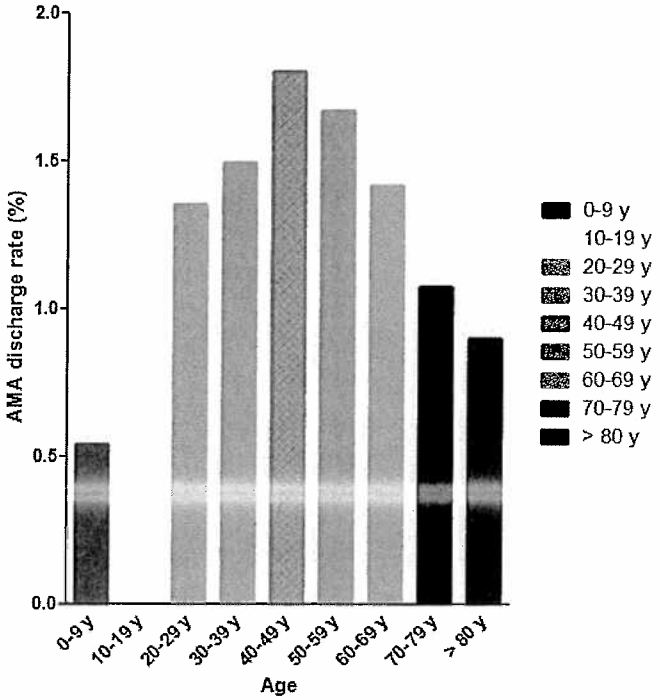
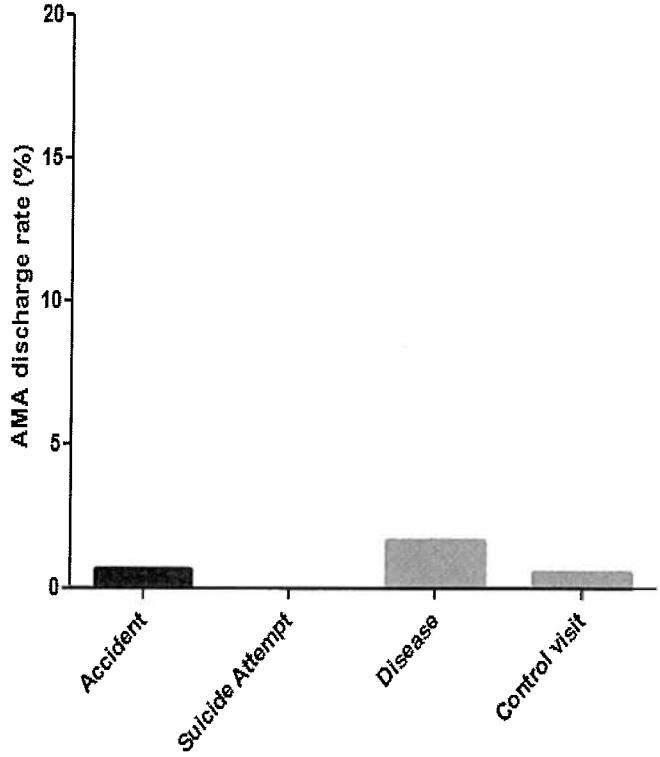


Figure 6 - AMA discharges by age



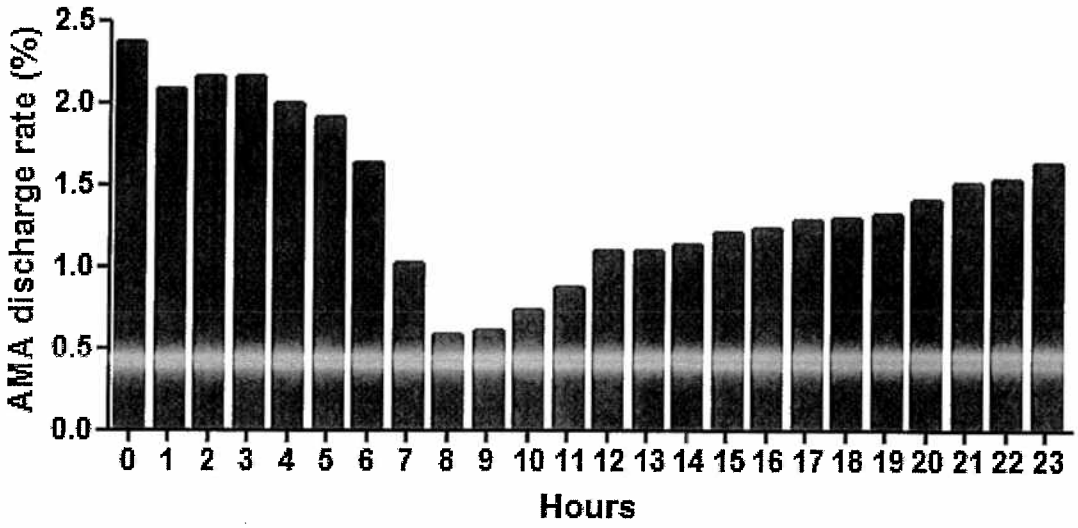
LAMA discharge appears more frequent in "active" adults than in children or elderly patients.

Figure 7 - AMA discharge by reason by category of admission



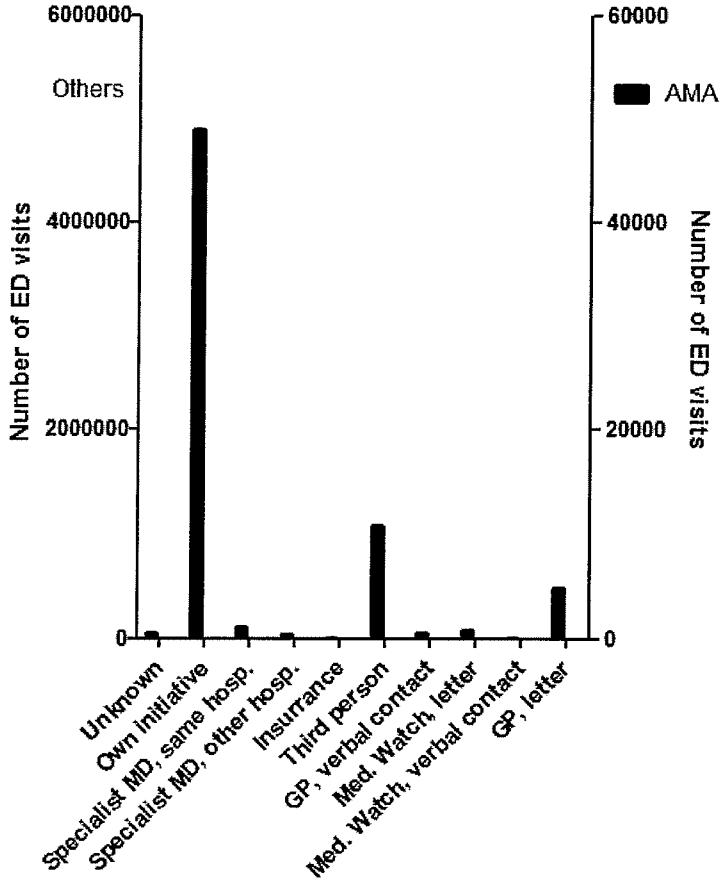
LAMA discharge appears more frequent in "medical" patients than in patients who attend the ED after an accident. This mode of discharge appears markedly more frequent after suicide attempt.

Figure 8 - AMA discharges by hours



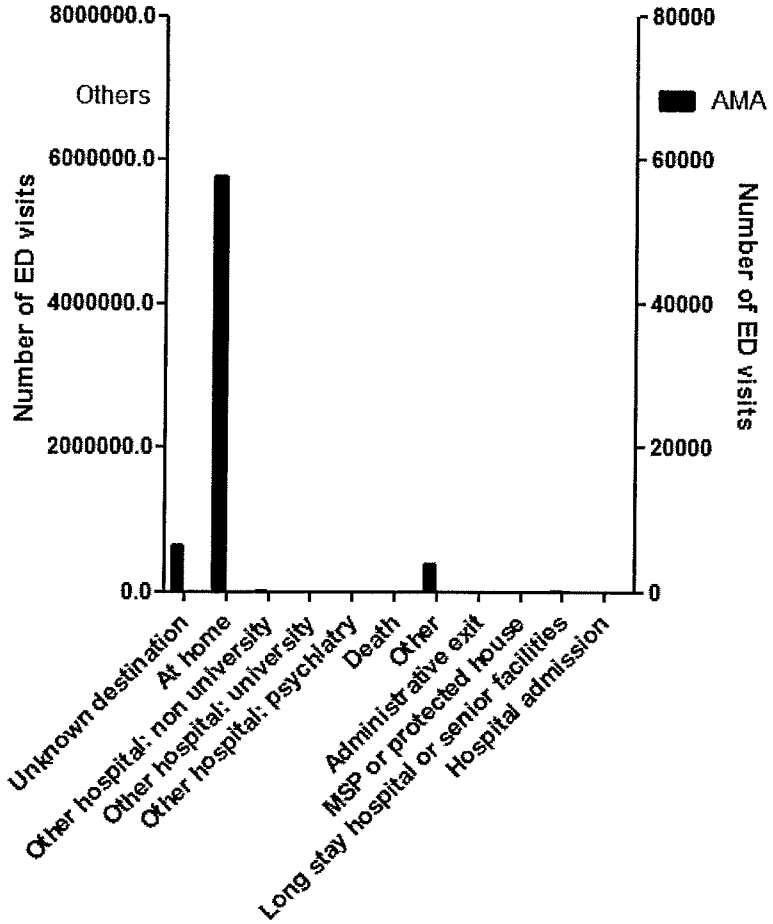
The rate of LAMA discharges appears to remain in the mean range during the busiest working hours of the EDs (usually 11:00 am – 19:00 pm). It is clearly higher during the nigh, especially after midnight.

