NHS
Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

BALANCING COMPASSION AND TECHNOLOGY

Facilitated by:

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&

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40th Annual BACCN Conference

Celebrating 40 Years of Advocating for Critical Care Nursing:

Adapting to a Changing Landscape

07 - 08 October 2025: The Winter Gardens, Blackpool

WHO WE ARE

Petro

I have qualified 36 years ago in South Africa. Working in the UK since 1999, having worked as an Advanced Nurse Practitioner in Emergency Care in South Africa, I joined the ICU Team.
My passion for innovation and technology led to a pivotal role in 2012, when I was seconded from Critical Care to the digital department to lead on the implementation of a new critical care electronic clinical system.

Recognising the impact of healthcare informatics, I transitioned to the Digital Team permanently in 2014. Currently working as the Clinical Informatics Manager using my extensive clinical experience to drive meaningful advancements in technology.

In addition to my managerial role in clinical informatics, I am also a Digital Clinical Safety Officer, where my team is dedicated to ensuring the highest standards of patient safety within the digital systems.

David

I have 26 years of experience as a registered nurse, qualifying in Scotland.

I worked abroad in Africa in 2007 for 3yrs, where I was teaching nursing ,working with a multidisciplinary team from across the globe. I have been working in England since 2010, with a diverse background in Research, Surgical and Critical Care Nursing.

In 2015 I joined the specialty of clinical informatics at Wigan where I work as a specialist nurse. My commitment to patient safety is reflected in my role as a clinical safety officer, where as part of a wider team I help to ensure the highest standards of digital safety and quality in healthcare delivery.

WHAT IS CLINICAL INFORMATICS

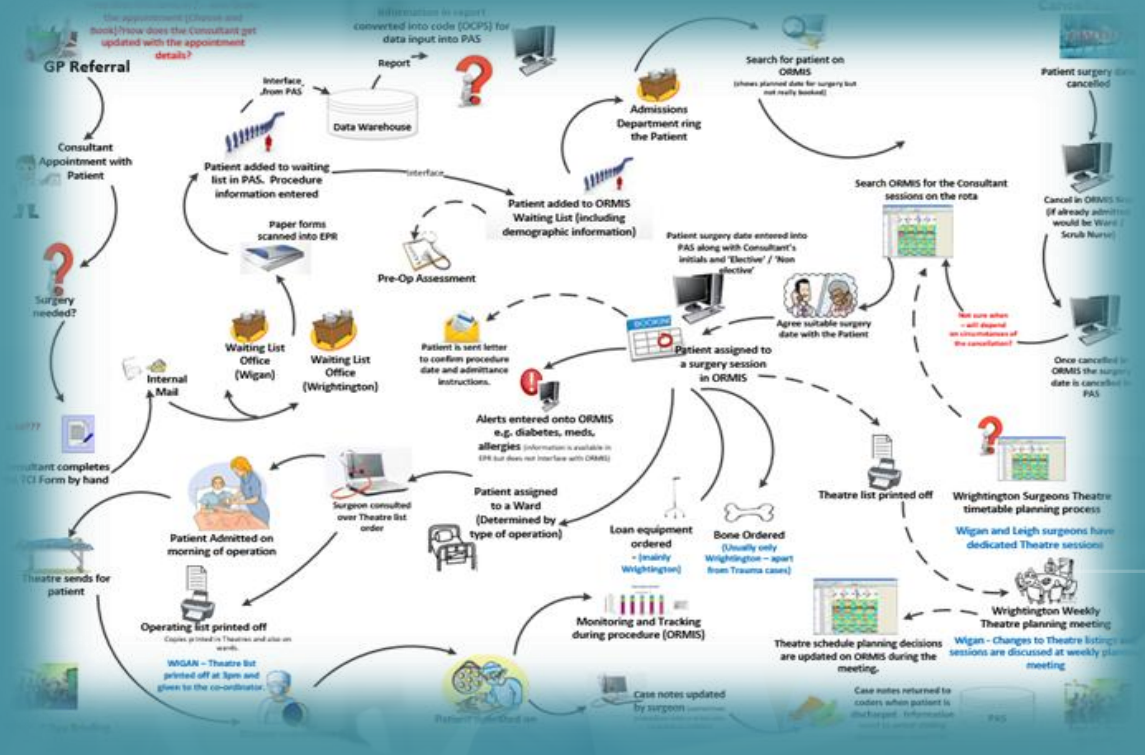
COLLECTING → ANALYSING → APPLYING

MEDICAL DATA → ENHANCE PATIENT CARE → SUPPORT CLINICAL DECISION MAKING

Streamline Healthcare Processes

Clinical Informatics focuses on the use of information technology and data management tools to improve healthcare delivery.

