

Providing Appropriate & Effective Care without Dispatching an Ambulance

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Emergency Communication Nurse System

(ECNS)

LOWCODE™ by

PrioritySolutions.



Houston, we have a problem....



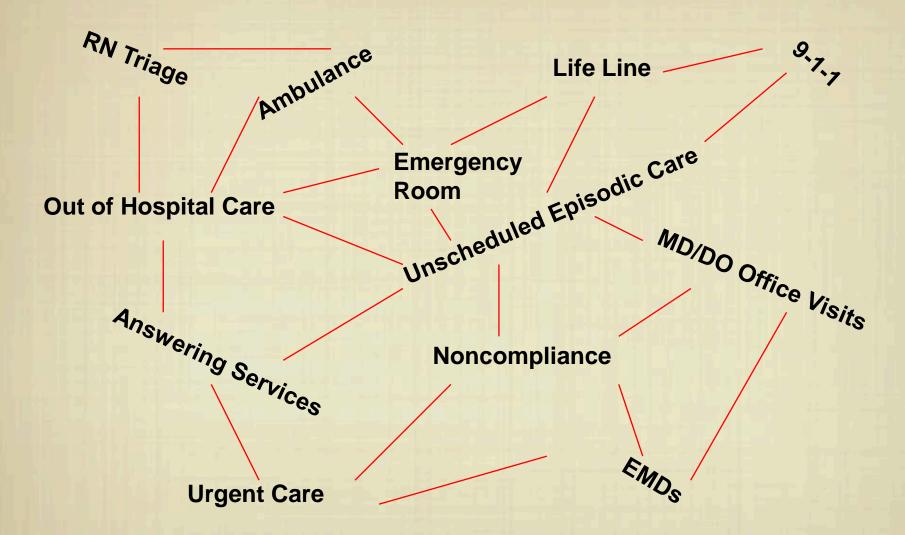




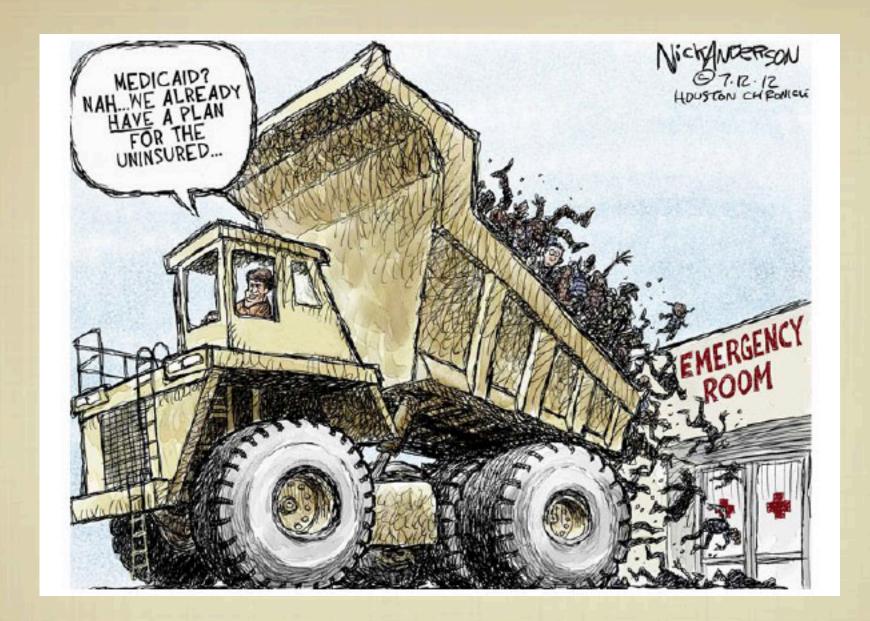
Unscheduled Medical Services



Current State of "Unscheduled Care"









Current State of "Unscheduled Care"

Reasons people call 9-1-1

- > To see if they needed to
- > It's what we have taught them to do
- Because their doctors tell them to
- They feel it is their only option

32.8% of 9-1-1 requests are non-emergent/non-urgent



Emergency Department Utilization

- According to the CDC the visit rate is about 38 for every 100 persons each year. In other words, every person has about a 1 in 3 chance that he or she will visit an ED within a year.
- > 50% of these ED cases would have done fine with a scheduled office visit.



Who are the most frequent ER users?

Patients who go to the ER > 4-times/year

- Account for 28% of all ER visits, but only 8% of all ER patients
- > 60% are white
- Average age 40
- Most have health insurance
 - 60% with Medicare/Medicaid
 - Only about 15% are uninsured
- Most have a primary care physician



And the abusers?

>Austin Study:

- A small number of individuals have a large impact
- Just 9-patients
- Accounted for 2700 ED visits over a 6-year period
- Cost of providing this care was \$3 million



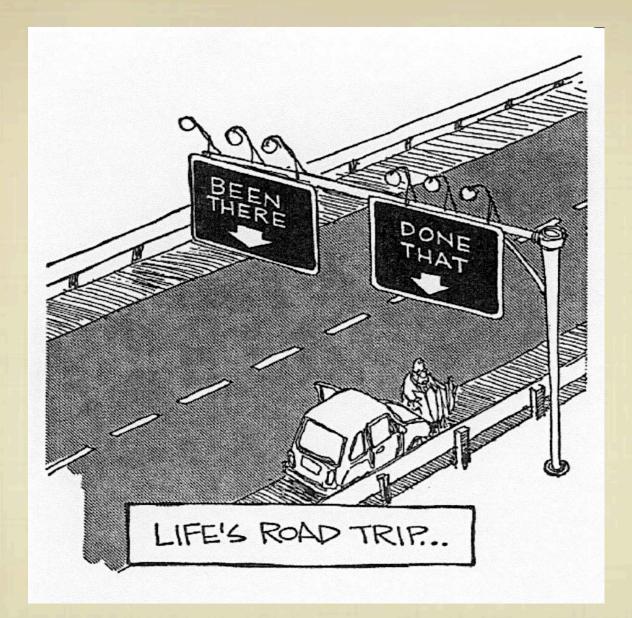


What about the uninsured?

- >1 in 5 use the ER as their primary source of medical care
 - Twice as often as the insured
 - Half as often as Medicaid patients
- Less than 2% are frequent ER users
- >More importantly
 - Less likely to know they have a chronic condition
 - Less likely to control it
 - Overall have a 25% \(\gamma\) risk of dying compared to the insured





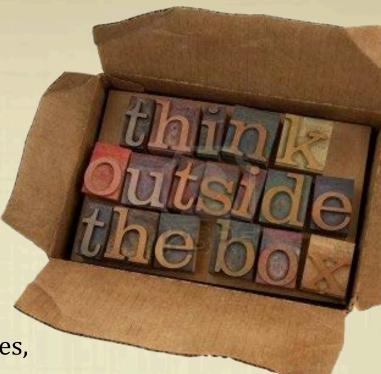




The GOAL

To safely reduce unnecessary utilization of EMS and ED services by connecting patients with appropriate sources of both medical care <u>and</u> social support.





- > Third party service providers:
 - Auto manufacturers
 - On-Star, Ford, BMW, Mercedes, Toyota, KIA, and Hyundai
 - Private 9-1-1 answering points
 - Call-center services
 - Elderly panic buttons, Jitterbug, GreatCall, ActiveCare, Apps(MyFlare), Lifeline, and Lifelink
- > 9-1-1 secondary nurse triage



Putting the pieces together







There are no inappropriate calls to 9-1-1.

Now, how we <u>RESPOND</u> to those calls can be inappropriate!



New EMS Role!

- > Right Resource
- > Right Time
- > Right Patient
- > Right Outcome





The first step...

Medical Priority Dispatch System

Jeff J. Clawson, M.D.

