





Acute Care Areas in ER

Dr. Juan González Armengol Co-Chairman. Emergency Department Hospital Clínico San Carlos. Madrid (Spain) President of SEMES



which is your context?

Which is your context??

Do you Have??:

- A little Public Hospital with a little people assigned?
- A little Public Hospital with a high people assigned?
- A great Hospital with a high density people assigned with a low or great average stay in hospitalization zone?
- A Private Hospital with low average stay in Hospitalization stay?
- A population assigned to the hospital with a high average age?.....

Do you have overcrowding in your emergency services regularly or frequently regardless of the cause?

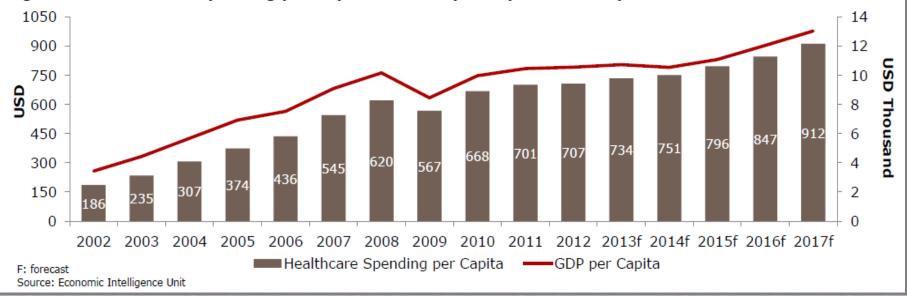
Spain Context

Some general features of Acute and emergency care in Spain , shared by countries in their socio-economic environment are :

- An exponential growth in attendance (26 millions/year) (1/2, but this is not true, the reality is that de users are only the 15% of de population
- The existence of numerous problems of coordination with other services and Primare Care.
- ER are the main gateway to the hospitalization (averaging between 70-75% of hospital admissions).
- These services condition in hospital bed management, surgical scheduling and managing waiting lists and health centers, the organization of the scheduled activities.
- 70% of users, varying according to the areas, who go to hospital emergency rooms, do so directly own initiative and en many cases are justified
- Of them all, does not reach as a median 20 % the number of patients being admitted finally in to hospital.

As economic welfare increased, Turkey's healthcare spending grew at a CAGR of 30.6% between 2002-2012

Figure 25: Healthcare Spending per Capita and GDP per Capita in Turkey

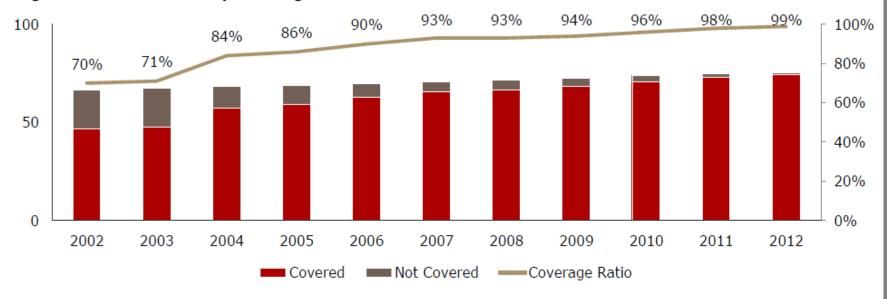


CAGR: Compound Annual Growth Rate

Healthcare Industry in Turkey. Investment Support and Promotion Agency of Turkey . January 2014

Social Security coverage has expanded rapidly in Turkey, covering 99% of the population in 2012





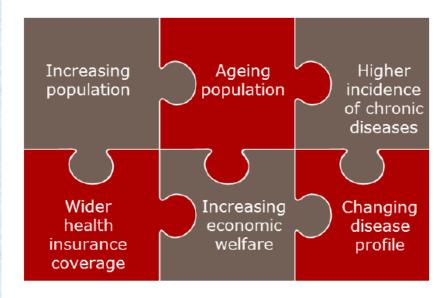
Source: SSI

75.2 million people covered

Healthcare Industry in Turkey. Investment Support and Promotion Agency of Turkey . January 2014

Increasing incomes, changing demographics and widespread access to healthcare services are the engines of growth in the Turkish healthcare system

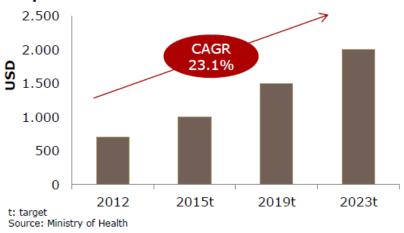
Figure 19: Drivers of Healthcare Growth



 The Turkish healthcare sector has been expanding and is expected to continue its expansion as changing population dynamics, higher incidences of chronic diseases, wider health insurance coverage and increasing economic welfare create increases in healthcare spending.

CAGR: Compound Annual Growth Rate

Figure 20: Targeted Healthcare Spending per Capita



- The Ministry of Health is targeting increased effectiveness, efficiency and equity in health service delivery as well as ensuring financial sustainability for its programs.
- Simultaneous improvements in the health system on both the demand side (increased health insurance coverage, expanded benefits and reduced cost sharing) and the supply side (expansion of infrastructure, health workforce and health services) are intended.
- As a result, healthcare spending per capita has been targeted to almost triple by 2023, reaching USD 2,000.

