

Critical Results: A Clinician's View

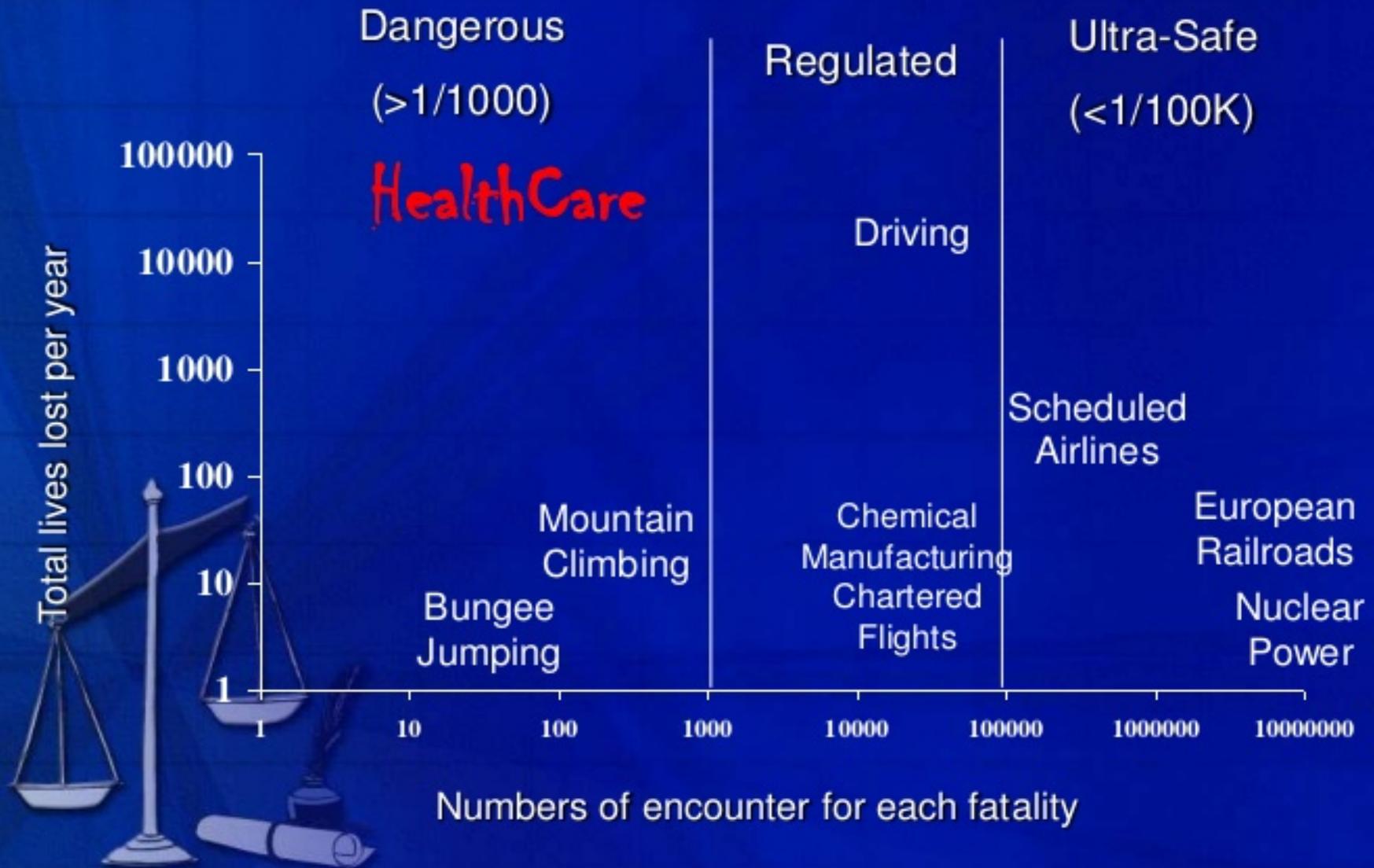
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Overview

- How safe are hospitals?
- How does critical results reporting fit in to our overall view of quality in healthcare?
- The changing landscape of results management
- Commentary on this case
- Who is responsible?
- How can we make it better?

How Hazardous Is Health Care?

(Modified from Leape)