The Father of Emergency
Dispatch
Founded 1979



MPDS

- > Version 12.2
- ➤ Generates 33 Protocols –plus-
 - Zero response time CPR
 - Stroke Diagnostic Tool
 - Aspirin Diagnostic and Instructions
 - Sinking Vehicle
 - Standardized Case Entry/Case Exit
- Locally-defined Responses/Dispatches
- ➤ Potential emergency-based ECNS sites must first be an Academic Center of Excellence (ACE) with the IAED

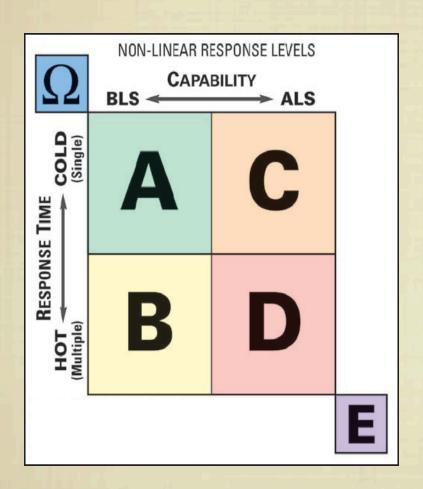


Five Standard Benefits of Protocol Usage

- 1. Reduces Liability
- 2. Enables Certification/Accreditation
- 3. Enables Quality Improvement
- 4. Enables Safe, Prioritization of Responses
- 5. Establishes a Standard of Service



MPDS Responses



Baseline Response Example All actual response assignments are decided by local Medical Control and EMS Administration		
local Medical	Control and EMS Administration Response	Mode
ЕСНО	Closest Apparatus—Any (includes Truck Companies, HAZMAT, or on-air staff)	
DELTA	Closest BLS Engine Paramedic Ambulance	HOT HOT
CHARLIE	Paramedic Ambulance	COLD
BRAVO	Closest BLS Engine BLS Ambulance (alone HOT if closest)	HOT COLD
ALPHA	BLS Ambulance	COLD
OMEGA	Referral or Alternate Care	



What is LowCode?

LowCode, the Emergency Communication Nurse System (ECNS) **software**, has been designed specifically to meet the following goals:

 Appropriately manage and support caller access to an increasingly burdened healthcare system, by better allocating resources to meet their non-emergent, non-life-threatening health situations.

-and-



What is LowCode? (cont.)

- 2) Help 9-1-1 Communication Centers and Ambulance Services optimize their outcomes by sending, when necessary, the
 - ✓ right personnel to the
 - ✓ right place, at the
 - ✓ **right time**, with the
 - ✓ right equipment, using the
 - ✓ right resources, to get the patient the
 - ✓ right care in the most clinically appropriate way;
 thereby reducing overall costs
 - ✓ (right cost).



How does the ECNS do this?

- ProQA, the world's renowned emergency triage software system developed by Priority Dispatch Corporation, is linked to a protocol software application, "LowCode", via a CAD interface.
- Callers to 9-1-1 not requiring immediate ambulance transport can be seamlessly directed between EMDs and a Registered Nurse who is specially-trained and certified as an Emergency Communication Nurse.
- ECNs then collect information through the use of protocols and EndPoints, a Directory of Services application, to determine the appropriate level of health services required. They also then help facilitate this care.



Benefits of ECNS include:

- Effective and standardized clinical assessment and assignment of appropriate recommended care level
- Safely manages the growing demands on health care providers
- Reduces the demand on ambulance transportation services
- Reduces ER visits and wait times
- Reduces unnecessary visits to a primary care physician, yet also provides PCP appt. scheduling
- Solid track record in multiple countries around the world for over 14 years
- Numerous integration efforts completed with 3rd party software



Current Clients:

- MetroSafe; Louisville, Kentucky, USA
- MedStar EMS; Dallas/Ft. Worth, Texas, USA
- Royal District Nursing Services; Melbourne, Australia
- London Ambulance Service; United Kingdom
- East of England Ambulance Service; United Kingdom
- Yorkshire Ambulance Service; United Kingdom
- Great Western Ambulance Service; United Kingdom
- South Central Ambulance Service; United Kingdom



Current Clients - continued -

- Queensland Ambulance Service; Australia
- > 13 Queensland Health; Australia
- GP Assist; Australia
- New South Wales Ambulance Service; Australia
- NetCare; South Africa
- Medical Rescue International; Botswana
- > In Development:
- Greenville County EMS, South Carolina, USA
- Niagara EMS, Ontario, Canada
- North Shore Health System, NY, USA
- Polk County, Florida, USA
- Salt Lake City, Utah, USA



By the Numbers...

- ECNS currently has 14 User Centers in 5 countries on 4 continents
- There are over 750 trained Emergency Communication Nurses in the USA and UK alone
- ECNS currently has over 200 protocols each containing a clinical rationale for the ECN along with a reference list for additional information
- Over 2,000,000 calls have been processed <u>without an</u> <u>untoward incident</u> attributable to the system or content

The Emergency Communication Nurse System

(ECNS)

The ECNS ensures safe, effective and appropriate outcomes according to the needs and clinical presentation of the patient. Importantly, it is holistic.

Performed correctly, it offers many advantages such as the appropriate medical utilization of resources and providing support and reassurance to the patient/caller.

Using EndPoints, it delivers locally-tailored care to the patient, appropriate to their needs, and reduces unnecessary delays in treatment (such as long waits in an ED).

* Co-locating the ECN in the 9-1-1 Center is crucial to success



ECNS Will....

- Help bring appropriate care closer to the patient (not necessarily ambulance care)
- Be responsive to patients needs
- Be credible and acceptable standardized and reproducible
- > Enable efficient and effective use of resources
- Link to other agencies and services (Physicians, EDs, Urgent Care Centers, clinics, etc.)
- Use 'Best Practices', reflect national guidance, and local services as well as being locally-tailored



Principles of ECNS

- Medical Direction is crucial:
 Assures EMS system integration into Operations
 Assures Medical control over all system participants
- Nurse staff co-located in the 9-1-1 center promotes: Collective program management and effective communication
- Patient's needs are of utmost importance
- Empowering patient with knowledge
- Good questioning and active listening techniques
- Safety and with proven efficacy
- Bundled Resources, using EndPoints



Principles of ECNS (continued.....)

- Attitude of empathy and patience
- If a caller feels the situation is an emergency, it is treated as such – err on the side of caution
- Override if patient insists
- Most emergent questions asked early in assessment
- Questions are asked in a non-leading, unassuming, predetermined manner
- Aid patients in managing their own care
- > ECNS is *not* a barrier to care
- Getting to the chief symptom effectively
- Always include callback or follow-up instructions for lack of improvement or changes in the patient's condition



ECNS Protocols

- Trinary flow protocols (yes, no, unsure)
- Symptom and history-based
- > Evidence-based
- Appropriate Recommended Care Level
- > 5 principles
 - Most calls benign, self limited
 - Caller information, education
 - Continuing education for nurses
 - Supports good physician care
 - Maximally customizable



The Call Process

- Provide a quick and consistent direction, without leading
- Multiple questions to be interpreted in context (in the absence of visualizing patient)
 - Call Intake
 - Pre-Triage Assessment
 - Protocol Selection
 - Protocol Assessment
 - Recommended Care Level (Disposition)
 - Point of Care, if applicable (Based on RCL)
 - Self Care Instructions
 - Directory of Services, EndPoints, as applicable
 - Callback Scheduling, as applicable
 - Case Completion/Final Instructions
 - Documentation/Acceptance of Call



Recommended Care Level (Disposition)

In essence, calls can be broken down into several outcomes:

- Problems that require an Immediate EMS Response
- > A Scheduled Appointment
- Problems that require an In-Person Evaluation as soon as possible (Same Day)
- Problems that require a specialized remote clinical assessment and instructions
- Problems that require an In-Person Evaluation within1-3 Days/follow-up
- Problems that require Self Care and/or ECNS Follow-Up Instructions



Point of Care

Local Resources within the Community

- 1) Scheduling patient callbacks should be a standard of care.
- 2) The ECN facilitates and assists the patient in scheduling appointments/offering resources such as:

Community Paramedics

Physician Specialist Crisis

Urgent Care Center

Dentist/Oral Surgeon

Behavioral Health

Social Services

Pediatric Services

Management Services

Health Departments

2-1-1 or Local Government Programs

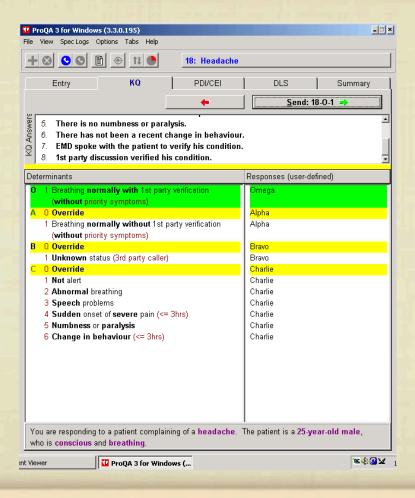
Falls Team/Minor Injury Unit



LOWCODE SYSTEM NAVIGATION

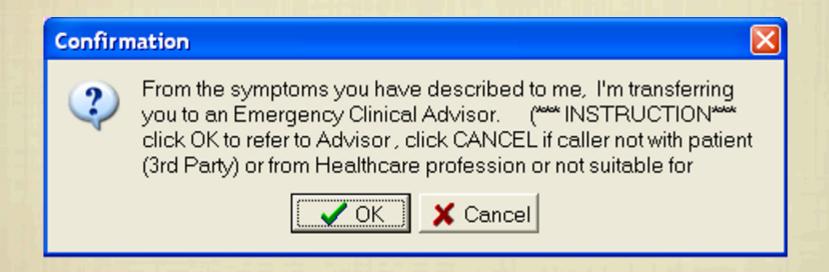


EMD triages using ProQA and a low acuity determinant is reached

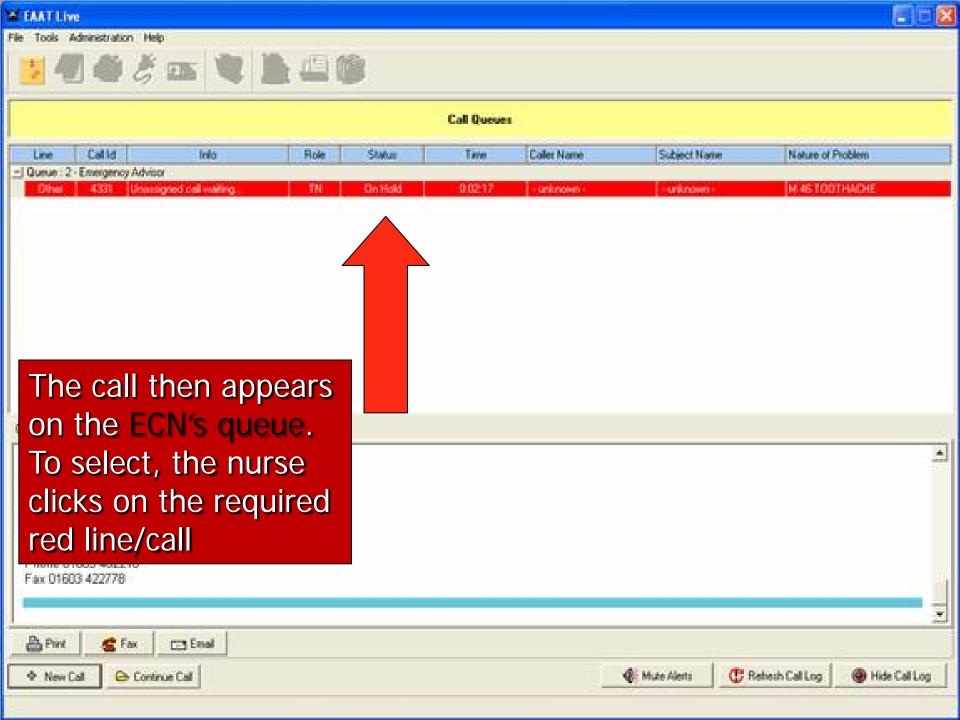


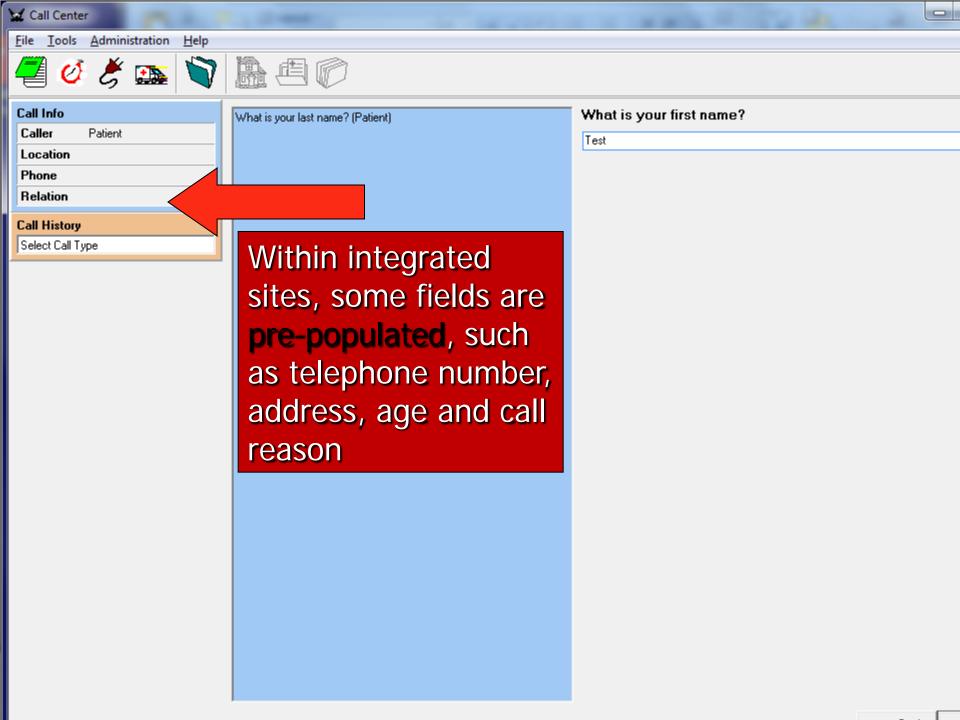


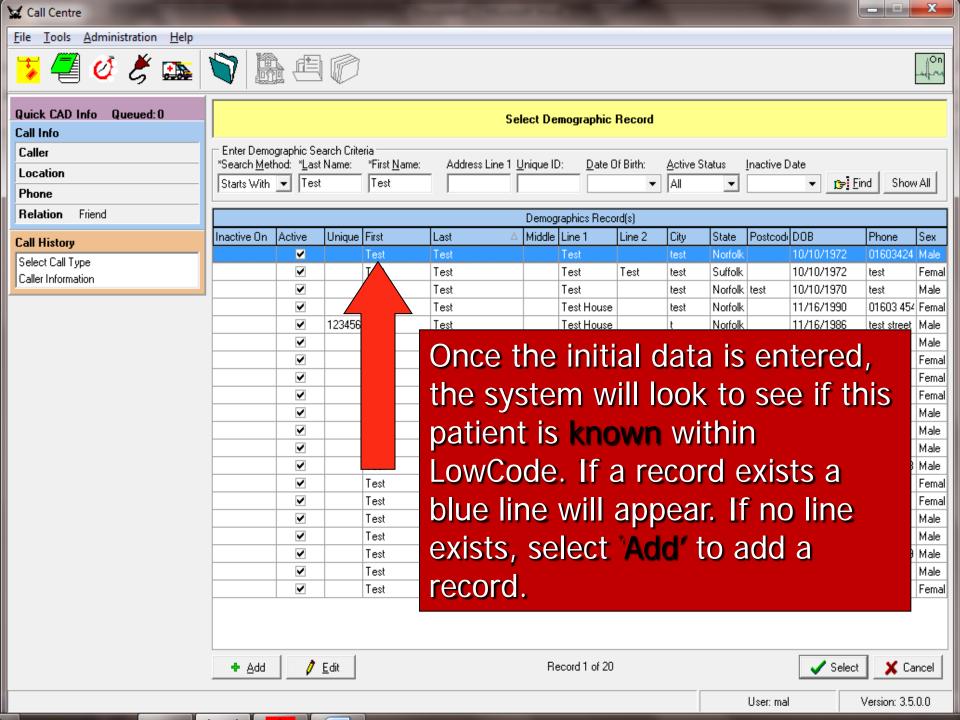
Depending on the CAD provider, the EMD may receive a Pop Up Box (as below) or have to select an option to send