Chronic care strategies: A new Health paradigm

It has been known for many years that 75% of health spending is due to the progressive aging of the population with one or more chronic diseases, and increased investment in geometric costly new technology.

The epidemiological pattern as predicted by the WHO in the late seventies of the twentieth century, creates a greater demand for health services utilization, corresponding to 80% of consultations in primary care and 60% of hospital admissions, Join with average stays longer and with greater use of medical consultation services, emergency, day hospitalization and medication use.

However, this epidemiological pattern change has not led to an evolution of the organization and management of health services to meet the new needs.

In recent years, there has been the emergence of numerous strategies, focusing on the management and prevention of chronic diseases, which will mean a new paradigm in shaping the future of health care systems.

Chronic Care. EE.UU.

Multiple Chronic Conditions: A Strategic Framework

Optimum Health and Quality of Life for Individuals with Multiple Chronic Conditions



U.S. Department of Health & Human Services
December 2010

Chronic Care. European Union



EUROPEAN COMMISSION

Brussels, 9.11.2011 COM(2011) 709 final

2011/0339 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

on

establishing a Health for Growth Programme, the third multi-annual programme of EU action in the field of health for the period 2014-2020

(Text with EEA relevance)

{SEC(2011) 1322 final} {SEC(2011) 1323 final}

Chronic Care. European Union

Promoting good health is an integral part of the smart and inclusive growth objectives for Europe 2020.

Keeping people healthy and active for longer has a positive impact on productivity and competitiveness.

Innovation in healthcare helps take up the challenge of sustainability in the sector in the context of demographic change.

^{-&}quot;Europe 2020 - A strategy for smart, sustainable and inclusive growth"

⁻Communication of 29 June 2011 'A budget for Europe 2020"

comprising physical chronic medical conditions

- arthritis,
- asthma,
- chronic respiratory conditions,
- diabetes,
- heart disease,
- AIDS,
- hypertension

others

- substance use and addiction disorders,
- mental illnesses,
- dementia and other cognitive impairment disorders,
- developmental disabilities.

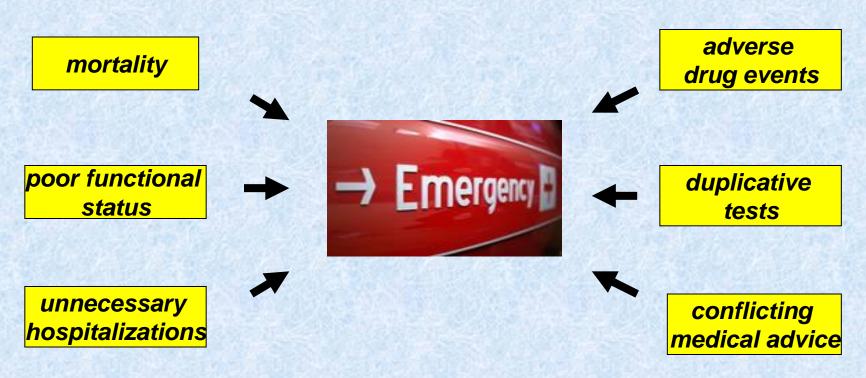




chronic diseases

all can be related to the Emergency Department

As the number of chronic conditions in an individual increases, the risks of the following outcomes also increase:



all can be related to the Emergency Department

Emergency Department

"Adaptation to reality"

- Social Environment: Evolution of the Society
- Legislative environment
- Administrative environment
- Commitment to the Hospital*
- Interface with other levels of care
- Interrelation with other specialists
- Scientific Evidence
- Self and continuus training



Emergency Department: Administrative and care environment

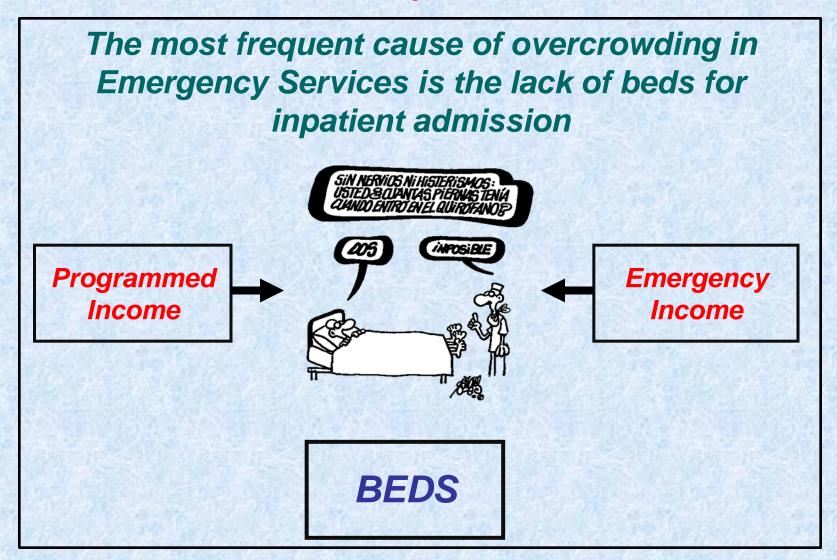
There are more than 26 million annual visits in the ED in Spain Managing an Emergency Service should address:

- Interest of citizenship
- Legislation in force
- Autonomic (regional) organization
- Hospital Organization

The structural and functional organization of ER should be a priority for the governing bodies of any center. There are a number of objectives:

- The demand for emergency care is predictable.
- The internal management that the hospital has improved.
- The responsibility of implementing alternative drainage devices to conventional income.