Figure 9 - AMA discharge by initiator of ED visit



There is no major difference in the LAMA rate, whatever the initiator of the ED visit. There is however a trend to an increased rate when the initiator is a third person, other than a physician (family members, relatives or friends,…)

Figure 10 - AMA discharge: destination of the patient



There is no major difference in the LAMA rate, whatever the known destination after discharge. Note that many patients who are discharged LAMA are checked "Unknown destination" or "Other" as destination after discharge but are probably returning at home.

3. Literature review

As far as EDs are concerned, many papers have evaluated the LWBS phenomenon. Few papers have evaluated the LAMA phenomenon in the ED and no paper specifically studied patients who eloped from the ED.

3.1. LWBS patients

Regarding LWBS patients, several points have been addressed:
- demographic data: how much?
- characteristics of LWBS patients and predictors of such a behaviour: who?, when?
- outcome : are there adverse health outcomes associated with the decision to LWBS in patients who attend for ED care?
- reasons : why?, what factors are associated with the decision of patient to LWBS the ED?
- which operational interventions have been designed to try to minimize the number of patients who attend for ED care and LWBS?

3.1.1. Demographic data

One of the first paper regarding LWBS patients was published in 1978[9]: as many as 3% of patients were reported to leave prematurely the ED and 1% to leave before being seen by a physician at all. From the end of the last 80's, the number of published reports regarding this group of patients reflects an increasing concern. Highly variable rates have been reported from as low as 0.36%[10], to « regular » ~1-2%[11] [12] [13] and to greater than 15%[14]. Fortunately, an excellent review (figure 11) was recently produced by Kennedy et al.[15] As shown in figure 11, a large majority of publication regarding LWBS patients arise from North America, Australia and Asia.

[9] Gibson et al. Walkout patients in the hospital emergency department. JACEP 1978; 7: 47-50.
[10] Lee et al, 1998
[11] Weissberg et al, 1986
[12] Sainsbury et al 1990
[13] Fernandes et al, 1994
[14] Bindman et al, 1991
[15] Kennedy et al. Review article: Leaving the emergency department without being see. Emerg Med Austral 2008; 20: 306 - 313

2. Preliminary data

2. 1. LWBS / LAMA: CUB – Erasme University Hospital - Year 2008 (data provided by M. L. Moest)

To have an idea of the magnitude of these phenomena in Belgium, we analyze the data collected though the E-Care software in the Emergency Department of Erasme University Hospital - Brussels, during the year 2008. The total annual number of visits was 41098. Among these patients:

–1314 (3.2%) were considered as LWBS (registered, no more present when called by the triage nurse);

–252 (0.6%) other patients were triaged, not seen in the ED but oriented to outpatient clinic by the triage nurse with the agreement of the attending physician;

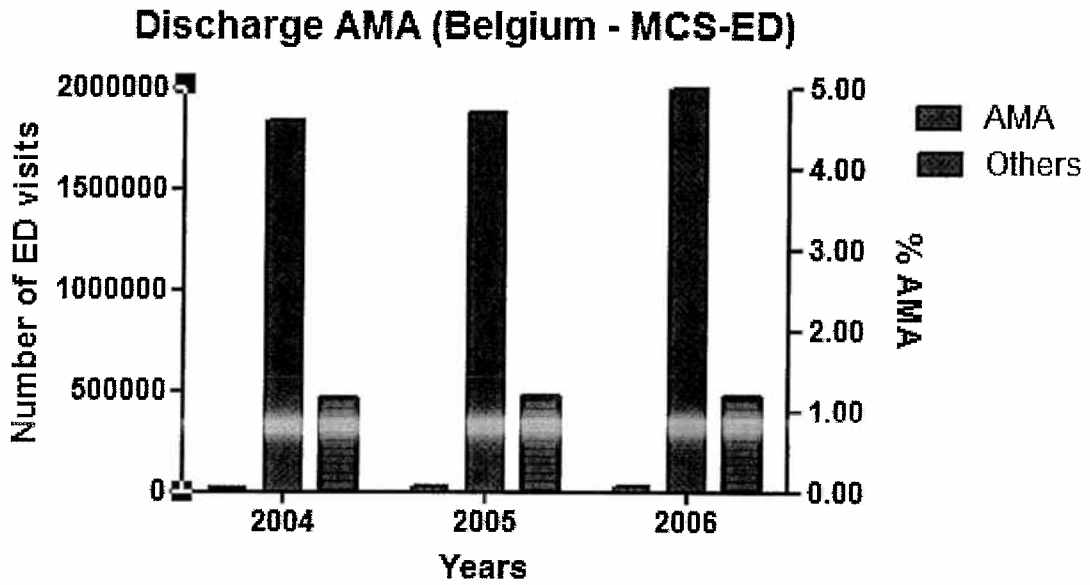
–276 (0.7%) were discharged against medical advice.

The number of patients who eloped can not be reliably quantified as this feature is often quoted by the physician on the medical chart, but inconstantly checked by the nurse in the computer.

2.3. Analysis of date from the Belgian ED registration system (Data provided by the Federal Public Service - Public Health, Environment and Food chain Safety - Dr L. Stamatakis and J. Legrand).

In this preliminary report, only registered data from the years 2004-2006 have been used. Registered items have changed and only LAMA data are available. Data regarding LWBS and eloped patients should become available from further registration.

Figure 4 - AMA discharges (whole country)



Although the total number of visits in Belgian ED is increasing, the percentage of LAMA discharges appears stable around 1.2%.

Figure 11 – Papers analyzed in Kennedy's review

Author	Country	Published	Sites	Design	% LWBS
Lee *et al.*[27]	Australia	2006	1	Prospective data collection and questionnaire.	6.7
Mohsin *et al.*[22]	Australia	2005	55	Secondary data analysis – retrospective observational	5.7
Fry *et al.*[28]	Australia	2003	1	Cross-sectional descriptive	7.9
Browne *et al.*[12]	Australia	2001	1	Prospective (case–control) surveillance	5.5
Mohsin *et al.*[17]	Australia	1998	5	Retrospective observational	4.9
Hanson *et al.*[16]	Australia	1994	1	Review of complaints	1.7
Rowe *et al.*[29]	Canada	2006	2	Prospective case–control	4.5
Goldman *et al.*[3]	Canada	2005	1	Case–control	3
Monzon *et al.*[9]	Canada	2005	1	Prospective case–control	3.57
Fernandes *et al.*[7]	Canada	1994	2	Prospective cohort (cross-sectional)	1.4
Lee *et al.*[2]	Hong Kong	1998	1	Prospective	0.36
Liao *et al.*[5]	Taiwan	2002	1	Cross-sectional	0.1
Goodacre and Webster[11]	UK	2005	1	Cohort	7.2
Khanna *et al.*[10]	UK	1999	1	Prospective follow-up	3.26
Ding *et al.*[19]	USA	2006	1	Pair-matched case–control	6.4
Kronfol *et al.*[25]	USA	2006	1	Prospective observational	3.65
Chan *et al.*[26]	USA	2005	1	Before–after intervention trial	7.7 (pre) 4.4 (post)
Polevoi *et al.*[23]	USA	2005	1	Modified case–crossover design	1.8
Weiss *et al.*[5]	USA	2005	1	Prospective observational	14.9
Arendt *et al.*[4]	USA	2003	1	Retrospective observational	0.84
Hobbs *et al.*[21]	USA	2000	1	Retrospective cohort analysis	7.4
Kyriacou *et al.*[16]	USA	1999	1	Prospective time study analysis	7.03, 6.18, 6.55 2.65, 3.97, 4.57, 7
dos Santos *et al.*[15]	USA	1994	1	Prospective follow-up (case–control)	3.9
Stock *et al.*[15]	USA	1994	30	Cross-sectional	4.2 (all hospitals) 7.3 (public)
Baker *et al.*[18]	USA	1991	1	Case–control follow-up	8.2
Bindman *et al.*[4]	USA	1991	1	Observational cohort	15.0

3.1.2. Patients characteristics

Kennedy's review suggests that LWBS patients
– have conditions of lower urgency and lower acuity;
– are more likely to be male and younger;
– are likely to identify prolonged waiting times as a central concern;
– have very low rates of subsequent admission;
– rarely report serious adverse events;
– frequently seek alternative medical attention;
– might have higher rates of ongoing symptoms at follow-up.
Authors make recommendations for further research to include comprehensive cohort or well-designed case–control studies, with various goals:
– Assessement of a wide range of related factors, including patient, hospital and other relevant factors.
– Comparison of outcomes for groups of LWBS patients with those who wait, including cross-sectoral data mapping to truly detect re-attendance and admission rates

3.1.3. Medical outcome and other consequences

Other authors have emphasized the potential implications of LWBS, especially patient dissatisfaction, medicolegal risk, ED and hospital reputation, consequences on ED and hospital revenue. Failure of the « safety net » function also appears as an important concern for those patients who have no easily identifiable alternative access to medical care.
The outcome issue also appears as controversial. Although most authors concluded to minor or self-limited problems (Gibson et al. Walk-out patients in the hospital emergency department. Am Coil Emerg Physicians 1978 ;7:47-50; Buesching et al. Inappropriate emergency department visits. Ann Emerg Med 1985;14:672-676; Dershewitz & Paichel. Patients who leave a pediatric emergency department without treatment. Ann Emerg Med 1986;15:717-720; Sainsbury.