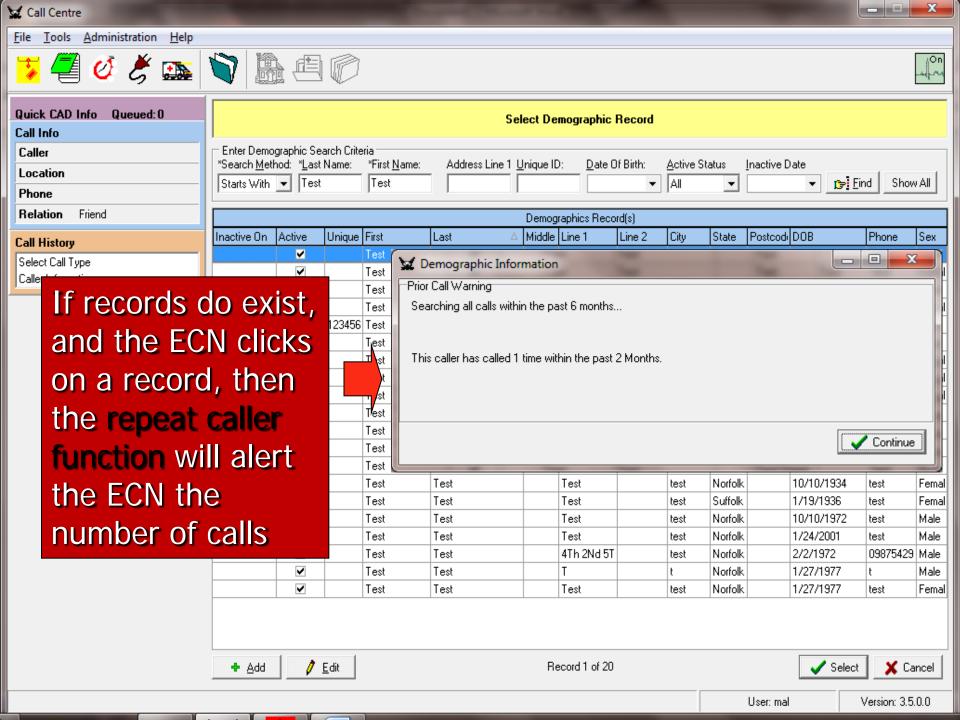


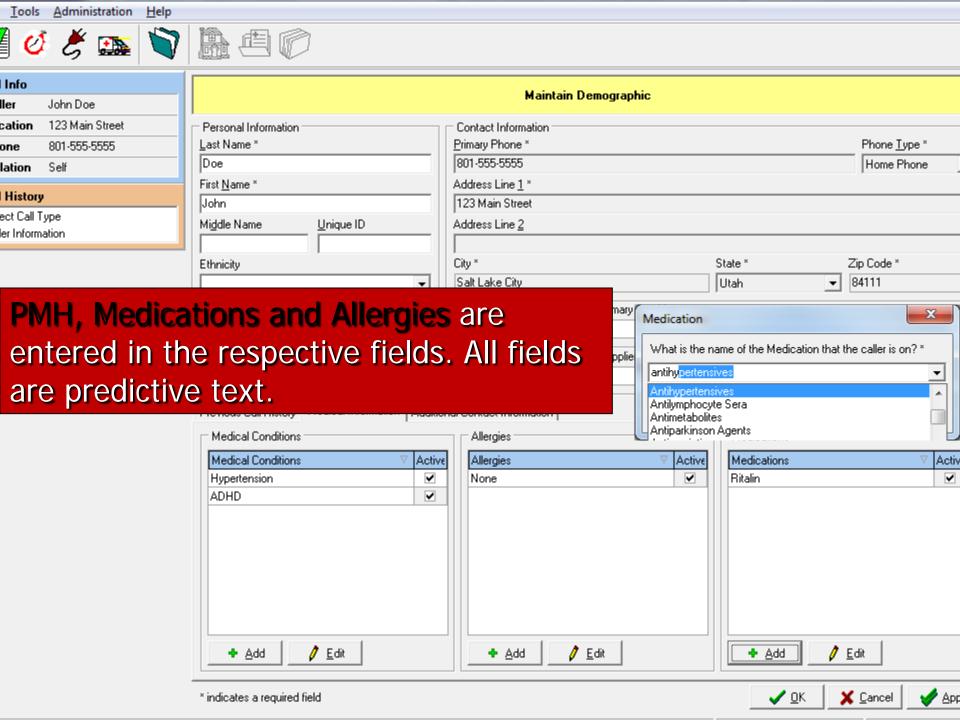


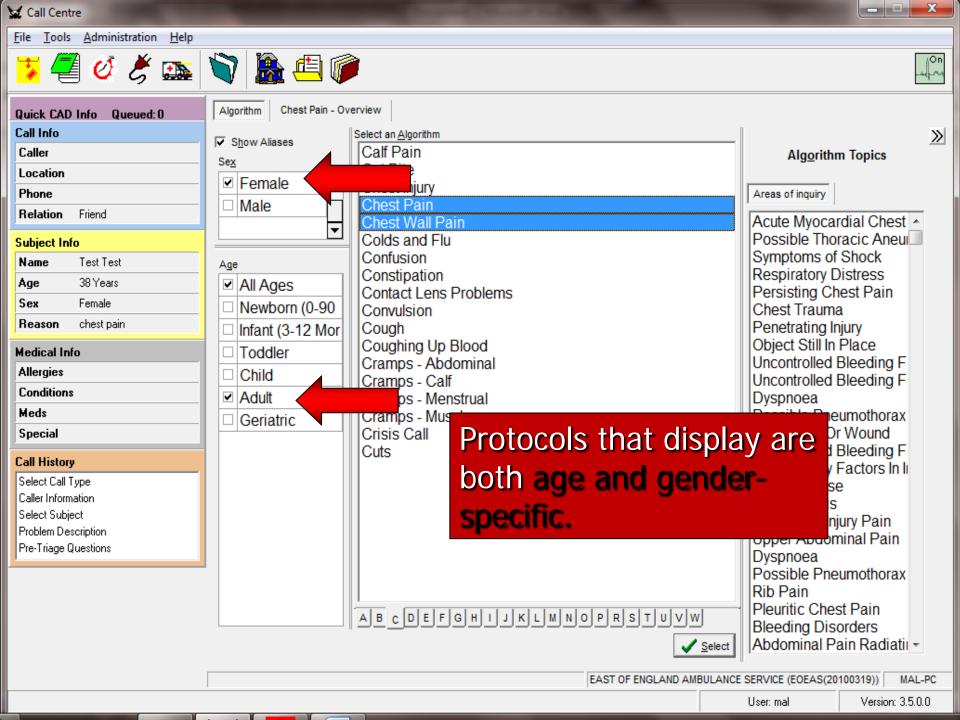


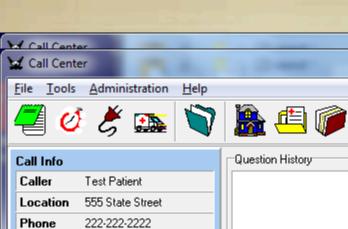






















Callel	Lest Latieur		
Location	555 State Street		
Phone	222-222-2222		

Self

Relation Subject Info

Test Patient Name

42 Years Age Sex Female

chest pain Reason

Medical Info

Allergies Conditions

Meds

Call History

Select Call Type

Caller Information

Select Subject Problem Description

Pre-Triage Questions

Question History

Chest Pain - Question 1 of 64 Chest Pain - Overview

OVERVIEW

Chest pain is an unpleasant physical sensation emanating from the thorax. It may be secondary to cardiovasc pulmonary, gastrointestinal, musculoskeletal or psychological causes. There is no correlation between the interpretation between the interpretation between the interpretation of the control of the cont of the pain and the seriousness of the underlying disorder, and in fact the classical syndrome of cardiac isch is generally described with words such as squeezing, pressing and dull rather than "pain" per se.