Commitment to the Hospital



My context

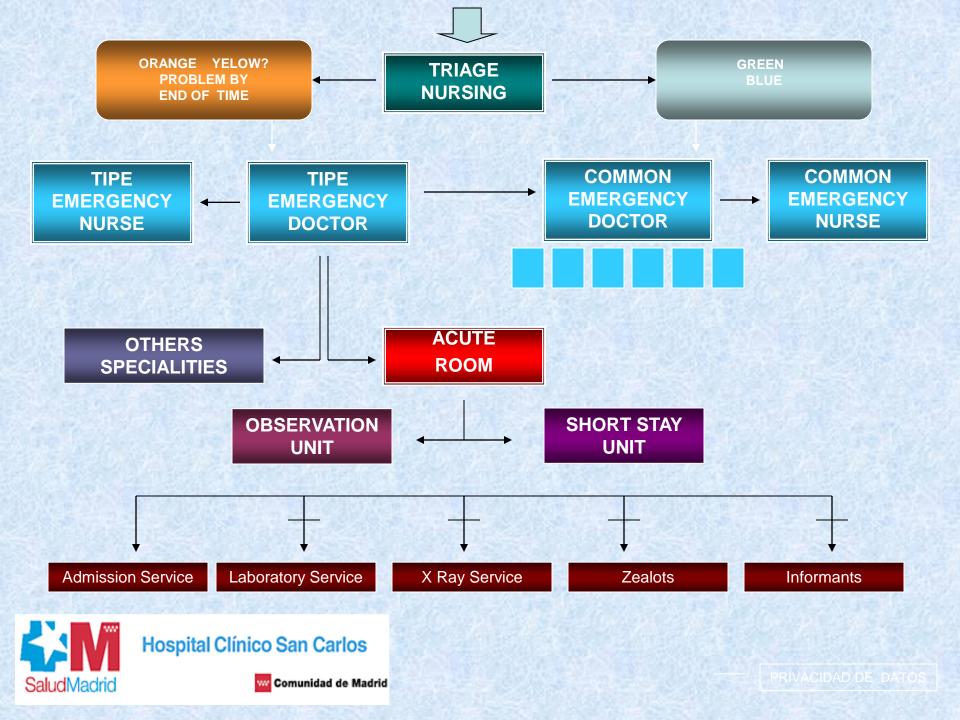




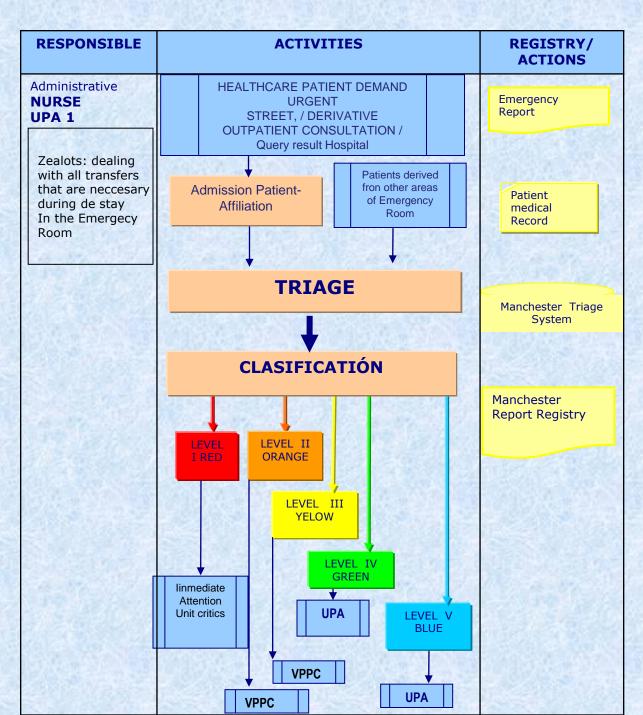
Terciary Hospital
High Complexity
400000 assigned people, with a 30% over 65 years

Hospital Clínico San Carlos ER Areas

- Area Classification Sick or Triage*
- Banquet resuscitation or critical*
- First Care Unit Patients or Scatter*
- Area Trauma
- Area of specialty (Ophthalmology, Otolaryngology)
- Area of Obstetricians and Gynecologists
- Department of Psychiatry
- Department of Pediatrics
- Acute Unit*
- Area of observation and monitoring of patients*
- Short Stay Unit Emergency** (Acute Medicine)
- Area of diagnostic imaging



FLOWCHART TRIAGE

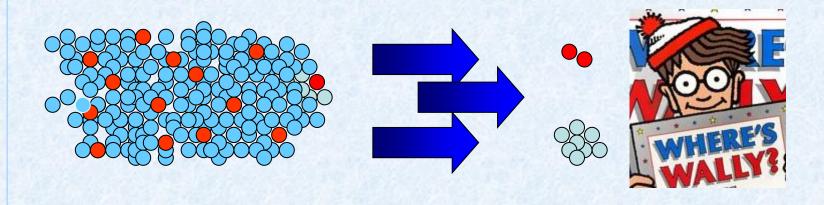


Introduction

Triage Concept

• The constant and growing demand in the Emergency Services causes serious difficulties in ensuring a quick and efficient patient care, which affects the quality of care and may lead to legal problems.