Emergency patients who leave without being seen: Are urgently ill or injured patients leaving without care? Military Med 1990;155:460-464; Weinerman et al. Determinants of use of hospital emergency services. Am J Public Health 1966; 56:1037-1056), serious problems have also been reported (Baker et al. Patients who leave a public hospital without being seen by a physician: Causes and consequences. JAMA 1991 ;266:1085-1090).

LWBS patients characteristics

–Rowe et al. Characteristics of patients who leave emergency departments without being seen. Acad Emerg Med. 2006;13:848-52.

–11 sampling periods of 7 days, phone contact
–711 (4.5%) LWBS of 15,660 registered ED patients; 50% male; median age, 33 years
–512 (72%) were contacted and 498 agreed to participate
–Triage-matched controls waiting a median of 87 minutes before seeing a physician.
–Reasons: impatience → "fed up with waiting" (44.8%)
–Outcomes:
- 60% of LWBS cases sought medical attention within one week
–14 patients were hospitalized
–1 patient required urgent surgery
–Acuity level
–Triage level was not associated with the probability of subsequently seeking medical attention (61%, 61%, and 60% in triage levels 3, 4, and 5, respectively).
–Of the 198 (39%) who did not subsequently seek medical attention,
·50 patients (26%) had been triaged as urgent
·one patient died six days after ED registration

·*Wartman et al. Emergency room leavers. A demographic and interview profile. J Comm Health 1984; 9: 261-268.*

LWBS patients:
–Live within 2.5 miles of the hospital
–Medicare/Medicaid or no medical insurance
–No private physicians
–No serious complaints

•*Weissberg et al. Patients who leave without being seen. Ann Emerg Med 1986; 15: 813-817.*

•As compared with non LWBS patients, LWBS patients have significantly more psychological and/or social problems (73%)
–Death or acute illness of relatives or friends
–Recent bouts of alcoholism
–Acute financial problems
–Suicidal thoughts or behavior
–Court appearance
–Prenancies and miscarriages
–New people in home
–Other psychological and/or social crises

·*McKinney et al. Characterization of patients who leave an emergency department without being seen. Ann Emerg Med 2007; 50: s72*

·Retrospective review of one year ED registration database from a university-affiliated Level I Trauma Center to identify LWBS patients

•80,736 total ED visits, 3,979 (4.9%) LWBS
•3,676 (92.4%) LWBS once, 303 (7.6%) multiple LWBS visits, though not necessarily for the same chief complaint.
•2,809 (70.6%) patients had insurance
•2,437 (61.2%) patients resided in the hospital's city (787 - 19.8% immediatetly adjacent towns / 755 - 19.0% outside the immediate area)
•2,052 (51.57%) of LWBS registered between 4pm and 12am, 1,293 (32.5%) registered between 8am and 4pm and 634 (15.9%) registered between 12am and 8am.
•Most common chief complaint: abdominal pain (463, 11.6%), multiple pain complaints (271, 6.8%), multiple complaints (188, 4.7%), and chest pain (183, 4.6%).
•General categories; 1,853 (46.6%) some type of pain, 375 (9.4%) trauma-related complaint, 245 (6.1%) gastrointestinal, 193 (4.9%) neurologic complaint
•Many of the patients who LWBS represented "high risk" symptoms, such as difficulty breathing, chest pain, neurologic symptoms, or trauma.
•Even with an experienced triage nursing assessment some of these patients may have left with unrecognized life-threatening conditions.
•In addition, a large percentage of patients who LWBS had some type of insurance, and therefore may represent a source of lost revenue for the hospital.
•Many chief complaints suggested the need for billable procedures, such as lacerations.
•The fact that many of the patients who LWBS came from areas nearby the hospital may indicate that they felt comfortable leaving because they were close enough to return should their condition worsen.

3.1.4. Raisons for not waiting

•*Weissberg et al. Patients who leave without being seen. Ann Emerg Med 1986; 15: 813-817.*
—Dissatisfaction with length of waiting time (48.3%): actually not different as compared to non LWBS patients
—No longer need for treatment (6.9%)
—Another appointment (20.7%)
—Feeling to sick to remain (6.9%)
—Other (6.9%)
•LWBS rate correlates with prolonged waiting times and patient dissatisfaction
—*Fernandes CMB, Daya MR, Barry S, et al: Emergency department patients who leave without seeing a physician: The Toronto hospital experience. Ann Emerg Med 1994;24:1092-1096.*
—*Bindman AB, Grumbach K, Keane D, et al: Consequences of queuing for care at a public hospital emergency department. JAMA 1991;266:1091-1096.*
—*Baker WD, Stevens CD, Brook RH: Patients who leave a public hospital emergency department without being seen by a physician. JAMA 1991;266:1085-1090.*

•*Saunders CE: Time study to patient movement through the emergency department: Sources of delay in relation to patient acuity. Ann Emerg Med 1987;16:1244-1248*
- Patients who are the least sick or have the least severe injuries have the greatest delays through ED systems, although their actual evaluation and treatment times are brief

•*Robinson et al. Factors That Correlate with Patients Leaving an Emergency Department Without Being Seen. Ann Emerg Med 2006; 48: s108.*

- Retrospective review of the ED patient tracking database at an urban, university-affiliated, Level 1 trauma center for the year 2005 :

- •ED visits
- •Critical resuscitations (trauma and medical)
- •LWBS
- •ED admissions
- •average ED waiting room time
- •average patient time in the ED
- •daily staffing for nurses, NP/PA's, residents and EM attendings

- Data was analyzed using descriptive statistics, bivariate correlations, and hierarchical multiple linear regression.

·*Hobbs et al. Hospital Factors Associated With Emergency Center Patients Leaving Without Being Seen. Am J Emerg Med 2000;18:767-772.*

- Multivariate analysis identified six variables that were significantly associated with LWBS and the fitted model containing all six variables explained 52.8% of the variability observed in LWBS frequency.
- The most powerful predictor of LWBS was **total number of patients cared for in the main ED**. (46.4% of the observed variation in LWBS).
- The total **number of trauma and resuscitation patients**, and the total **number of observation unit admissions to the hospital** were also associated with increased LWBS.
- More **pediatric cases** seen in the main ED, **weekends**, and additional **faculty coverage** were associated with fewer patients leaving.

·80,735 patients were entered into the ED patient tracking system
·18,147 (22.4 %) were admitted
·4,045 (5.0 %) were critical resuscitations
·4,297 (5.3%) LWBS
·The factors with the highest bivariate correlation with percent LWBS were:
·average waiting room time (0.771, p 0.001),
·total ED visits (0.480, p 0.001)
·time of the academic year (0.326, p 0.001)
·number of admissions from the ED (0.324, p 0.001)
·nurse staffing (0.306,p 0.001).
·These same factors exhibited the highest correlations with wait time.
·Hierarchical multiple linear regression indicated a statistically significant effect of ED volume with significant incremental effects of staffing and timing on both wait time and LWBS.
·Among staffing factors nursing and resident experience (based on time of the academic year) were the strongest individual predictors, however were confounded in the data.
·The addition of wait room time provided a substantial and statistically significant increase in the prediction of percent LWBS (R2 change 0.226, p 0.001).

•Average ED waiting room time is the best individual predictor of the difference in LWBS rates during the study period.

•Total ED volume and nurse staffing / time of the academic year were also key factors.

•Additionally, the models suggest that average ED waiting room time is predictive of percent LWBS to a greater extent than the factors of volume and staffing.

•Further research is needed to determine what other factors not measured in this study correlate with increased average waiting time and percent of patients who LWBS.

•*Farley et al. Hourly Patient Arrivals Predict the Number of Patients Who Leave Without Being Seen. Ann Emerg Med 2008; 51: s131*

•Prospective observational cohort study capturing the hourly number of patient arrivals and patients who LWBS in a single ED (annual volume 100,000 patients) during two 1-week study periods in 2 separate months: 3880 patient visits

• "arrival intensity" = number of patients who arrived in a given 2-hour period divided by the maximum number of patients who arrived in any 2-hour period during the study, calculated for each consecutive 2-hour period

•2-tailed Pearson correlation coefficient was calculated between arrivals over each 2 hour period and the number of those patients who subsequently LWBS: r0.4, p0.001

•correlation between "arrival intensity" over each 2-hour time period and the number of patients who LWBS: r0.4, p0.001

•*Kulstad et al. Occupancy Rate and EDWIN Score Both Correlate Significantly With Number of Patients Leaving the Emergency Department Without Being Seen*

LWBS patients outcome

•Adverse health consequences ?

•Low acuity patients not willing to wait for non-emergent care ?