TRANSFORMATIVE POTENTIAL OF CLINICAL INFORMATICS IN THE CRITICAL CARE SETTING



Interoperability/Interfaces
Seamless data exchange between different systems and providers

- ❑ PAS - demographics
- ❑ Pathology
- ❑ Radiology
- ❑ Patient monitors into the EPR
- ❑ Syringe pumps/IVACs
- ❑ Ventilators
- ❑ Haemofilters

More concise, ultimately improving data quality & patient safety

If not – disjointed workflows - risks

DATA ANALYTICS

- Analyse large volumes of healthcare data
- Identify trends and patterns
- Support population health management
- ICNARC – national data collection
  - to measure patient care and outcomes
  - to benchmark with other providers across the UK
  - to identify and address areas that could be improved

- Clinical Audits on the units – best practice - providing rich data
- Supporting best practice
- Benchmark outcomes
- Supporting Research Studies
- Machine Learning – Data Scientists

DATA QUALTIY MATTERS

DEMAND PREDICTION

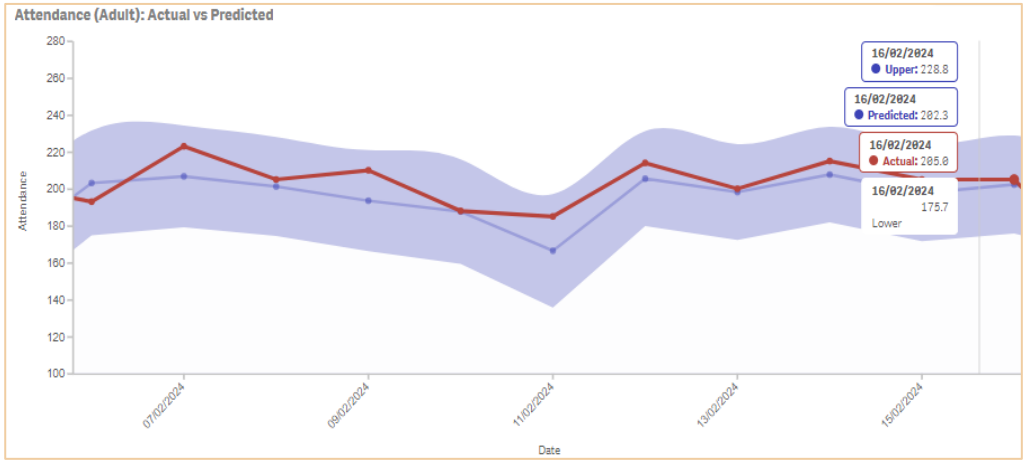
Assist in disease prediction and diagnosis

Forecasting daily admission and A&E Arrivals

- by using Machine Learning Algorithms and historical data

Predicting patient discharges

- Identifying patients most likely to stay more than 20 days or are most likely to be ‘No Reason to Reside’. To allocate resource and improve discharge planning.



Predicting DNA’s

- Identifying patients most likely to miss their outpatient appointments and sending them reminders a few days prior, to reduce unused appointments and wasted resource.

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ARTIFICIAL INTELLIGENCE (AI)