Force a System Hierarchy of Needs



Introduction

Triage Systems

| | ATS | CTAS | MTS | ESI | MAT |
|--------------------------------------|-----|------|-----|-----|-----|
| Five category-sacale | YES | YES | YES | YES | YES |
| Universal use in country | YES | YES | YES | NO | NO |
| Based on symptomatic categories | NO | NO | YES | NO | YES |
| Based on key discriminant | YES | NO | YES | YES | YES |
| Based on clinical algorithms | NO | NO | YES | YES | YES |
| Based on predefined scales emergency | YES | YES | NO | NO | YES |
| Electronic format | NO | NO | YES | NO | YES |

^{*} ATS (Australasian Triege Scale), CTAS (Canadian Emergency Department Triage and Acuity Scale), MTS (Manchester Triage System), ESI (Emergency Severity Index), Modelo Andorrano de Triaje (MAT).

Gómez Jiménez J. Emergencias 2003, 15: 165-74.

Introduction

Manchester Triage System, MTS

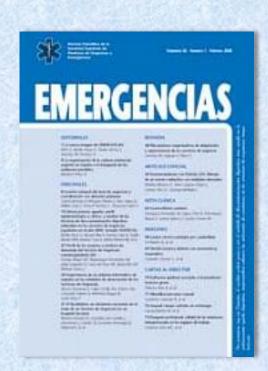
- Possible Reasons for consultation 52.
- Rank in 5 categories (colors).
- Each category translates into a maximum of attention, which allows prioritizing patients based on the severity.
- Diagram of decision, with a maximum of four questions (YES / NO).
- Symptoms and signs that differentiate between clinical priorities are called discriminators and are arranged in a diagram for each presentation.
- The discriminators are general (life-threatening, pain, bleeding, level of consciousness, temperature and time evolution) or specific (specific problem).

Introducción.

Manchester Triage System, MTS

| Level | Name | Colour | Objective |
|-------|-----------|--------|-----------|
| 1 | Critical | Red | 0 |
| 2 | Emergent | Orange | 10 min |
| 3 | Urgent | Yelow | 60 min |
| 4 | Normal | Green | 120 min |
| 5 | No Urgent | Blue | 240 min |

VPPC: Evaluation Process with potential patient complexity



The physician is necessary in triage at Tertiary Hospital Emergency Department

Martín-Sánchez FJ, González-del Castillo J, Zamorano J, Candel FJ, González-Armengol JJ, Villarroel P, Elvira C, López-Farré A

Alm: To assess the need of a physician on the ED triage, with the aim of identifying high-complexity patients using Manchester Triage System (MTS) at an Emergency Department.

Methods: Prospective observational study which enrolled all patients classified as very urgent (level 2 or orange) and urgent (level 3 or yellow) by the MTS in the First Assistance Unit (FAU) of the Emergency Department during a period of 12 hours, to be assessed by an experimented physician who decided the immediate location in an acute care or FAU area based on medical criteria. The validity of the decision was established according to the destiny of the patients once visited and measured by the admission index.

Results: The study included 100 patients, 45 of whom were eligible for the study, 10 (22.22%) placed by the MTS in acute care area as very urgent or orange and 35 (77.78%) in FAU area as urgent or yellow. The admission index of patients placed in acute care area by MTS was 40% (N=4) and in those placed in FAU area was 20% (N=7) (p=0.23). The triage physician placed 12 patients (26.67%) in an acute care area, 4 (8.89%) due to technical procedures and 8 (17.78%) due to their complexity and 33 patients (73.33%) in a FAU area. According to the physician criteria, the admission index of the patients placed in an acute care area due to their complexity was 87.5% (N=7) and of those placed in FAU 12.1% (N=4) (p<0,000).

Conclusions: The low capacity of the MTS to detect patients with potential high-complexity, makes the assessment of the physician necessary to guarantee the immediate location, adapting available services to individual necessities and therefore, optimising the resources. [Emergencias 2008; 20: 41-47]

VPPC: Evaluation Process with potential patient complexity

AIM

This operating procedure is to ensure the adequacy of care and attention to patient safety access room by systematizing activities of the multidisciplinary team.