There are many possible causes of chest pain and they range from conditions which are potentially life threa to those which are far less serious. Potentially life-threatening causes of chest pain include angina, myocardi infarction, pulmonary embolism, and aortic dissection. Less serious causes include acute pericarditis, pleurisy costochondral pain, chest wall pain, oesophageal pain, emotional disorders, cervical disc disease, osteoarthr the cervical or thoracic spine, abdominal disorders (peptic ulcer, hiatus hernia, pancreatitis, biliary colic), pneumonia and intercostal neuritis (as with herpes zoster).

CARDIOVASCULAR RELATED PAIN

of hypertension.

aeroplane trip.

pressure, squeezing or constricting, with radiation to the inner aspect of the left arm. The pain is predictably triggered by exertion, emotional upset, or meals, and it is usually relieved with nitroglycerine. Since angina is associated with coronary artery disease, the patient usually has one or more coronary risk factor present; the include male gender, age >55, history of hypercholesterolaemia, hypertension, diabetes, cigarette smoking an positive family history of cardiac disease. Unstable angina pectoris is defined as prolonged (>20 minutes) epis of angina, angina that occurs at rest, or angina not relieved with three nitroglycerine tablets. Unstable angina medical emergency.

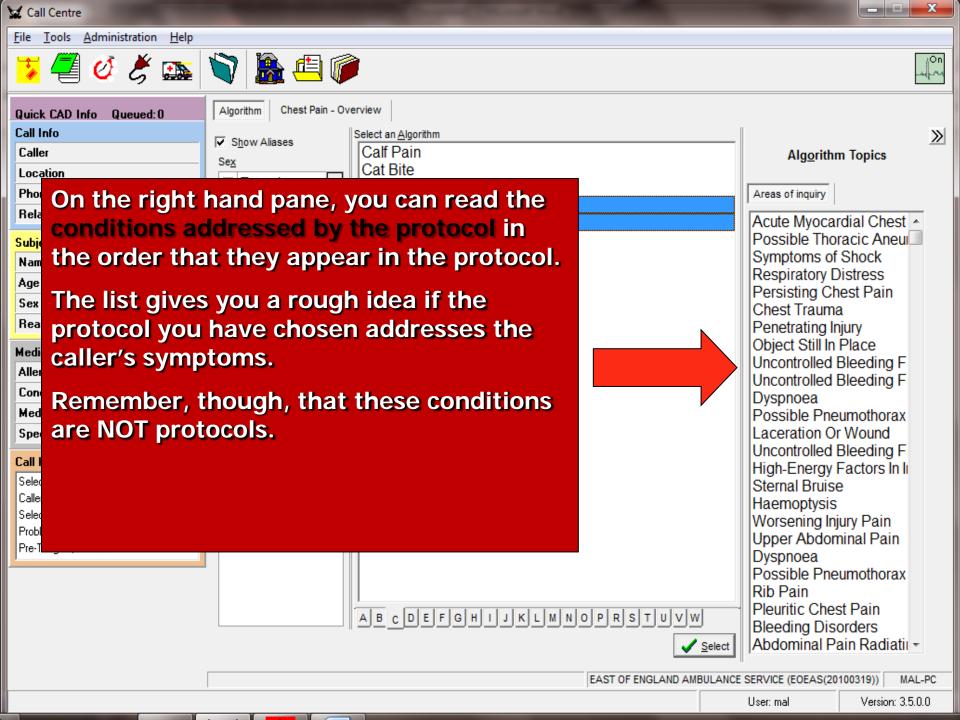
Angina pectoris should always be ruled out in patients complaining of "chest wall pain" and the history is an

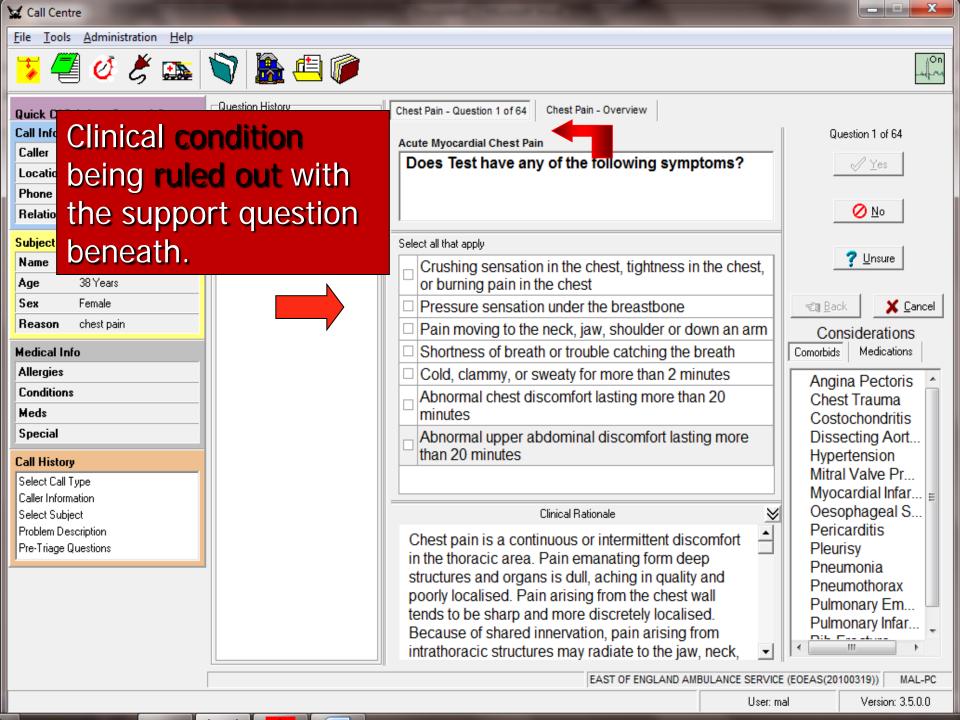
effective means to do so. Angina pectoris is associated with chest pain that is classically described as subsi

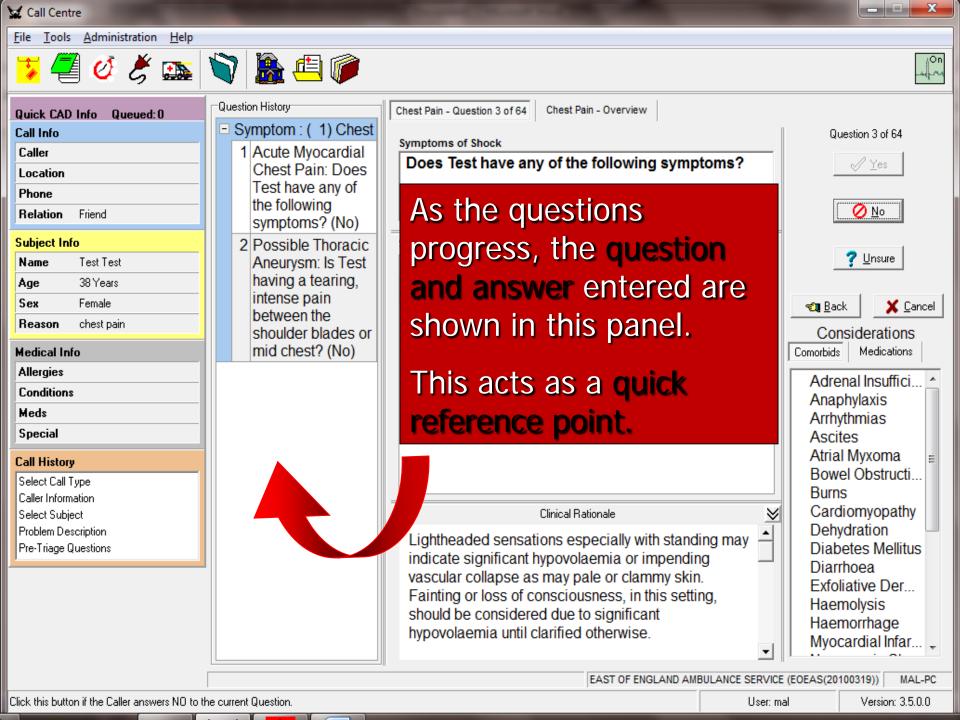
The pain associated with acute myocardial infarction is similar to that of angina pectoris, though it may be more severe or have characteristics similar to that of unstable angina. It is often associated with dyspnoea, nause vomiting, diaphoresis and/or lightheadedness.