•*Sainsbury S: Emergency patients who leave without being seen: are urgently ill or injured patients leaving without care ? Milit Med 1990: 155: 460-464.*

•One-year retrospective study 9/87-8/88, Military Hospital → N = 191

–5 admissions within 7 days (1.7%)

–123 return visits for care within 7 days (42.3%)

–163 without return visit (56%)

–No death

–11.7% < 1 year old: only 4,3% with no return visits

•No reliable means to detect which LWBS patients are likely to seek follow-up care

•*Crystal et al. Analysis of Patients Who Leave Without Being Seen From an Academic Community Emergency Department. Ann Emerg Med 2006; 48: s24.*

•12-month period data collection beginning in November 2004: 62,239 patients, of which 6037 LWBS

•convenience sample of patients extracted to be called back 48 hours after their initial LWBS visit by an administrative assistant (days when the total LWBS percentage exceeded the daily average by at least 5%, on average 3 days per month):

–1165 patients

–668 (57.3%) could be contacted by telephone (100% data available) and 497 (42.7%) were unable to be contacted.

•electronic hospital database query to verify whether any patients had returned to our ED or been admitted to the hospital within 48 hours
•Patients who LWBS from ED had very low ED return and admission rates
–378 (56.1%) patients either went to an outpatient clinic or planned to go within 24 hours
–197 (29.5%) patients chose not to seek outpatient care and did not desire a future appointment for their current complaint
–40 (6%) patients requested our administrator's help with scheduling an outpatient appointment
–34 (5.1%) patients returned to our ED
–21 (3.2%) patients presented to another ED
–Only 2 (0.3%) patients had been admitted to the hospital within the past 48 hours

LWBS: underestimation?
- *Jones et al. Implementation of a Self-Service Kiosk System in The ED: Are More Patients Leaving Than We Think? Ann Emerg Med 2008; 51: 533.*
- Measure of LWBS rates prior and after implementation of a self-service ED registration kiosk system (May 2007)
- Documented LWBS rates capturing those patients who are triaged may be factitiously low as many LWBS patients are not tracked because of leaving prior to contact with a triage provider

Prevention of LWBS ? Some solution that have been proposed
–bedside registration
–fast-track area after first level triage, with second level triage in the main ED
–different waiting rooms for fast track area and ED
–liaison function with information within the waiting room(s), periodic waiting time announcement
–reassessments in the waiting room, retriage
–predischarge area for patients waiting for laboratory and radiology test results
–one-way flow (ex: no return to the waiting room)
–education of emergency staff regarding the importance of patient flow, staff meetings, performance improvement bulletin boards
–education of in-house staff has raised their awareness of the importance of moving admitted patients upstairs quickly (1-hour rule)
–incentives to physicians to improve patient flow rates (ex: starting the initial contact with the physician within 30 minutes of patient arrival and reaching this goal 98% of the time)
–nurse practitioners (lab tests, Xrays, treatments with standing orders…)

Decreasing waiting times
- *Chan L, Reilly KM, Salluzzo RF. Variables that affect patient throughput times in an academic emergency department. Am J Med Qual 1997;12:183-6.*
- *Arendt KW, Sadosty AT, Weaver AL, Brent CR, Boie ET. The left-without-being-seen patients: What would keep them from leaving? Ann Emerg Med 2003;42:317-23.*
- *Fernandes CMB, Price A, Christenson JM. Does reduced length of stay decrease the number of emergency department patients who leave without seeing a physician? J Emerg Med 1997;15: 397-9.*
- *Liptak GS, Super DM, Baker N, et al: An analysis of waiting times in a pediatric emergency department. Clin Pediatr 1985;24:202-209.*

Triage and quality of triage

- *Smrz-Dupont. Strategies to Reduce Patients Who Left Without Being Seen and Potential EMTALA Violations. J Emerg Nurs 2004; 30: 210.*
- *Paulson. A comparison of wait times and patients leaving without being seen when licensed nurses versus unlicensed assistive personnel perform triage. J Emerg Nurs 2004;30:307-11*

Fast tracking:

- *Fan. Cost-effectiveness of an emergency department fast-track system for low-acuity patients. Ann Emerg Med 2005: 46: S109*
- *Levy et al. Effect of Rapid Patient Evaluation on the rate and type of error citation of emergency physicians. Ann Emerg 2005; 46: S108.*
- *Fernandes CMB, Price A, Christenson JM: Does reduced length of stay decrease the number of emergency department patients who leave without seeing a physician? J Emerg Med 1997;15:397-399.*
- *Simon HK, Ledbetter DA, Wright J: Societal savings by "fast tracking" lower acuity patients in an urban pediatric emergency department. Am J Emerg Med 1997;15:551-554.*

ED Observation Unit:

-*Hedayati et al. The Effect of Implementation of an Observation Unit on Emergency Department Wait Time to Initial Physician Evaluation, Emergency Department Length of Stay, Emergency Department Boarding Times, and Percentage of Patients Who Left Without Being Seen. Ann Emerg Med 2008;52:s112*

Rapid admission policy (RAP):

- *Quinn et al. Effects of implementing a rapid admission policy in the ED. Am J Emerg Med 2007: 25; 559–563*

Additional staffing, on demand :

- *Shaw & Lavelle. VESAS: A solution to seasonal fluctuations in emergency department census. Ann Emerg Med 1998;32:698-702.*

What can be done with LWBS patients ? Interventions after LWBS

–Phone call to the regular physician of the patient

–Follow-up phone call to the patient : evaluation of the need for early revisit (GP, ED, scheduled consultation) or psychiatric or social service referral

- *McNamara.Patients Leaving the ED Without Being Seen by a Physician: Is Same-Day Follow-Up Indicated? Am J Emerg Med 1995;13:136-141.*

3.2. LAMA patients

Discharge AMA is of concern because it is assumed that these patients are leaving too soon and that adverse consequences will follow and that such mode of discharge is thus inappropriate. Belgian data for example (see 2.2 above) show that suicidal patients that are often incompliant commonly used this mode of discharge to leave the ED without psychiatric evaluation in the ED or scheduled.

However, it is not impossible that these discharges might in fact be appropriate in other categories of patients. Actually, we must accept that LOS as determined by the patients themselves may be more appropriate than what the physicians would recommend. Patients may recognize their recovery from acute illness before the physicians do. In most studies, "soft" admissions (e.g., those for noncardiac chest discomfort) are overrepresented among patients discharged LAMA. (Saitz R. Discharges against medical advice:
time to address the causes. CMAJ 2002; 6 : 167-168)

evidence
is accumulating to indicate that many hospital stays last longer than the period of acute illness, with uncertain, if any, additional benefit over shorter stays
1. DeCoster C, Roos NP, Carrière KC, Peterson S. Inappropriate hospital use by patients receiving care for medical conditions: targeting utilization review. *CMAJ* 1997;157:889-96.
2. Kalant N, Berlinguet M, Diodati JG, Dragatakis L, Marcotte F. How valid are utilization review tools in assessing appropriate use of acute care beds? *CMAJ* 2000;162:1809-13.
3. Flintoft VF, Williams JI, Williams RC, Basinski AS, Blackstien-Hirsch P, Naylor CD. The need for acute, subacute and nonacute care at 105 general hospital sites in Ontario. Joint Policy and Planning Committee Non-Acute Hospitalization Project Working Group. *CMAJ* 1998;158:1289-96.
tend to
interpret a shorter length of stay as a favourable outcome because of lower short-term costs and reduced exposure to the potential risks of a hospital stay

3.2.1. Data from general medicine wards

Most of data most are issued from hospital wards rather than from EDs.
In the US, rates of LAMA discharges from medical services at various teaching and acute care hospitals have been reported to range from 0.8 to 2.2%. This rate seems inversely correlated with the socioeconomic status (0.8%: hospitals serving middle- and upper-class population; 2.2%: hospital serving disadvantaged urban areas), the lack of health insurance and Medicaid eligibility (2 fold increase of LAMA discharge likehood) or a longer eventual hospital stay.
LAMA discharge appears to be associated to a worse health outcome. More readmission are observed than after regular discharges (32% within 30 days vs 12%, respectively; 62% at 1 year vs 45%, respectively). Patients discharged LAMA are more likely to have a subsequent admission for the same (or a related) diagnosis in the subsequent month than patient discharged regularly (28% vs 8%, respectively) and to have longer stays in hospital for any readmission (median 5 vs 0 days, respectively) (Anis et al).
Leaving hospital against medicaladvice (AMA) is a common and frustrating problem for health care providers.

In an attempt to gain a better understanding of why patients do this, Dr. Aslam Anis and colleagues reviewed all "index" (first admission) records for HIV/AIDS patients admitted to St. Paul's Hospital in Vancouver between Apr. 1, 1997, and Mar. 1, 1999. Of the 981 patients, 125 (13%) left hospital AMA. The authors found that departure on the day that welfare cheques were issued and a history of injection drug use were significant predictors of this action. Most troubling, however, is the finding that patients leaving AMA were more likely to be readmitted with the same diagnosis.