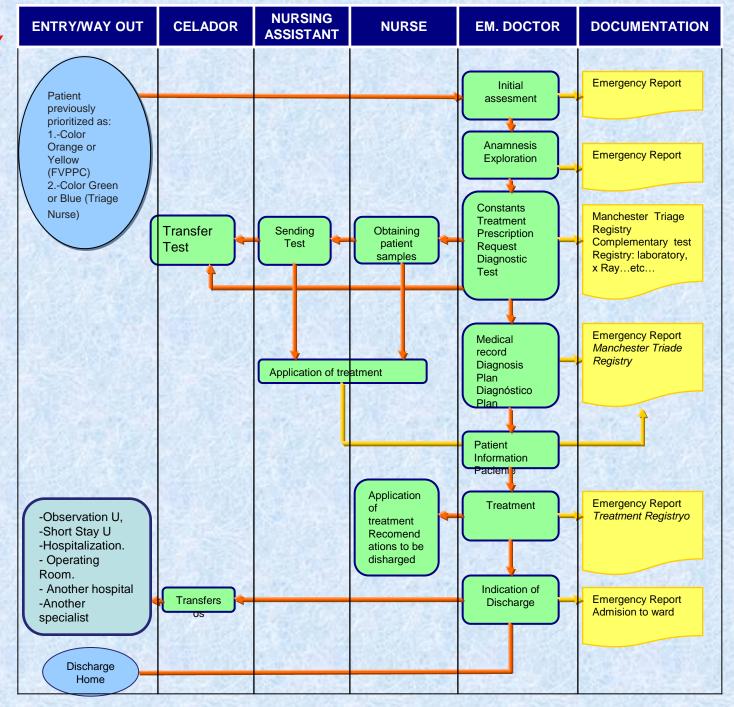
SCOPE

All patients over 15 years located in this room with pathology (acute or chronic exacerbation) requiring comprehensive supervision a controlled by treatment or physical condition does not allow ambulation. Vital that urgent or emergent encompass here stabilized, type those minor emergencies or urgent situations that contraindicate their attention on other areas.

DEFINITIONS

Urgency type: process not involving imminently life sick but that must be solved in a short period of time

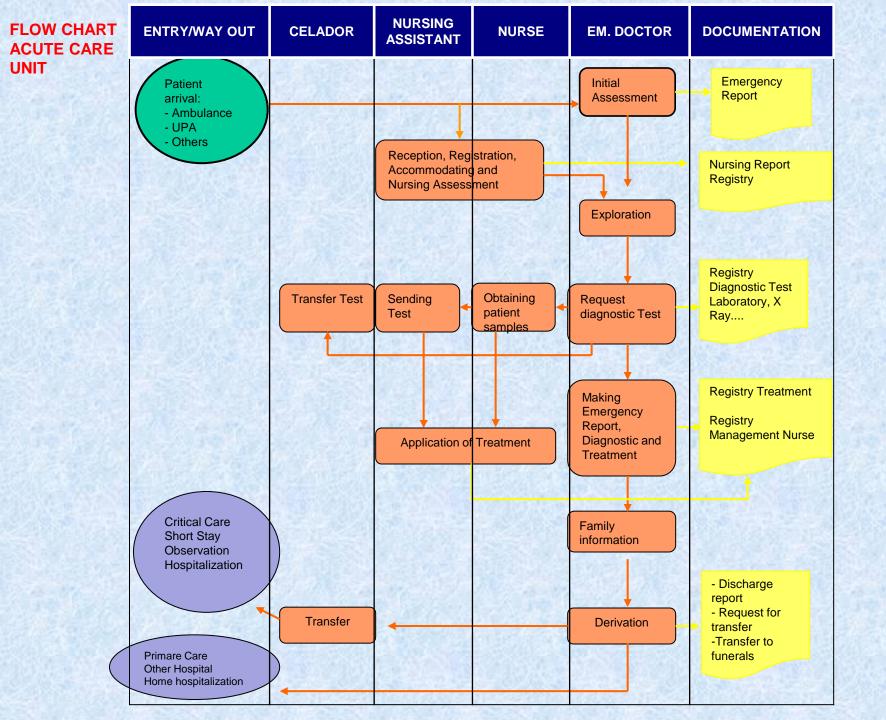
Vital Emergency: the situation of the patient care not to apply can immediately put the patient's life in danger even produce serious consequences both physical and intellectual FLOW CHART AMBULATORY PATIENT UNIT (UPA)



AMBULATORY PATIENT UNIT(UPA)

Be located in the UPA a greater whole unknown primary patient 15 years previously rated by the nursing staff using the Triage System in Manchester with priority levels IV to V (green and blue).

Is also posible to located in this room levels II and III (orange, yellow), which, after clinical assessment by the Optional CSFV (FVPPC), attention in this area is decided.



ACUTE CARE UNIT

SCOPE

All patients over 15 years of disease (chronic or acute exacerbation) requiring extensive surveillance, controlled by treatment or physical condition does not allow you to walk will be located in this room. Vital that urgent or emergent stabilized, type those minor emergencies or urgent situations that contraindicate their attention on other areas would be included here.