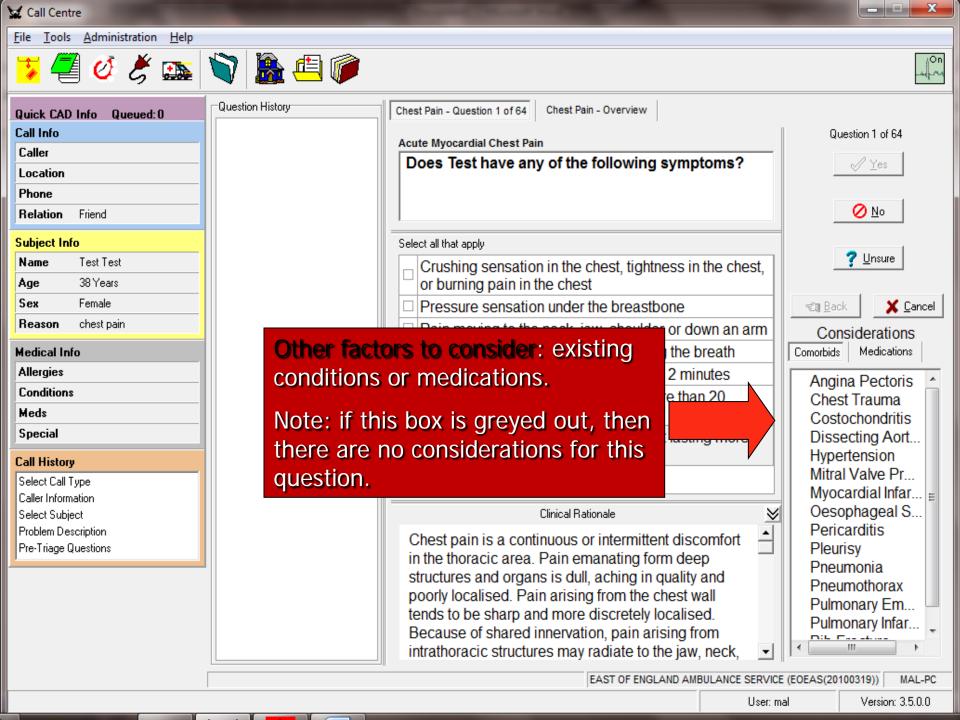
Aortic dissection is associated with very severe, tearing or ripping chest pain that radiates to the back and is affected by position. Aortic dissection is slightly more likely to occur in pregnant patients and in those with a h

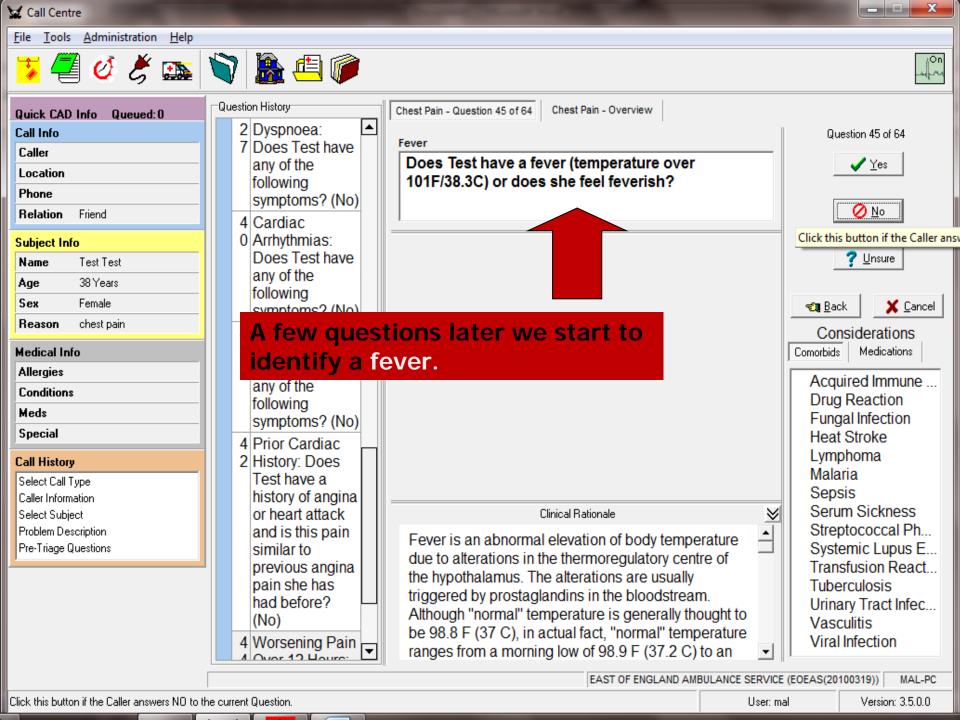
Acute pulmonary embolism is frequently accompanied by pleuritic, sharp chest pain and shortness of breath. also be accompanied by cough and haemoptysis. Pulmonary emboli are more likely to occur in people who are immobilised or are in a leg cast, people with a history of cancer or people who have recently had a long car of