Cost per admission may be lower for stays ending in discharge LAMA, but the long-term costs would be higher. Saitz R, Ghali WA, Moskowitz MA. The impact of leaving against medical advice on hospital resource utilization. *J Gen Intern Med* 2000;15:103-7. Saitz 2002)
Mortality rates and disease-specific consequences are additional health outcome issues that should be studied.
In their study conducted in the general medicine department, of a teaching hospital, Hwang et al. have matched 97 consecutive LAMA patients with controls[16]. They found a readmission rate within 15 days of 21% vs 3 % for patients discharged regularly ($p<0.001$). Predictors of LAMA discharge in this study were male gender and alcohol abuse.

[16] Hwang et al. What happens with patients who leave hospital against medical advice ? CAMJ 2003; 168: 417-420.

Demographic factors that are inconstantly reported as LAMA predictors but may help to predicts the occurrence of discharge against medical advice include younger age, male sex, history of substance abuse, lack of a personal physician and lack of health insurance.(Weingart SN, Davis RB, Phillips RS. Patients discharged against medical advice
from a general medicine service. *J Gen Intern Med* 1998;13:568-71.
8. Jeremiah J, O'Sullivan P, Stein MD. Who leaves against medical advice? *J Gen Intern Med* 1995;10:403-5.
9. Saitz R, Ghali WA, Moskowitz MA. Characteristics of patients with pneumonia who are discharged from hospitals against medical advice. *Am J Med* 1999; 107:507-9.
Anis and colleagues[4] addressed some of these issues in a retrospective cohort study of 981 hospital inpatients with HIV infection, almost half of whom reported injection drug use (see page 633). They found a high rate of discharge against medical advice — 13% overall. Current injection drug use was significantly more common among patients who left hospital against medical advice, and onefifth of injection drug users left under these circumstances. Furthermore, patients were more likely to leave against medical advice on days when welfare cheques were issued.
calendar effects. Weingart and associates[5] found no effect of day of the week, month or season on rates of discharge against medical advice. However, in that study of general medical patients, the prevalence of drug abuse was probably much lower than in the study by Anis and colleagues (Anis AH, Sun H, Guh DP, Palepu A, Schechter MT, O'Shaughnessy MV. Leaving hospital against medical advice among HIV-positive patients. *CMAJ* 2002;167:(6):633-7.) (income was not reported in either study, which makes it difficult to know whether that factor might explain the different findings). Studies of the "cheque effect" support the hypothesis that receipt of welfare payments can be related to addictive behaviours,(6. Halpern SD, Mechem CC. Declining rate of substance abuse throughout the month. *Am J Med* 2001;110:347-51.
7. Phillips DP, Christenfeld N, Ryan NM. An increase in the number of deaths in the United States in the first week of the month — an association with substance abuse and other causes of death. *N Engl J Med* 1999;341:93-8.) which may be the mechanism of the "welfare Wednesday" effect found by Anis and colleagues.[4]
Among variables available in discharge abstracts, Anis and colleagues[4] found no other predictors that were significantly associated with discharge against medical advice. In particular, age, sex, housing status and severity of HIV infection were not significant independent predictors,
Importantly, disease severity does not appear as a LAMA predictor (Anis et al, Saitz 1999). These predictors are however not particularly helpful in the understanding of why patients choose to leave against medical advice.
For Jeremiah et al., patients leaving against medical advice from the inpatient sector have two major motivations: the patient feels better or he has personal or financial obligations. Near half of the LAMA patients in this study had no primary care provider[17].

3.2.2. Data from emergency departments

Only a few studies have been specifically conducted in EDs.

- *Dubow D, Propp D, Narasirnhan K. Emergency department discharges against medical advice. J Emerg Med 1992;10:513-6.*

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[17] Jeremiah et al. Who leaves against medical advice? J Gen Intern Med 1995;10:403-5.

- *Pennycook AG, McNaughton G, Hogg F. Irregular discharge against medical advice from the accident and emergency department-a cause for concern. Arch Emerg Med 1992;9:230-8.*
- Ding R, Jung JJ, Kirsch TD, Levy F, McCarthy ML. Uncompleted emergency department care: patients who leave against medical advice. *Acad Emerg Med.* 2007;14(10): 870-876
- Henson VL, Vickery DS. Patient self discharge from the emergency department: who is at Risk? *Emergency Med J.* 2005;22(7):499-501.
- Strinko JM, Howard CA, Schaeffer SL, Laughlin JA, Berry MA, Turner SN. Reducing risk with telephonefollow-up of patients who leave against medical advice of fail to complete an ED visit. *J Emerg Nurs.* 2000;26(3):223-232.
- *Strinko et al, J Emerg Nurs, 2000*
    - *6 categories of reasons for leaving AMA/FTC that are not mutually exclusive, + 1 category to be used if the reasons for leaving were not shared*
        - *Perceived long waiting time*
        - *Perceived negative attitude/competency of staff*
        - *Perceived environmental situation*
        - *Seeking 2nd opinion*
        - *Personal obligation*
        - *Disbelief in seriousness of condition*
        - *Reason not shared*

Bijlage 6

College kwaliteit der geneesheer-specialisten in de urgentiegeneeskunde

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ENQUÊTE OVER DE STRUCTUUR EN DE ACTIVITEIT VAN DE SPOEDGEVALLENDIENSTEN IN BELGIË, GEGEVENS VAN HET JAAR 2009.

1. Doelstellingen:

1. Algemene beschrijving van de activiteit op de spoedgevallendiensten in het jaar 2009.
2. Beschrijving van de menselijke en technische middelen waarover de spoedgevallendiensten in België beschikken.
3. Observatie van de evolutie sinds analoge studies uitgevoerd in 1996 door de beroepsvereniging van de geneesheerspecialisten in de urgentiegeneeskunde (BeCep) en in 2000 door het College Kwaliteit.
4. Het doel van deze studie is evalueren of patiënten die de spoedafdeling verlaten zonder gezien te zijn in rekening worden gebracht en of deze factor kan worden gezien als een kwaliteitsindicator.

2. Motivatie:

Een College van geneesheerspecialisten in de urgentiegeneeskunde werd opgericht volgens het KB van 15 februari 1999, voor de evaluatie van de kwaliteit van de medische activiteit in de ziekenhuizen (MB van 25/03/1999).
De spoedgevallendiensten met een gespecialiseerde functie moeten een interne en externe evaluatie van hun medische activiteit uitvoeren (art.1.).

Het College heeft beslist om opnieuw een beschrijvende analyse van de structuur van de spoedgevallendiensten uit te voeren. Deze analyse zou toelaten om te beoordelen of de verschillen tussen centra, waargenomen in latere studies, mogelijks verband houden met de grootte van de dienst, hun aantal en de omvang van hun activiteit.

3. Methodologie:

Een vragenlijst wordt gericht aan alle erkende spoedgevallendiensten van het land. De verzamelde gegevens horen verband te houden met het jaar 2009.
De vragenlijst werd aan alle leden van het College voorgelegd en besproken, met de bedoeling om eventueel wijzigingen aan te brengen aan de vragenlijst van het College (2000).

De vragenlijsten zijn verstuurd naar alle erkende spoedgevallendiensten met gespecialiseerde functie. In geval van fusie of groepering van ziekenhuizen, wordt per site waar zich een gespecialiseerde functie bevindt een vragenlijst ingevuld.

Het College waarborgt aan alle deelnemende centra een absolute confidentialiteit van de ingegeven gegevens. Het ingeven van de gegevens gebeurt rechtstreeks op de internetsite van het College Kwaliteit: **www.emerqual.be** met behulp van een gebruikersnaam en wachtwoord.

De algemene resultaten zullen aan de deelnemende centra medegedeeld worden. Elk deelnemend centrum zal zich kunnen positioneren ter vergelijking met de andere geanonimiseerde ziekenhuizen. De besluiten en algemene bemerkingen zullen door het College verstrekt worden. Het College zal tevens, waar mogelijk, een vergelijking maken met de gegevens van de enquête die in 2000 werd uitgevoerd.

Het College zal de resultaten van deze studie voorstellen op een symposium in 2010.

4. Verklarende woordenlijst:

1. *Kandidaat-urgentiearts (6j.):*
   Een geneesheer-specialist in opleiding voor urgentiegeneeskunde.

2. *Kandidaat-specialist acute geneeskunde (3j.):*
   Een geneesheer-specialist in opleiding voor acute geneeskunde.

3. *Kandidaat voor het behalen van de bijzondere beroepsbekwaamheid urgentiegeneeskunde (1j.):*
   Geneesheer-specialist (13 basisdisciplines) die een stage urgentiegeneeskunde volgt voor het behalen van de bijzondere beroepsbekwaming in de urgentiegeneeskunde (min.1j.).

4. *Kandidaat-specialist in opleiding:*
   Een arts in opleiding voor een basisspecialiteit.

5. *Schatting:*
   Indien men niet over exacte cijfers beschikt, duidt men hier aan dat het over een schatting gaat.

6. *Ziekenhuisopname:*
   Elke patiënt die in het ziekenhuis opgenomen wordt en waaraan een ligdag wordt aangerekend.

7. *Fulltime equivalent (FTE):*
   Komt overeen met de wettelijke normen van het personeel dat in salarisverband werkt (5,36 FTE zijn nodig om op deze basis gedurende het ganse jaar een permanentie te organiseren).

8. *Aanmeldingen op de spoedgevallendienst:*
   Elke patiënt die zich aanbiedt op de spoedgevallendienst, gehospitaliseerd of niet.

9. *Opname via spoedgevallendienst:*
   Een ziekenhuisopname na verblijf op de spoedgevallendienst.