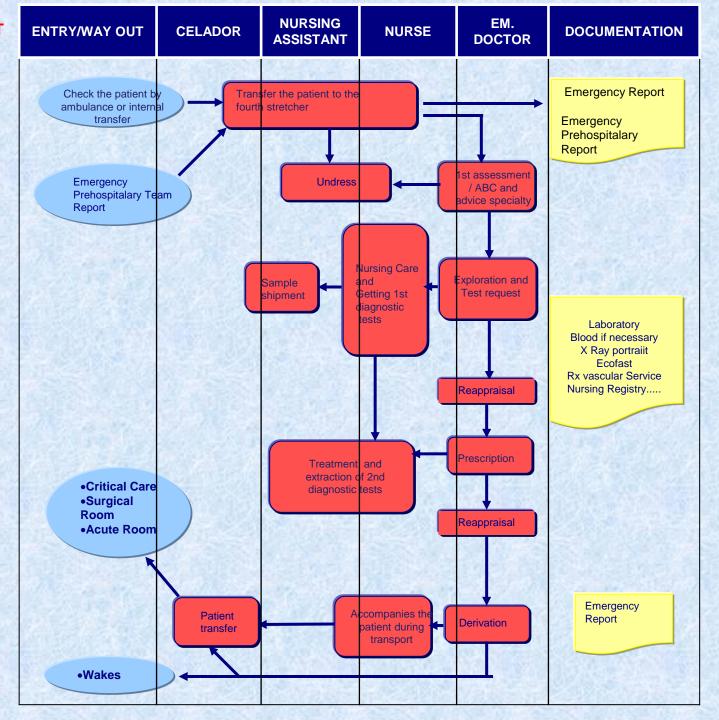
DEFINITIONS

- Urgency type: process not involving imminently life of the patient but must be solved in a short period of time
- vital Urgency: the situation of the patient not to apply immediate attention may endanger the patient's life even produce serious consequences both physical and intellectual

SYSTEM PERFORMANCE

The room is prepared for the acute care of patients with multiple pathologies that require special vigilance and need some diagnostic tests and specific treatment. Ratio Nurse/Doctor/ bed: 1/4-6

FLOW CHART CRITICAL CARE UNIT



CRITICAL CARE CARE UNIT

AIM

- 1 Ensure the safety of patients who need intervention and / or immediate care for the stabilization of a committed life situation.
- 2 The appropriateness of activities undertaken by the team of care shock, by systematizing them.

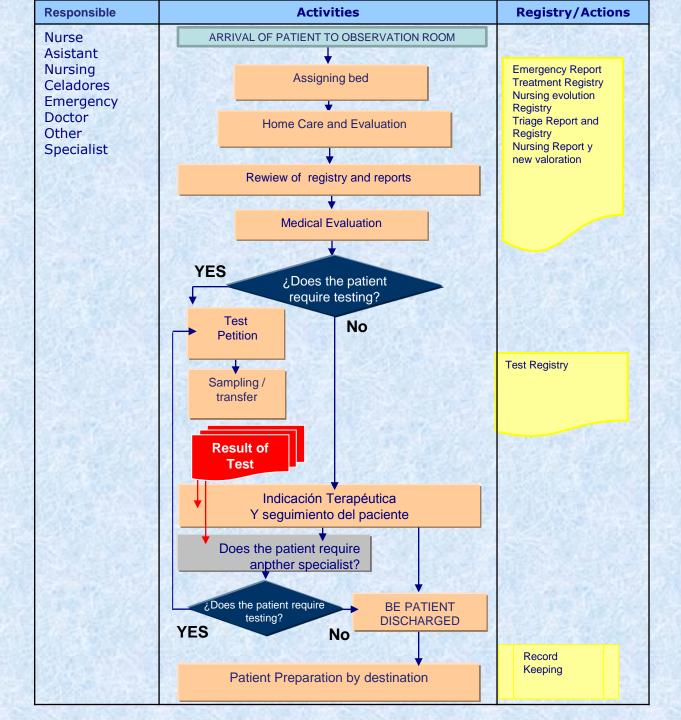
SCOPE

Attention all patient / client that their pathology requiring inmediate attention or hemodynamically unstable vital evident risk (cardiac arrest , sudden death, severe acute lung edema , severe arrhythmias , severe multiple trauma , massive bleeding , heart-beating donors , etc. .).

DEFINITIONS

The physical location provided material, medication, devices, with accessibility and good communication, in which attention and interventions on critically ill patients is performed.

FLOW CHART OBSERVATION UNIT



UO development is almost parallel to the development of own ER, the 24 hours coverage, and the answer quick to the possible changing conditions of patients.

Principles

Serious to be discharged but patients no need for hospitalization

Continuing care needs but no need for hospitalization

Risk of serious processes without need for hospitalization

Need supportive care or caregiveers, but without present medical Problems requiring hospitalization

Boose LA. The use of observation beds in emergency service units. Hospital Forum. 1965:30;38-9.

Taubenhaus LJ, Robilotti GD. The holding area: new arm of the ED. JACEP. 1972:1;15-19.

Landers GA, Waekerle JF, McNabney WK. Observation ward utilization. JACEP. 1975:4;123-125.

Diamond NJ, Schofferman JA, Elliott JW. Evaluation of an emergencydepartment observation ward. JACEP. 1976:5;29-31.

Bobzien WF. The observation holding area: a prospective study. JACEP. 1979:8;508-512.

Patients profile

Diagnostic Evaluation of syndromes (50%)

Intensive treatment of serious diseases (10-30%)

Psychosocial problems (5-20%)

Diagnostic procedures and / or therapeutic (5-20%)

Patients profile: diagnostic evaluation

Balance between the probability of disease and risk of the same

Whether or not to support diagnosis (biomarkers. ..)