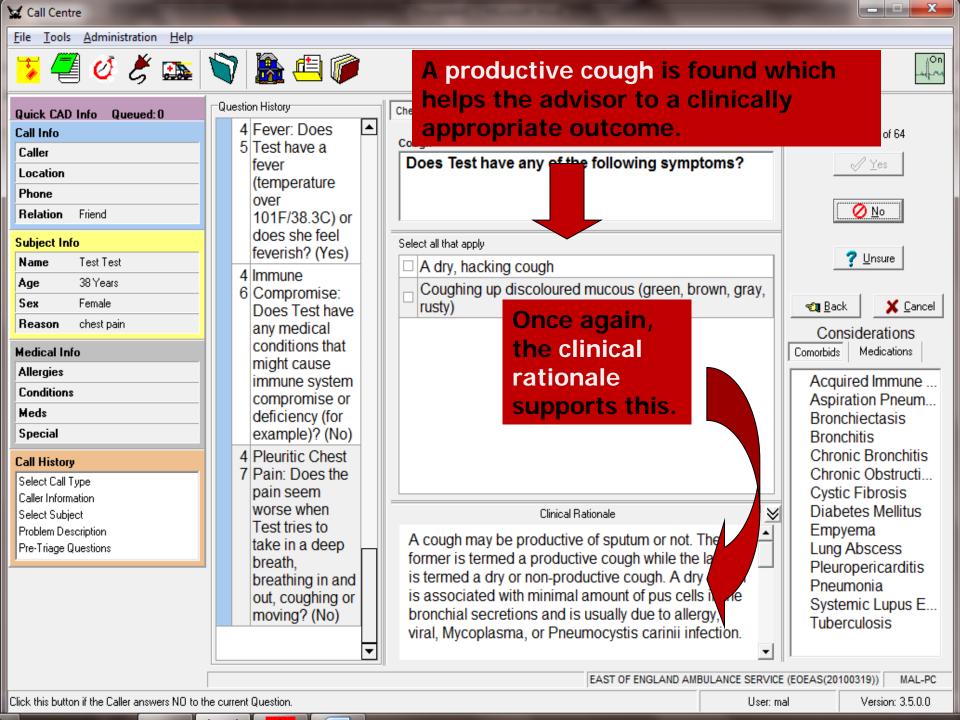


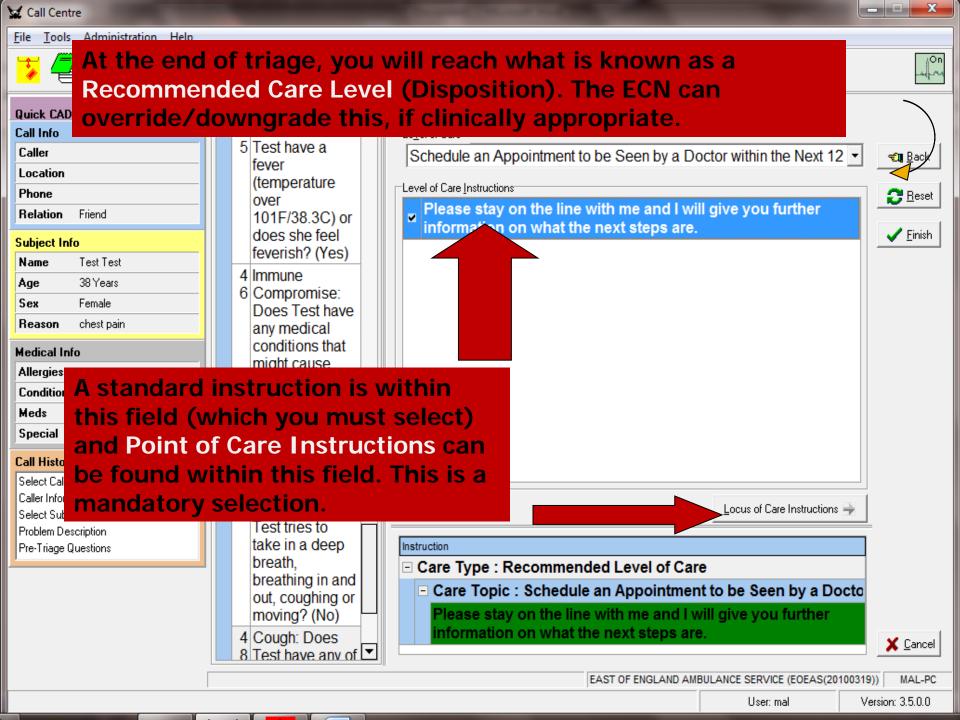


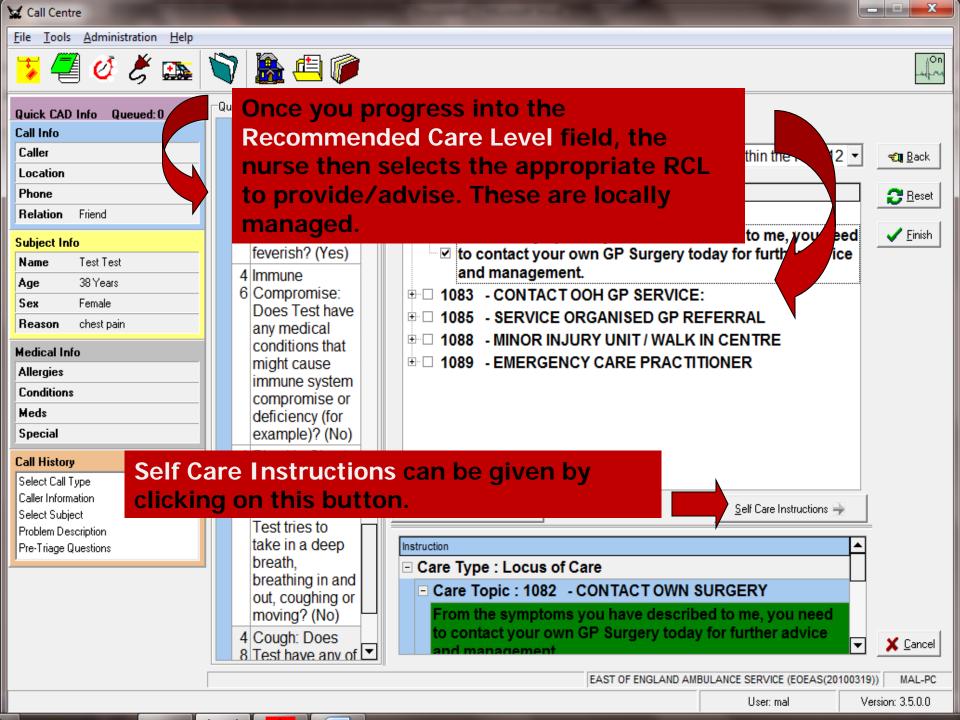












LowCode Directory of Services via EndPOINTS

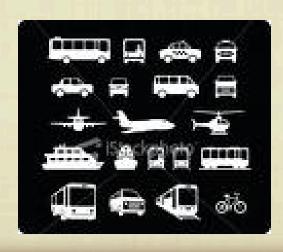
EndPoints-Directory of Services

Build a team

- Partners
- Broad, yet focused
 - Physicians
 - Immediate/Urgent Care
 - Hospitals/Clinics
 - Transportation
 - Community Groups
 - Medicaid/Insurers
 - Others

