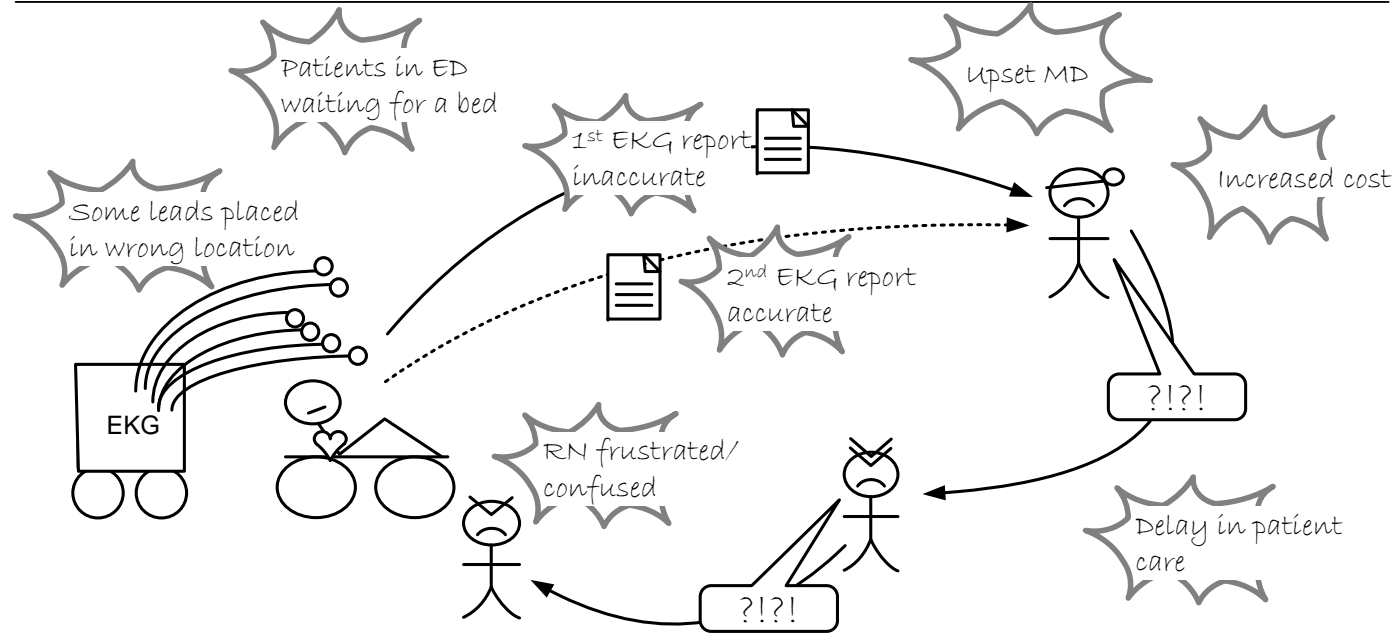


ISSUE Patient's diagnosis and care is delayed by inaccurate 12-lead electrocardiogram (EKG).

BACKGROUND

November 1 - December 15: Three 12-lead EKGs repeated in ED due to incorrect placement of EKG leads. Average time of repeated EKG to MD = 31 minutes.