Need time to make decisions treatment on patients

Serving intermediate intensity for a period of Limited time (<24-48 h)

⁻ Lee TH, Goldman L. Serum enzymes assay in the diagnosis of acute myocardial infarction. Ann Int Med. 1986:105;221-33.

⁻ Graff LG, Radford MJ, Werne C. Probability of appendicitis before and after observation. Ann Emerg Med. 1991: 20;503-507.

⁻ Hollander JE, Litt HI, Chase M, et al. Computed tomography coronary angiography for rapid disposition of low-risk emergency department patients with chest pain syndromes. Acad Emerg Med. 2007;14:112-116

| | | | | | | |
|-------------------------------------|---|---|---|--|--|--|
| | | CONCENTRATION OF PATIENTS | | | | |
| | | DIFFUSE AREA | SPECIFIC AREA | | | |
| OVIDERS BY TRAINING LEVEL) | GENERALLY INFORMED | Type I Scattered (Diffuse Area/Generally Informed) | Type II Open (Specific Area/Generally Informed) | | | |
| PROVIDERS (STRATIFIED BY TRAININ | WELL INFORMED (TRAINED ON PROTOCOLS) | Type III Virtual (Diffuse Area/Well Informed) | Type IV Closed (Specific Area/Well Informed) | | | |
| | > 0 | | | | | |

Table 2: Advantages and Disadvantages of Observation Units

| Type | Advantages | Disadvantages |
|--|---|--|
| Type I: Scattered Unit | 'any provider – anywhere' may increase number of enrolled observation patients Inexpensive Relatively easy to implement No additional staff required Uses existing hospital beds | No system change Unregulated or no protocols introduces practice management variation Little or no care standardization Lack of nursing focus, input Requires intense case management No team approach, little feedback Redundant equipment resources required |
| Type II: Open 'Defined' Observation Unit | 'any provider – specific location' Focused attention on patient movement through the system Specific location allows for targeted nursing and unit training Trained 'compliant' unit may overcome provider inexperience though close communication and tight unit protocol compliance Reduces redundant resources | Unknowledgeable or uncooperative providers may disrupt unit and reduce efficiency Lack of protocol standardization may result in wide variation in practice management Lack of unit oversight may lead to loss in efficiency Requires rigorous case management and tight controls Requires appropriate space |
| Type III: Virtual Observation Unit | trained provider – any location' Specified 'compliant' providers improve efficiencies by standardizing work-ups Standardized protocols may adjust for lack of untrained or uncoordinated unit Appropriate resource allocation | Unclustered patients reduce efficiency, requires redundant resources Nursing untrained or unfamiliar with protocols may disable system or reduce efficiency May require transfer of care to another provider if bed located away from ED Requires moderate case management |
| Type IV: Closed Observation Unit | trained provider – specific location Focused attention on patient movement through the system Trained staff delivering standardized care pathways Clustered patients provide enhanced efficiencies Seamless system may be designed from ED to unit | Expensive to implement Requires additional staff (physicians, nursing, support staff) Requires appropriate space and additional resource allocation |

The combination of a specific place with trained staff is as efficient

Type IV is the most appropriate

The UO are more efficient when they enter into billing, like other units

Currently represent 4-10% of total patients presenting to the ED, approximately 300-330 patients per bed / year

Ratio Nurse/Doctor/bed: 1/8-10

⁻ Brillman J, Mathers-Dunbar L. American College of Emergency Physicians: Management of Observation Units. Ann Emerg Med. June 1995:25:823-830.

⁻ Cooke MW, Higgins J, Kidd P. Use of emergency observation and assessment wards: a systematic literature review. Emerg Med J. 2003;20:138-142.

⁻ American College of Emergency Physicians. Management of Observation Units [policy resource and education paper]. Approved January 2008. www.acep.org

⁻ Roberts R, Graff L. Economic Issues in Emergency Medicine. In Emergency Observation Medicine. Emerg Med Clin North Am. 2001;19(1):19-33.

⁻ Mace SE, Graff L, Mikhail M, et al. A national survey of observation units in the United States. Am J Emerg Med. 2003;21(7):529-533.

Emergency Department: Administrative and care environment: Observation Unit

- Promote social worker figure in the Services Emergency (Ombudsman's Report, 1988).
- Strengthen the role of the ED as key decision point referral to the best level of health or geriatric (Acute, Hospital at Home, Centers support, health centers, residences)
- Ensure that the discharge reports are clear and legible.
- Facilitate unidosis medication to the patient (if possible).
- Perform the prescription according to the criteria of Rational Use Medicines (therapeutic reconciliation programs).
- To facilitate the monitoring of patients by doctor Primary Care (care plan).

Emergency Department: Administrative and care environment: Observation Unit

- Introduce to ED nursing homes in your area
- Facilitate communication from the ED and collaboration with residences, as well as attending courses and joint sessions.
- Encourage the creation, maintenance and accessibility of systems integrated computer.
- Facilitate and encourage physicians rotation Residencies by ED, and make joint protocols.
- Ensure the notification from the ED of patients with social problems to primary care physicians.
- Set alarms in electronic medical records of HUS.
- Include social value indicators in the quarterly (PEPPER) for each hospital, on their use and comparison (benchmarking).