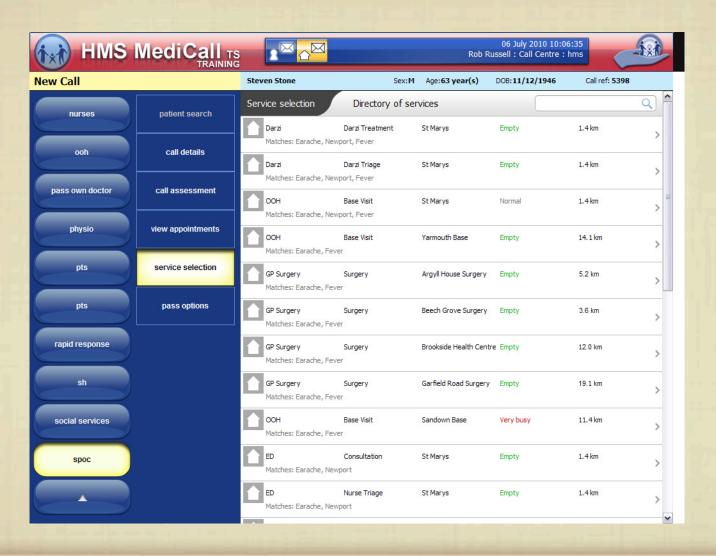








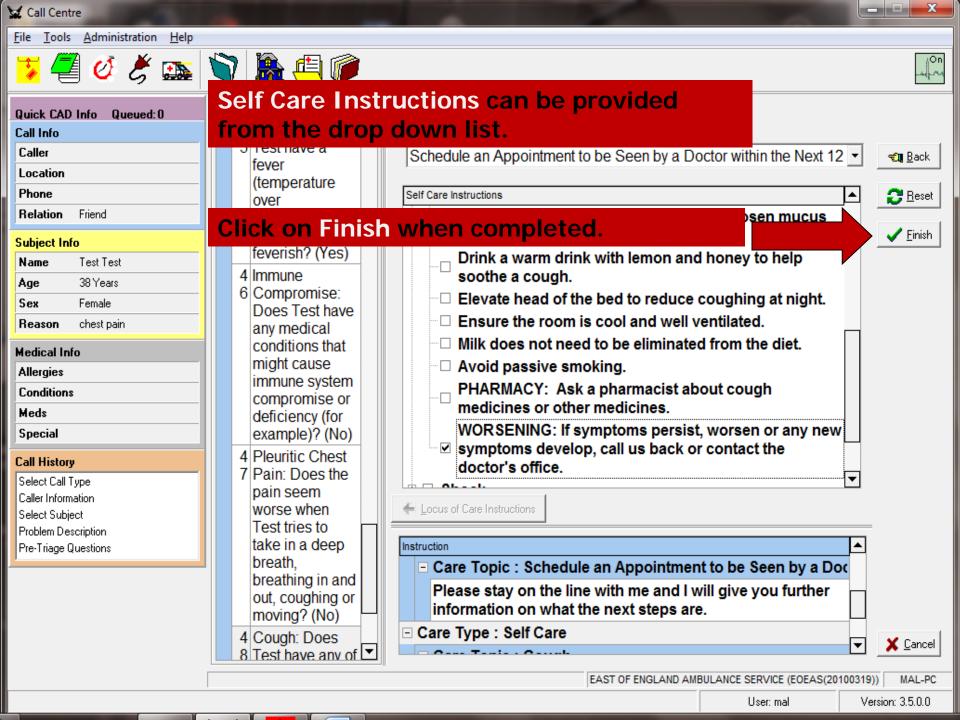
Assignment of Point of Care

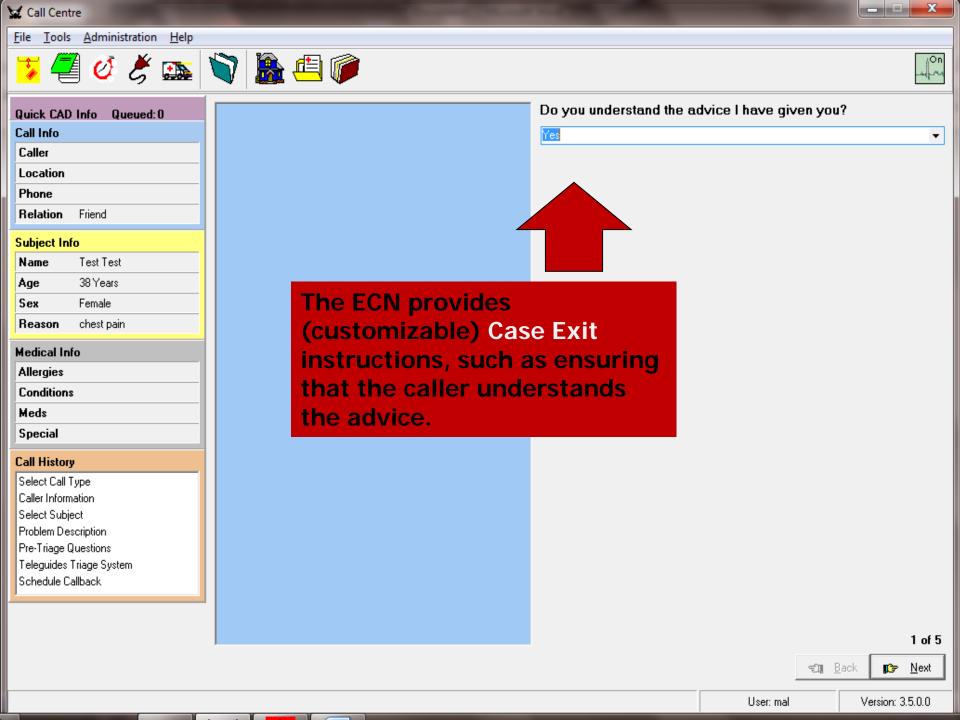


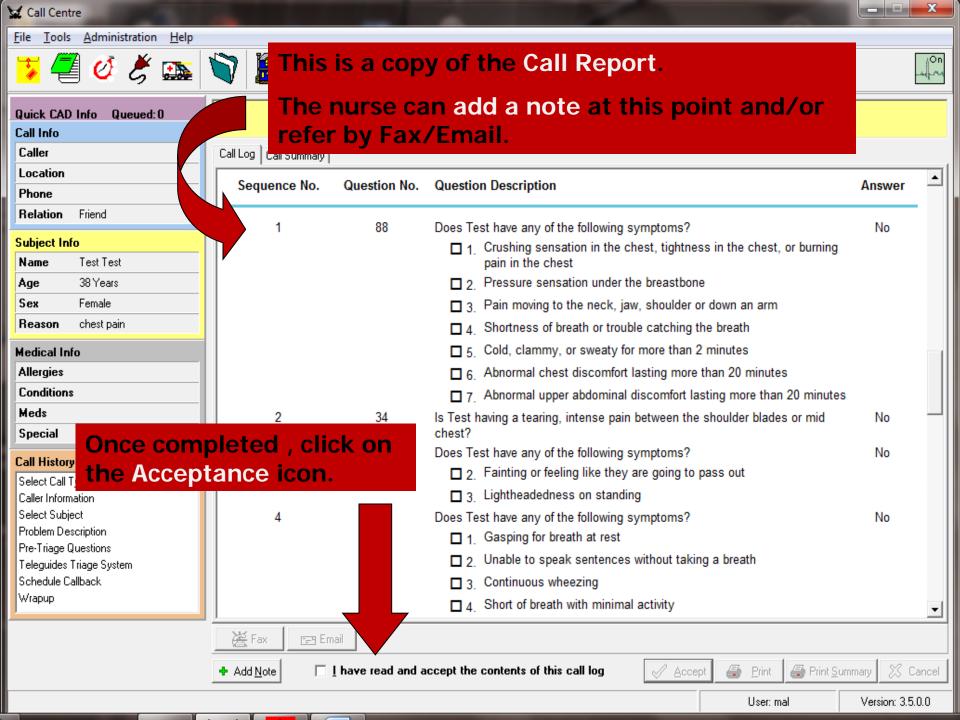
Facility/Service Information and Linkage

including transportation!!









Oversight/Standards



Oversight Committee Structure



- Steering Committee
 - Upper Management/Policy Makers
 - Quarterly Reviews
- Dispatch Review Committee (DRC)
 - Working Group (Users)
 - Middle Management
 - Monthly Reviews
- Quality Improvement Unit (QIU)
 - On-Going, Day-to-Day Reviews





An Expanded Role for the IAED:

The clinical protocols that underpin the LowCode software have been adopted by the International Academies of Emergency Dispatch as "*The Fourth Pillar*" of the Academy, along with EMD, EFD, and EPD.

The Clinical Governance of these protocols is now a function of the Emergency Communication Nurse System (ECNS) Council of Standards in the IAED.



Proposals for Change









A COLUMN	Nation	d Academies of Emergency Disput	tise	Con part	National Academies of Emergency Disputche
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Quality Assurance

- AQUA Software available for ECN-Q
- Agency controls the Quality Assurance process
- As a result, changes can be identified and rapidly implemented
- Peer-to-peer review
- > Accreditation



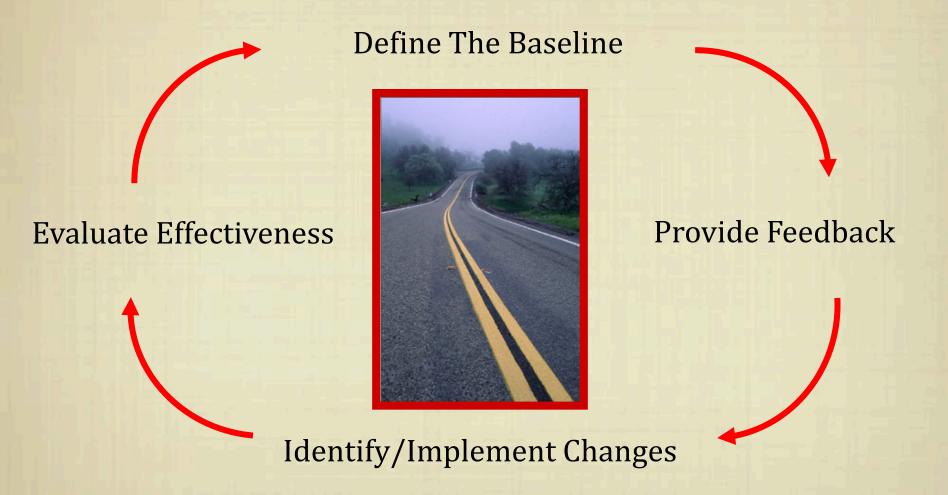
Quality Assurance

Regular QA should take place on all calls, with a view to:

- Call Case Review/Evaluation for Accuracy, Safety, and Customer Service
- Generate Reports, Track Trends
- Nurse Support
- Focused Continued Education
- Enhance Local Services and Interactions
- Protocol Improvement, Enhancement
- Protocol and Procedure Review
- Ensure Quality and Clinical Governance



How to get to where you need to be?





Questions?

-- Thank You