10. *Tijdelijke hospitalisatie:*
    Elke patiënt opgenomen op de spoedgevallendienst die er de nacht doorbrengt.
    Synoniem: kortstondige hospitalisatie.

11. *Hospitalisatie met miniforfait (HMF):*
    Verblijf op de spoedgevallendienst dat leidt tot de facturatie van een miniforfait (perfusies, medicatie van cat.A, monitoring).

12. *Totale oppervlakte:*
    Totale m^2 van de architectonische eenheid.

13. *Reanimatiezaal:*
Lokaal uitgerust om één of meerdere patiënten in kritieke toestand op te vangen (KB 27/4/1998).

14. *Brancard:*
Daar waar een patiënt kan worden neergelegd en snel kan worden gemobiliseerd.

15. *Onderzoekslokaal:*
Daar waar zich één of meerdere brancards bevinden en waar diagnostische en therapeutische handelingen worden gedaan.

16. *Bed:*
Daar waar de patiënt de nacht kan doorbrengen op een comfortabelere wijze en minder mobiel dan een brancard.

17. *Kamer:*
Daar waar zich één of meerdere bedden bevinden.

18. *Afstand in minuten:*
De tijd nodig om van de ene plaats naar de andere te gaan met gezwinde stap, maar zonder te lopen.

19. *Wachtkamer:*
Kamer voorzien voor de geneesheer van wacht.

20. *Ziekenhuiscomité:*
Commissie die de spoedgevallendienst en de gebruikende partners samenbrengt.

21. *Regelmatige dienstvergaderingen:*
Vergaderingen die op regelmatige basis plaatsvinden en zodoende al het personeel samenbrengen.

22. *Dagelijkse overdracht van de wacht:*
Bespreking van de casussen van de wacht.

23. *Urgentiearts:*
Geneesheer-specialist, houder van de bijzondere beroepstitel in de urgentiegeneeskunde.

24. *Automatische link:*
Vereist dat er niet moet heringelogd/apart ingelogd worden.

25. *Spoedgevallendienst verlaten zonder gezien te zijn door een arts:*
Patiënten die de spoedgevallendienst verlaten waarbij al dan niet onderzoeken zijn volstrekt (EKG, bloedafname, etc.), maar die nog geen arts hebben gezien.

26. *LWBS:*
Patiënten die de spoedgevallendienst verlaten alvorens het medisch/klinisch onderzoek door een arts kon plaatsvinden en waarbij nog geen onderzoeken werden uitgevoerd (EKG, bloedafname, etc.).

27. *Van de spoedgevallendienst weglopen/verdwijnen vooraleer alle onderzoeken zijn afgerond, vooraleer episode is afgerond:*
Patiënten die de spoedgevallendienst verlaten waarbij reeds de onderzoeken werden uitgevoerd, maar waarbij de arts nog niet is langsgeweest.

28. *Inzet spoedartsen:*
Enkel volgende categorieën mogen worden vermeld:
Specialisten met de bijzondere beroepsbekwaming in de urgentiegeneeskunde
Specialisten in de urgentiegeneeskunde of de acute geneeskunde
De assistenten in opleiding van deze disciplines
De artsen met het brevet acute geneeskunde
De andere disciplines die nog mogen deelnemen aan de permanenties mogen niet worden vermeld.

29. *Laatste 3 cijfers van RIZIV nr.:*
Bij een RIZIV nr. a/bcdef/gh/ijk, wordt enkel 'ijk' vermeld.

30. *Aantal uren tijdens gewone werkweek:*
Van maandagmorgen 8u00 tot zaterdagmorgen 7u59 gedurende de opgegeven periode van de dag waarbij EXCLUSIEF op de spoedgevallendienst wordt gewerkt. Neem een gemiddelde week waarbij er buiten de recuperatie van nacht- of weekendprestaties, geen verlof wordt toegekend.

31. *Aantal uren tijdens het weekend:*
Van zaterdagmorgen 8u00 tot maandagmorgen 7u59, waarbij EXCLUSIEF op de spoedgevallendienst wordt gewerkt. Neem een gemiddeld weekend tijdens een week waarbij er buiten de recuperatie van nacht- of weekendprestaties, geen verlof wordt toegekend.

32. *Verlof per jaar:*
Aantal verlofdagen buiten de wettelijke feestdagen, inclusief de toegekende wetenschappelijke verlofdagen.

De dossiers van de 22 patiënten die de eerste dosis antibiotica pas na 6u of later toegediend kregen, werden door een spoedarts geëvalueerd. Hierbij konden een aantal zaken worden opgemerkt.

1. Bij twee patiënten was er geen opdracht tot antibiotica op de spoedopname. Gezien tijdens de observatieperiode werd overgeschakeld van papieren dossiers naar elektronische dossiers, is het mogelijk dat hierdoor voor deze 2 patiënten oorspronkelijk op het papieren dossier er werd vanuitgegaan dat deze patiënten antibiotica toegediend kregen.

2. Bij 4 patiënten werd reeds voor opname op de spoedafdeling een antibioticum gestart. Deze patiënten werden oorspronkelijk in de studie opgenomen, gezien toedienen van antibioticum voor opname geen exclusiecriterium was. Wanneer we echter deze patiënten uit de studie laten (en andere patiënten die thuis reeds antibiotica opgestart kregen (4)), dan kunnen we de resultaten nuanceren (zie later).

3. Bij 3 patiënten waarbij oorspronkelijk werd gedacht dat ze antibiotica kregen na 6u of langer, bleek de registratie fout te zijn. De oorzaak hiervan was de omschakeling van papieren dossiers naar elektronische dossiers. Deze 3 patiënten kregen dus de eerste antibiotica toegediend binnen de 6u na opname.

4. De overige 13 patiënten kregen laattijdig (>6u) de eerste dosis antibiotica toegediend. Bij 2 patiënten was de oorzaak hiervan het feit dat het lang duurde vooraleer een onderzoek kon uitgevoerd worden om de juiste diagnose te stellen. Bij 2 andere patiënten was de initiële diagnose onduidelijk. Bij 1 patiënt werd geadviseerd door de nefroloog om op spoed geen antibioticum op te starten. Het ging hierbij om een patiënt met urineweginfectie die al eerder sepsis ontwikkelde. Mogelijk was het niet correct om te wachten met antibiotica. Bij 2 patiënten werd vanop de spoedafdeling de opdracht gegeven om AB te starten op de afdeling, mogelijks omdat het voorgeschreven AB niet aanwezig was op de spoedafdeling. Bij de overige 6 patiënten was het niet mogelijk de oorzaak van laattijdige toediening te achterhalen.

Tabel 1 geeft een overzicht van de bestudeerde dossiers

TABEL 1: Overzicht oorzaken laattijdige (>6u) toediening.

OORZAAK LAATTIJDIGE TOEDIENING	AANTAL PATIENTEN
Technische investigaties (CT scan, sputumstaal,..)	2
Opdracht tot geven AB op afdeling	2
Reeds AB thuis opgestart	4
Onduidelijke diagnose	2

Fout in registratie (door omschakeling papier→elektronisch)	3
Opdracht wacht met AB	1
Niet te achterhalen, gezien retrospectief onderzoek	6
Geen opdracht AB op spoed	2

Wanneer we de 2 patiënten waarvoor op spoed geen opdracht tot AB was en de patiënten die thuis AB toegediend kregen (8) uit de studie laten, zijn de resultaten licht gewijzigd. De totale studiepopulatie omvat dan 116 patiënten (met nog steeds 2 missing data). Tabel 2 geeft hiervan een overzicht.

TABEL 2 Overzicht resultaten

Karakteristiek	**Resultaat 2009**	**Resultaat na bespreking outliers**
Totaal aantal patiënten, N	126	116
Gemiddelde leeftijd, jaren (SD)	63.10 (18.91)	62.99 (18.68)
Geslacht M/V	68/58	61/55
Infectietype		
Pneumonie N (%)	62 (49.2%)	56 (48.3%)
Urineweginfectie N (%)	15 (11.9%)	13 (11.2%)
Infectieuze COPD exacerbatie N (%)	16 (12.7%)	15 (12.9%)
Intra-abdominale infectie N (%)	15 (11.9%)	14 (12.1%)
Urosepsis N (%)	7 (5.6%)	7 (6.0%)
Erysipelas N (%)	5 (4.0%)	5 (4.3%)
Pyelonefritis N (%)	2 (1.6%)	2 (1.7%)
Andere N (%)	4 (3.2%)	4 (3.4%)
CRP mg/dL (SD) op moment van opname	11.40 (10.59)	11.67 (10.87)
APACHE II score (SD)	10.07 (5.14)[a]	10.09 (5.06)
Gemiddelde tijd tot toedienen eerste dosis antibiotica voor de volledige studiepopulatie in uren (SD; mediaan)	4.23 (3.00; 3.35)[b]	3.52 (2.31; 3.19)

Vergelijking 2005-2009(zonder outliers): p= 0.044 Er is dus een statistisch significant verschil in tijd tot toediening van de eerste dosis antibiotica voor de volledige studiepopulatie in 2005 vergeleken met 2009 (zonder outliers)