Emergency Department: Integrated Health Computer Systems

GAP between the expected potential Technologies eHealth and empirically demonstrated

No solid research on risks implementation and profitability

Lack of evidence on improving Health Parameters

Consideration should be and evaluate the various Stages Life of technologies to maximize success probability

Black AD, Car J, Pagliari C, Anandan C, Cresswell K, et al. 2011 The Impact of eHealth on the Quality and Safety of Health Care: A Systematic Overview. PLoS Med 8(1): e1000387.doi:10.1371/journal.pmed.1000387. Available at: http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.1000387

Over 200,000 stories. HCE 30% (57% with Clinical Guidelines Diagnosis Support)

Only 1 of 20 quality indicators was better with HCE

Only 1 of 20 quality indicators was better in those using EHRs to support clinical guideline

There are doubts about the ability of the Technology for improving the quality of the attention

Romano MJ, Stafford RS. Electronic Health Records and Clinical Decision Support Systems: Impact on National Ambulatory Care Quality Arch Intern Med. 2011 Jan 24.

Evidence

Invest U.S.> 5 billion in Healthcare computer systems (HCS)

HCS based on the user profile and on quality, not only in sales and documentation

HCS only prove to be a good security tool (decrease in prescribing errors)

Gordon D. Schiff, M.D., and David W. Bates, M.D. Can Electronic Clinical Documentation Help Prevent Diagnostic Errors? New engl j med 362;12 march 25, 1066, 2010

Emergency Department: Scientific evidence

Emergency Departments are the instead of choice for studies of prevalence pathologies.

It is important to be aware of their need to set guidelines for intervention on patient groups:

- frail elderly
- frequenters
- social problems
- Causes of re-attendances
- Prioritization, recognition and classification systems in ED
- Conciliation therapeutic.
- Prevalence of averse effects in patients presenting to the ED
- Valoración geriátrica en los pacientes mayores de 75 años ingresados en la unidad de observación de urgencias. Martín-Sánchez FJ, Fernández C, González-Armengol JJ, Ribera Casado JM. Rev Esp Geriatr Gerontol. 2010;45:358-9.
- Moya Mir. La formación geriátrica en urgencias. Emergencias 2006;18:1-4.
- Roberts DC, McKay MP, Shaffer A. Increasing rates of emergency department visits for Elderly Patients in the United States, 1993 to 2003. Ann Emerg Med 2008; 51: 769-774.
- Martín Sánchez FJ, González Del Castillo J, Elvira C et al. Diferencias del sistema de triaje Manchester entre ancianos y adultos. XXI Congreso Nacional Sociedad Española de Urgencias y Emergencias. Emergencias 2009:264 (volumen extraordinario).
- Perfil clínico del paciente con insuficiencia cardiaca aguda atendido en los servicios de urgencias: Datos preliminares del Estudio EAHFE (Epidemiology Acute Heart Failure Emergency). Llorens P, MartínSánchez FJ, González Armengol JJ, Herrero P, Jacob J, Álvarez AB, Pavón J, Garrido M, Pérez-Durá MJ, González C, Gil V, Alonso H, y colaboradores del estudio EAHFE. Emergencias 2008; 20: 154-163.
- Moya Mir MS. Epidemiología de las urgencias del anciano. Monografías Emergencias 2008;2: 6-8.
- González García P. Síndromes geriátricos: conceptos e identificación. Monografías Emergencias 2008; 2: 9-11.
- El paciente geriátrico en urgencias. Martín-Sánchez FJ, Fernández-Alonso C, Merino C. An. Sist. Sanit. Navar. 2010; 33 (Supl. 1): 163-172.

Editorial

Emergency medicine: understanding ourselves better

JUAN JORGE GONZÁLEZ ARMENGOL

Presidente de la Sociedad Española de Medicina de Urgencias y Emergencias (SEMES), Madrid, Spain.

Emergencias 2014; 26: 4-6

Original article

Emergency department short-stay ward at a tertiary care hospital: 4 years' experience

JUAN JORGE GONZÁLEZ-ARMENGOL1, CESÁREO FERNÁNDEZ ALONSO1, FRANCISCO JAVIER MARTÍN-SÁNCHEZ1, JUAN GONZÁLEZ-DEL CASTILLO1, ANTONIO LÓPEZ-FARRÉ2, CARLOS ELVIRA3, ELPIDIO CALVO4, PEDRO VILLARROEL ELIPE1

Emergencias 2009;21:87-94

Editorial

Approaching the care of patients with chronic conditions: a role for emergency departments

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Emergencias 2013; 25: 343-344



Conclusions

- The ER should play an important role in the new health integration strategies
- The hospital bed is expensive and it is important to try to bring the potential income to the best healthcare facilities
- The configuration and structure of the ER must be made according to the demand and potential output
- There are a significant number of patients who are not well placed properly by current systems Triage
- Observation Units in the ER is configured as an excellent place to stratify risk, ensure safety and location provided more appropriate for patients. The Type III and IV are the most efficient.
- Acute Medicine Units or Short Stay must be physically or functionally integrated in the ER to ensure continuity of processes will
- EPs must expand our horizons in knowledge and research on prevalence studies and proposals for intervention



Thank you