Domains of Quality in Healthcare

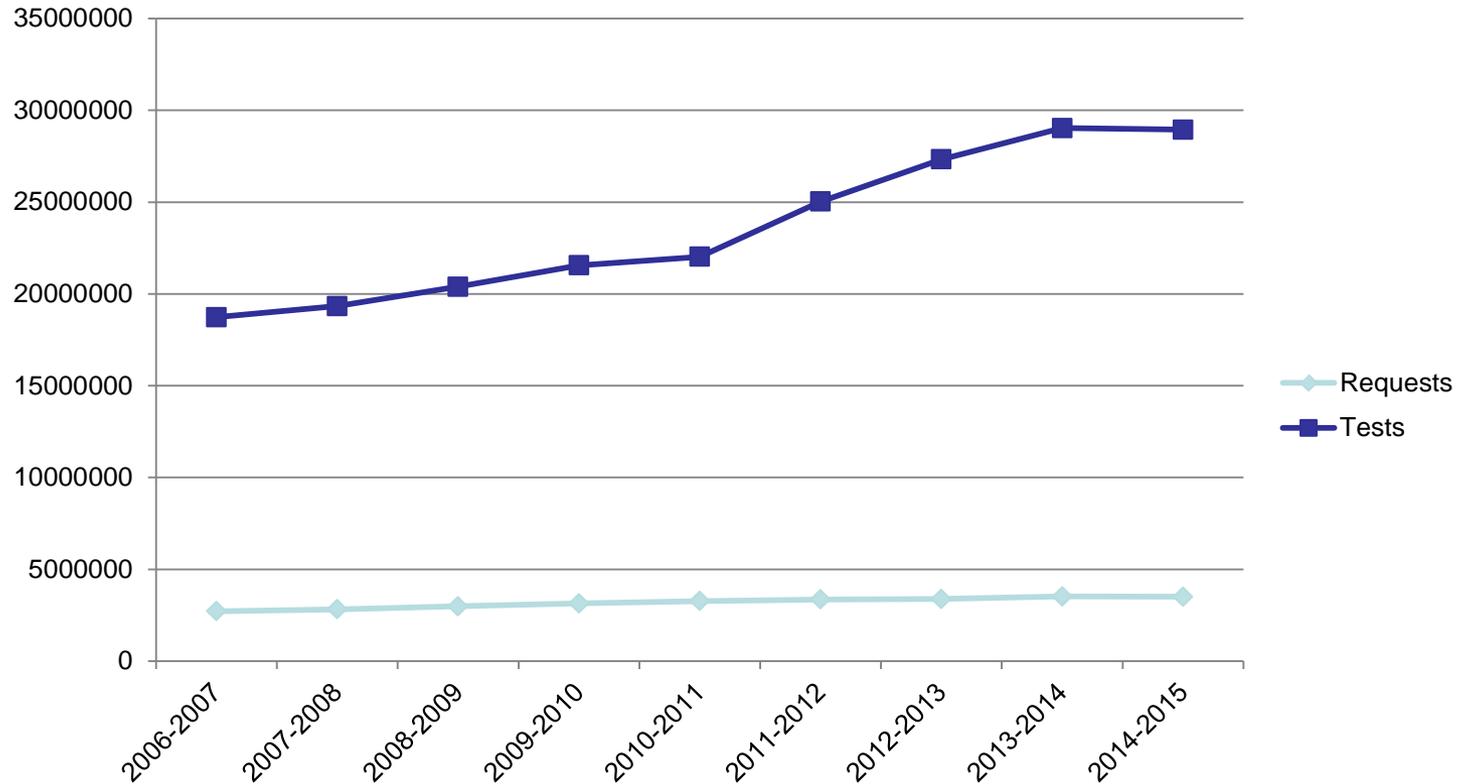


Changing clinical landscape

- Growth in activity/test requesting
- Reduction in length of stay
- Fragmentation of clinical teams
- Evolution of electronic records
- Sub-specialisation
- Regulation



Lab tests in STHFT



Fragmentation of clinical teams

- FY and Core Trainees rotate every 4 months
 - Largely shift based
 - Overwhelmed with “induction information”
 - H@N teams often covering large areas
- Concept of a named consultant diminished
 - So who is responsible for a result?
- AHPs
 - Requesting, reviewing, prescribing

Electronic Health Records in evolution

- These should help but...
 - Mixed economy of paper, electronic and phone
 - Insufficiently inter-connected
 - Blurred lines of responsibility
 - Technical problems
 - What constitutes review?
 - Amended reports?



Electronic prescribing

- Allows direct linkage with lab results
- Decision Support
 - Eg prevent prescribing if no INR
 - Advice on dose by algorithm
 - Advice when haematology consultation needed
 - Alert Fatigue
 - Reduces system speed

Sub-specialisation

- Do all specialties want the same thresholds for critical results?
 - Serum potassium for renal inpatients
 - Platelet count for haematology inpatients
 - Are requests adequately detailed?
 - Eg on chemotherapy, pre/post dialysis
- On the whole, a simple, single approach is best for labs
 - Give departments some leeway about triggered actions



Management

- Creatinine 403 (eGFR 9)
- Albumin 11 (NR 38-48)
- No Liver function tests recorded
- Patient started on IV antibiotics
- Warfarin prescribed as per Trust anticoagulation chart

Anticoagulant management

Day & Time	Warfarin dose given	INR result	INR result time	INR result documented on chart ?
Friday	2mg			
Saturday 6pm	2mg	2.7	5.30 pm	No
Sunday 6pm	3mg	3	08.30 am	Yes
Monday 6pm	3mg	5.5	09.16 am	No
Tuesday	Omitted – based on prev day result	>10	08.45am	No
wednesday		>10		

Results in red were not considered when prescribing warfarin

Who is responsible?

- Shared responsibility
 - Question is how to optimise:
 - Lines of communication
 - Training
 - The use of the resources we have
 - Build redundancy into the system



Recommendations

- Explore an IT solution for better direct communication of clinically significant results to clinical teams.
- That the management of patients on anti-coagulation are included in the junior doctor's teaching sessions.
- Review existing Trust Guidelines and Policies on anticoagulation. While there is excellent guidance on the 'General Management of bleeding or excessive anticoagulation in adult patients on warfarin (or sinthrome) there is a lack of expert guidance on day-to-day management of anticoagulation in complex in-patients especially with reference to frequency of INR monitoring. Clinical lead for anticoagulation to consider an addendum to Warfarin prescription guidelines to cover this aspect.

Additional Considerations

- Are the right people prescribing?
 - Would anticoagulation pharmacists do better?
 - What level of consultant input is there?
- Is there enough redundancy to make the system safe?
 - Unlikely that IT will solve it completely
- Role of bridging protocols
 - But not easy in renal disease