Tijd tot toediening van de eerste dosis antibiotica in uren	Aantal patiënten in 2009 [a]	Gemiddelde tijd tot toediening eerste dosis antibiotica in uren (SD; bereik) in 2009	Aantal patiënten na bespreking outliers [a]	Gemiddelde tijd tot toediening eerste dosis antibiotica in uren (SD; bereik) in 2009
< 4 uur	76	2.52 (0.93; 0.27-3.85)	74	2.56 (0.91; 0.27-3.85)
4 uur - 10 uur	40	5.70 (1.43; 4.07-9.95)	36	5.59 (1.38; 4.07-9.95)
10 uur -15 uur	6	11.84 (1.15; 10.33-13.32)	3	11.77 (1.30; 10.33-12.88)
> 15 uur	2	16.63 (0.017; 16.52-16.75)	1	16.52 (/)

a: 2 missing data

Karakteristiek	Studie 2009	Studie 2009 na bespreking outliers
Gemiddelde tijd tot initialisatie op de spoedafdeling in uren (SD; bereik)	3.46 (1.70; 0.42-7.68)	3.44 (1.62; 0.42-7.68)
Gemiddelde tijd tot initialisatie op de hospitalisatie afdeling in uren (SD; bereik)	6,64[a] (4.61; 0.25-16.75)	5.64 (4.18; 0.27-16.52)

Vergelijking 2005-2009 zonder outliers

tijdstip toediening eerste dosis AB 2005-2009(zonder outliers) spoed→p=0.001
tijdstip toediening eerste dosis AB 2005-2009(zonder outliers) afdeling→p = 0.810

Nationale enquête op basis van de erkende Belgische spoedgevallendiensten in 2009.

A. Basisformulier

Naam van het ziekenhuis:

Naam van de site van spoedgevallendienst:

Adres van de site van de spoedgevallendienst:

Naam van het diensthoofd:

Diensthoofd sinds:

Telefoonnummer:

E-mail:

Kwalificaties van het diensthoofd:

		Gediplomeerd in het jaar
Basisspecialiteit:		
Beroepstitel in de urgentiegeneeskunde:	☐ ja ☐ neen	
Gespecialiseerd in urgentiegeneeskunde:	☐ ja ☐ neen	
Certificaat in rampengeneeskunde en management:	☐ ja ☐ neen	
Aanvullend diploma ziekenhuisbeleid:	☐ ja ☐ neen	

Andere:

a)

b)

Onderwijsopdracht:

- ambulanciers	☐ ja	☐ neen
- verpleegkundigen	☐ ja	☐ neen
- studenten geneeskunde	☐ ja	☐ neen
- kandidaat-urgentieartsen[1] (6j.) / -acute geneeskunde[2] (3j.)/ -bijzondere beroepsbekwaming urgentiegeneeskunde	☐ ja	☐ neen
- andere specialiteiten	☐ ja	☐ neen

Stagemeester:

- kandidaat-urgentieartsen[1] (6j.) / -acute geneeskunde[2] (3j.)/ -bijzondere beroepsbekwaming urgentiegeneeskunde	☐ ja	☐ neen
- andere kandidaat-specialisten[4]	☐ ja	☐ neen
- Andere:	☐ ja	☐ neen

Deelname aan de wachtrol van het extern rampenplan:	☐ ja	☐ neen
Representatieve functie in provinciale en regionale commissies van DMH:	☐ ja	☐ neen

B. Kwantitatieve gegevens van de spoedgevallendienst.

Activiteitsgegevens van de site die de functie herbergt	**Precieze cijfers**	**Schatting[5]**
Aantal ziekenhuisopnames[6] in 2009		☐
Aantal ligdagen in 2009		☐
Aantal FTE[7] verpleegkundigen		☐
Aantal FTE geneesheer-specialisten		☐
Aantal FTE kandidaat-specialisten[4]		☐
Aantal FTE andere geneesheren		☐
Globale bedbezettingsgraad in 2009		☐
Percentage gewettigde dagen in 2009		☐
Activiteitsgegevens van de spoedgevallendienst	**Precieze cijfers**	**Schatting**
Aantal aanmeldingen op de spoedgevallendienst[8] in 2009		☐
Accidentele pathologie		☐
Niet-accidentele pathologie		☐
Percentage pediatrie (<16 jaar)		☐
Percentage psychiatrie		☐
Verdeling (%) 07 – 18u 18 – 22u 22 – 07u		 ☐ ☐ ☐
Aantal opnames via de spoedgevallendienst[9]		☐
Percentage opnames via de spoedgevallendienst		☐
Aantal tijdelijke/kortstondige hospitalisaties[10] op de spoedgevallendienst		☐
Aantal opnames met miniforfait[11]		☐
Percentage opnames via de 100 ambulance (100 ambulance – PIT – MUG)		☐

Percentage opnames via eigen middelen		☐
Percentage opnames via gewone ziekenwagen		☐
Percentage van patiënten verwezen door een arts zonder verwijsbrief		☐
Percentage van patiënten verwezen door een arts met verwijsbrief		☐
Percentage van aanmeldingen dat getransfereerd wordt naar een ander ziekenhuis		☐
Percentage van aanmeldingen dat in een ander ziekenhuis wordt opgenomen		☐
Beschrijvende gegevens van de dienst	**Precieze cijfers**	**Schatting**
Aantal administratieve FTE[7]		☐
Aantal FTE brancardiers		☐
Aantal FTE verzorgenden		☐
Aantal FTE verpleegkundigen		☐

C. Beschrijvingsgegevens omtrent de architectuur van de spoedgevallendienst.

Gegevens	Cijfers	Schatting
Totale oppervlakte[12] van de dienst (m^2)		☐
Oppervlakte van de ingangsgarage (m^2)		☐
Aantal ziekenwagens die simultaan in de garage kunnen		☐
Oppervlakte van de wachtzaal (m^2)		☐
Oppervlakte voor het administratief onthaalpersoneel (m^2)		☐
Oppervlakte van de verpleegwacht (m^2)		☐
Aantal monitoren op de dienst Met centrale monitoring?	☐	☐
Aantal reanimatiezalen[13]		☐
Aantal beademingsapparaten		☐
Aantal brancards[14] op de spoedgevallendienst		☐
Aantal onderzoekslokalen[15] voor patiënten (ambulant)		☐
Oppervlakte van deze onderzoekslokalen (m^2)		☐
Aantal bedden[16] op de spoedgevallendienst (tijdelijke hospitalisatie)		☐
Aantal kamers[17] voor tijdelijke hospitalisatie		☐
Oppervlakte van de kamers voor tijdelijke hospitalisatie (m^2)		☐
Aantal isoleercellen voor geagiteerde patiënten		☐
Oppervlakte van de isoleercel(len) (m^2)		☐
Aantal kamers voor isolatie van besmette patiënten		☐
Oppervlakte van deze isolatiekamer(s) (m^2)		☐
Aantal gipskamers		☐
Oppervlakte van de gipskamer(s) (m^2)		☐
Aantal sutuurzalen		☐
Oppervlakte van de sutuurza(a)l(en) (m^2)		☐
Oppervlakte van de medische bureaus (m^2)		☐

Oppervlakte van de ontspanningsruimte(s) (m^2)		☐
Oppervlakte van de bergingsruimte voor materiaal (m^2)		☐
Buizensysteem voor overbrenging van bloedstalen?	☐	
Radiografiezaal op de spoedgevallendienst?	☐	
Afstand tot de radiologiezaal (in minuten[18])		☐
Echotoestel op de dienst?	☐	
CT-scan op de dienst?	☐	
Operatiezaal op de dienst?	☐	
Operatiezaal voorzien voor spoedgevallen in operatiekwartier?	☐	
Bloedgas analyzer op de dienst?	☐	
Permanente bibliotheek ter beschikking op de dienst?	☐	
Internetverbinding beschikbaar op de dienst?	☐	
Voldoende telefonie voorhanden?	☐	
Draadloze telefonie (dect)?	☐	
Rechtstreekse telefoonlijn met dienst 100?	☐	
Radiofonie met 100 frequentie en interhospitaalfrequentie?	☐	
Aantal wachtkamers[19] binnen de dienst		☐
Oppervlakte van de wachtkamer(s) (m^2)		☐
Sanitair (toilet en douche) voorzien in de kamer?	☐	
Afstand naar de wachtkamer (in minuten)		☐