CURRENT CONDITION

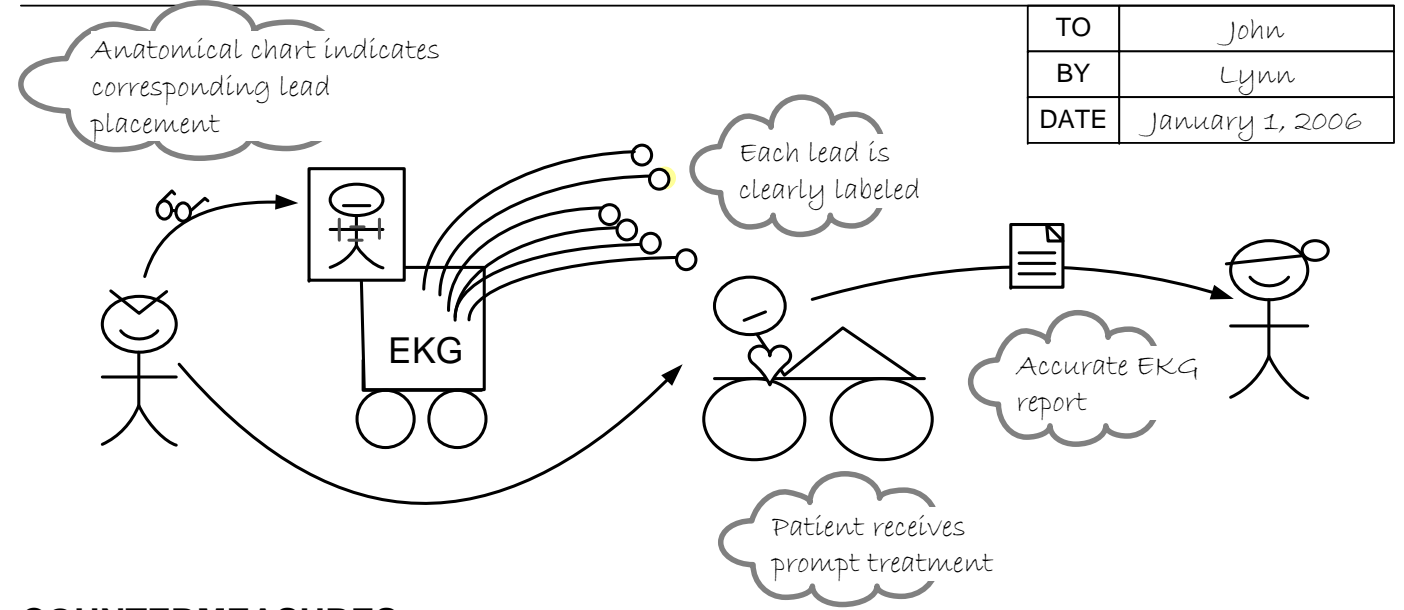


PROBLEM ANALYSIS

1. Delay in patients' treatment
 - Why? EKG needs to be repeated
 - Why? Some leads placed incorrectly on patient
 - Why? Leads aren't clearly identified (marks worn off)
2. Increased cost to hospital and patient
 - Why? Redundant RN/ MD work
 - Why? Wasted materials/ use of EKG machine
 - Why? Other patients can't be seen
3. RN frustration and confusion
 - Why? No clear signal for EKG lead placement
 - Why? Leads aren't clearly identified (markers worn off)
 - Why? MD is upset
 - Why? Concern for patient/ delay in diagnosis
 - Why? Incorrect EKG
 - Why? Leads aren't clearly marked
 - Why? Bottleneck in flow of the ED patients
 - Why? Bed occupied by patient awaiting cardiac diagnosis
 - Why? EKG needs to be repeated (as above)
 - Why? His time is misused trying to get correct EKG

TARGET CONDITION

Title: EKG Leads



COUNTERMEASURES

1. Clearly label EKG leads
2. Create system for replacing labels when worn.
3. Create anatomical chart for lead placement on EKG cart

IMPLEMENTATION PLAN

What	Who	When	Outcome
Label EKG leads	Biomed	2/1/06	Clear signal to RN for lead placement
System for lead label replacement	Biomed	2/2/06	Clear process for replacement of labels
Inservice for staff	RN	2/4/06	Staff aware of replacement process
Laminate and adhere anatomical chart to EKG cart	RN	2/4/06	Staff aware of process

COST / BENEFIT

Cost	\$\$\$
Labels (12 x \$0.50 x 2 EKG machines)	\$12.00
Benefit	\$\$\$
Increase capacity in Emergency Department	Quality and \$\$\$
Patient receives prompt treatment	Quality

TEST

RN does EKG on simulated patient w/ anatomical chart and marked leads - completed in 9 minutes.

FOLLOW UP

February 15, 2006 - May 15, 2006:
 No repeated EKGs.
 Average time of EKG to MD - 11 minutes.