D. Functionele en organisatorische gegevens van de spoedgevallendiensten.

	Kwalitatieve gegevens	NG = niet gecommuniceerd
1.	**Bestaat er een ziekenhuiscomité[20] voor de spoedgevallendienst?**	☐ ja ☐ neen ☐ NG
	Zo ja, is dit multidisciplinair?	☐ ja ☐ neen ☐ NG
	Zo ja, komt het comité meer dan tweemaal per jaar samen?	☐ ja ☐ neen ☐ NG
2.	**Is de spoedgevallendienst een onafhankelijke dienst onder de verantwoordelijkheid van een diensthoofd?**	☐ ja ☐ neen ☐ NG
	Indien ja, is hij/zij dan voornamelijk op de spoedgevallendienst aanwezig?	☐ ja ☐ neen ☐ NG
	Indien ja, is hij/zij urgentiearts?	☐ ja ☐ neen ☐ NG
3.	**Bestaan er schriftelijke richtlijnen en standaardprocedures voor de spoedgevallendienst?**	☐ ja ☐ neen ☐ NG
	Zo ja, houden zij verband met diagnostiek en therapie?	☐ ja ☐ neen ☐ NG
	Zo ja, aangaande afspraken met andere diensten?	☐ ja ☐ neen ☐ NG
	Zo ja, aangaande ethische aspecten?	☐ ja ☐ neen ☐ NG
4.	**Heeft de spoedgevallendienst 24u/24 toegang tot de medische dossiers van de patiënten?**	☐ ja ☐ neen ☐ NG
5.	**Zijn er regelmatig dienstvergaderingen[21] op de spoedgevallendienst waarop de hele staff uitgenodigd is?**	☐ ja ☐ neen ☐ NG
	Zo ja, minstens 1 keer per maand?	☐ ja ☐ neen ☐ NG
	Zo ja, minstens 1 keer per week?	☐ ja ☐ neen ☐ NG
	Zo ja, soms samen met de verpleegkundigen?	☐ ja ☐ neen ☐ NG
	Zo ja, bestaan er vergaderingen aangaande mortaliteit, morbiditeit, kwaliteit?	☐ ja ☐ neen ☐ NG
6.	**Bestaan er dagelijkse overdrachten[22] van de patiënten van de wacht?**	☐ ja ☐ neen ☐ NG

7.	**Neemt de spoedgevallendienst deel aan het onderwijs in de urgentiegeneeskunde?**	☐ ja ☐ neen ☐ NG
	Zo ja, voor artsen / verpleegkundigen van het ziekenhuis?	☐ ja ☐ neen ☐ NG
	Zo ja, voor ambulanciers?	☐ ja ☐ neen ☐ NG
8.	**Wordt de opvolging van het intern rampenplan toevertrouwd aan de spoedgevallendienst?**	☐ ja ☐ neen ☐ NG
	Zo ja, organiseert U jaarlijkse oefeningen?	☐ ja ☐ neen ☐ NG
	Zo ja, actualiseert U het plan minstens 1 keer per jaar?	☐ ja ☐ neen ☐ NG
9.	**Vertegenwoordigt U uw ziekenhuis in extramurale vergaderingen?**	☐ ja ☐ neen ☐ NG
10.	**Stuurt de spoedgevallendienst systematisch een schriftelijk verslag naar de huisartsen?**	☐ ja ☐ neen ☐ NG
	Zo ja, wordt dit verstuurd onder de vorm van een papieren versie?	☐ ja ☐ neen ☐ NG
	Zo ja, wordt dit verstuurd via elektronische weg? (bvb. Medibridge,…)	☐ ja ☐ neen ☐ NG
11.	**Krijgt de spoedgevallendienst een kopij van het eindverslag van een hospitalisatie van een patiënt die opgenomen werd via de spoedgevallendienst?**	☐ ja ☐ neen ☐ NG
	Zo ja, systematisch?	☐ ja ☐ neen ☐ NG
12.	**Vindt U dat globaal gezien de situatie van de urgentieartsen[23] in uw ziekenhuis identiek is aan deze van de andere specialisten?**	☐ ja ☐ neen ☐ NG
	Indien neen, minder aantrekkelijk?	☐ ja ☐ neen ☐ NG
13.	**Kunnen er op uw spoedgevallendienst sommige patiënten onmiddellijk tijdelijk opgenomen worden?**	☐ ja ☐ neen ☐ NG
14.	**Heeft uw spoedgevallendienst een triageprocedure?**	☐ ja ☐ neen ☐ NG
	Zo ja, uitgevoerd door enkel een verpleegkundige?	☐ ja ☐ neen ☐ NG
	Zo ja, uitgevoerd door een verpleegkundige met een senior arts (acute geneeskunde, urgentiearts in opleiding, bijzondere beroepsbekwaamheid) / junior arts (brevet acute geneeskunde, specialist in opleiding)?	☐ ja ☐ neen ☐ NG
	Zo ja, permanent uitgevoerd door een arts en een verpleegkundige?	☐ ja ☐ neen ☐ NG

	Zo ja, uitgevoerd door enkel een arts?	☐ ja ☐ neen ☐ NG
	Zo ja, is de bestaffing voor de triage permanent?	☐ ja ☐ neen ☐ NG
	Zo niet, overdag incl. weekend en feestdagen (07-18u)?	☐ ja ☐ neen ☐ NG
	Zo niet, tijdens gewone werkdagen (maandag – vrijdag, 07-18u)?	☐ ja ☐ neen ☐ NG
	Zo niet, enkel bij 'overcrowding'?	☐ ja ☐ neen ☐ NG
	Zo niet, andere regeling? Specifieer:	☐ ja ☐ neen ☐ NG
15.	**Is er een samenwerking met een algemene wachtdienst van huisartsen? (huisartsen onafhankelijk van de ziekenhuisstructuur)**	☐ ja ☐ neen ☐ NG
	Zo ja, bevindt deze zich binnen de spoedgevallendienst?	☐ ja ☐ neen ☐ NG
	Zo ja, bevindt deze zich in de nabije omgeving van de spoedgevallendienst? (geschatte afstand in km:)	☐ ja ☐ neen ☐ NG
	Zo ja, bevindt deze zich op afstand van de spoedgevallendienst? (geschatte afstand in km:)	☐ ja ☐ neen ☐ NG
16.	**Is er een geïnformatiseerd medisch dossier aanwezig? (niet enkel beperkt tot administratieve registratie)**	☐ ja ☐ neen ☐ NG
	Zo ja, werd dit lokaal ontwikkeld (eigen systeem)?	☐ ja ☐ neen ☐ NG
	Zo ja, gaat het om specifieke software beschikbaar op de markt? (Encare, Urqual, …)	☐ ja ☐ neen ☐ NG
	Zo ja, bestaat er een automatische link[24] tussen het algemeen medisch dossier en het dossier van de spoedgevallen.	☐ ja ☐ neen ☐ NG
17.	**Worden de laboratoriumresultaten elektronisch overgedragen?**	☐ ja ☐ neen ☐ NG
18.	**Wordt de medische beeldvorming elektronisch overgedragen?**	☐ ja ☐ neen ☐ NG

E. Gegevens betreffende patiënten die de spoedgevallendienst vervroegd verlaten.

	Kwalitatieve gegevens	NG = niet gecommuniceerd
1.	**Heeft u exacte tijden in verband met de aankomst en het vertrek van de patiënten uit de spoedgevallendienst?**	☐ ja ☐ NG ☐ neen
	Zijn volgende tijden beschikbaar: - wachtzaaltijden - observatietijden - tijdstip aanvraag radiografie - tijdstip aanvraag laboratorium - tijdstip waarop alle onderzoeksresultaten gekend zijn - tijdstip toediening geneesmiddelen - tijdstip aanvraag van consulten - tijdstip uitvoering van consulten	 ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG
2.	**Wordt het percentage van patiënten die de dienst verlaten zonder door een arts gezien te zijn bijgehouden[25] (via geïnformatiseerde gegevens)?**	☐ ja ☐ NG ☐ neen
	Zo ja, hoeveel bedraagt dit percentage?	
	Zo niet, kan het percentage geschat worden (geen exacte meting mogelijk)?	☐ ja ☐ NG ☐ neen
	Hoeveel bedraagt deze schatting? (%)	
	Kunt u volgende categorieën onderscheiden? - Leaving without being seen (LWBS)[26] - patiënten die verdwenen/weggelopen zijn voordat hun episode werd afgerond[27] - patiënten die de spoedgevallendienst verlaten op medisch tegenadvies	 ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG ☐ ja ☐ neen ☐ NG
3.	**Bent u van mening dat deze percentages een kwaliteitsindicator zijn?**	☐ ja ☐ NG ☐ neen
	Waarom wel/niet?	

4.	**Volgt u deze indicatoren regelmatig op?**	☐ ja ☐ NG ☐ neen
	Zo ja, heeft u reeds maatregelen getroffen om de, volgens u, te hoge percentages te verminderen?	☐ ja ☐ NG ☐ neen
	Zo ja, welke maatregelen? En sedert wanneer?	

F. Gegevens betreffende kwalificatie en inzet spoedartsen[28]. Situatie op 31/1/2010.

	Kwalificatie (laatste 3 cijfers van RIZIV-nr.)[29]	Geboorte-jaar	Geslacht	Aantal uren/week tussen 08u00-20u59 tijdens gewone werkweek[30]	Aantal uren/week tussen 21u00-07u59 tijdens gewone werkweek[30]	Aantal uren tussen zaterdagmorgen 08u00 en maandagmorgen 07u59[31]	Verlof per jaar[32]
1.			☐M ☐V				
2.			☐M ☐V				
3.			☐M ☐V				
4.			☐M ☐V				
5.			☐M ☐V				
6.			☐M ☐V				
7.			☐M ☐V				
8.			☐M ☐V				
9.			☐M ☐V				
10.			☐M ☐V				
11.			☐M ☐V				
12.			☐M ☐V				
13.			☐M ☐V				
14.			☐M ☐V				
15.			☐M ☐V				
16.			☐M ☐V				
17.			☐M ☐V				
18.			☐M ☐V				
19.			☐M ☐V				
20.			☐M ☐V				

Hoeveel FTE[7]-artsen zijn er in de dienst nodig om de MUG- en spoedgevallenactiviteiten gedurende het ganse jaar te vervullen?