New Technologies

- Technical Implementation
- Link with our current digital Systems

Information Governance

- Data Sharing
- Patient notices

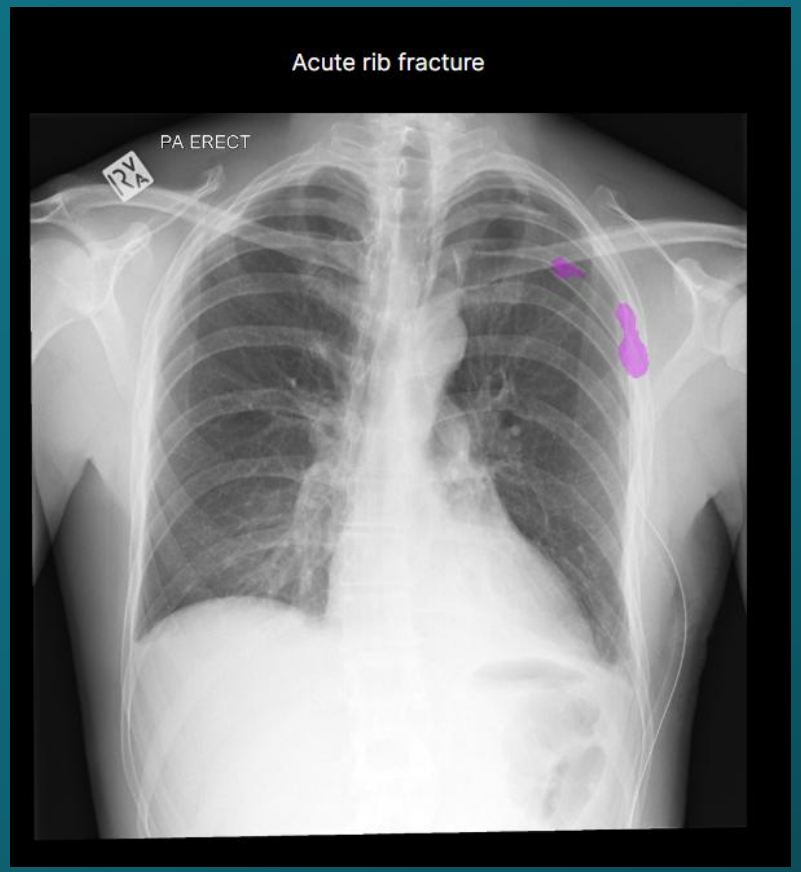
Clinical Safety

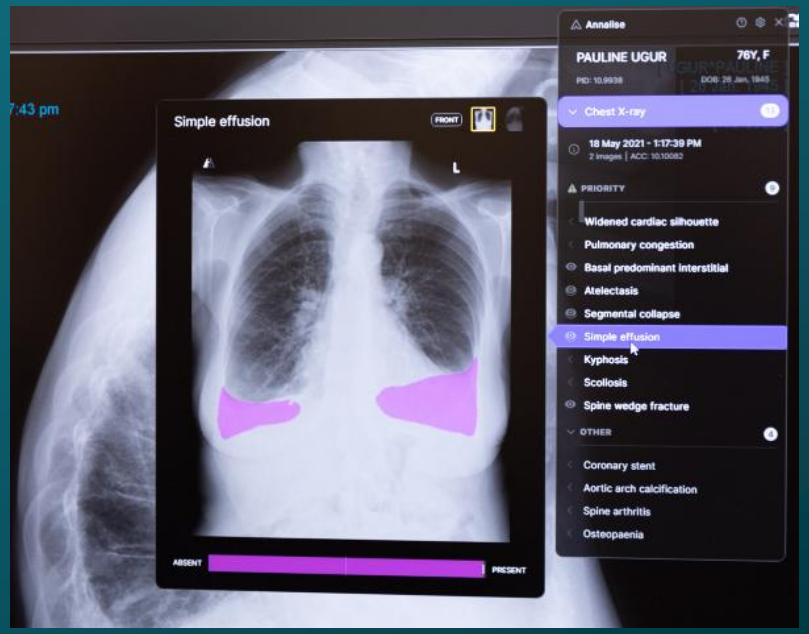
- Decision Support
- Change in Standard Operating Procedures (SOPs)

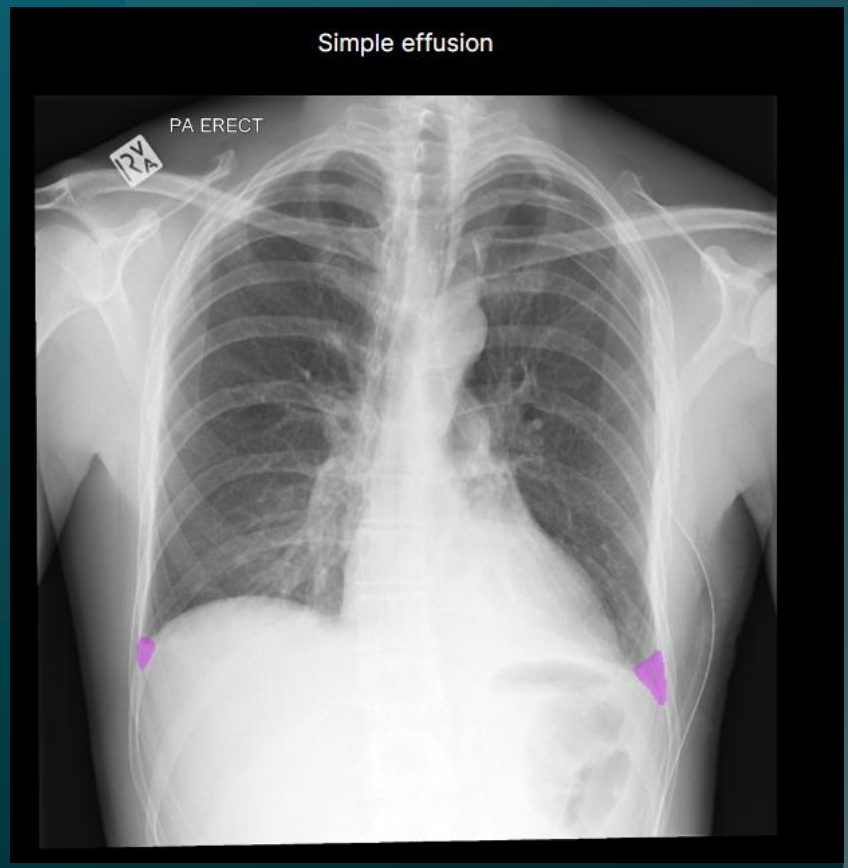
Alleviating the concerns

- Not currently intended to replace staff
- Teaching tool

BENEFITS







- Improve reporting turnaround times for screening examinations
- Accelerating early diagnosis to improve patient outcome
- To enable increased capacity for Radiologists to focus on other clinical activity
- To deliver cost reductions in film reader training and support
- Address workforce pressures within the clinical services

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OUR CLINICAL INFORMATICS TEAM

The bridge between digital and clinical services

We've touched on some of the areas of clinical informatics.

Multiprofessional team

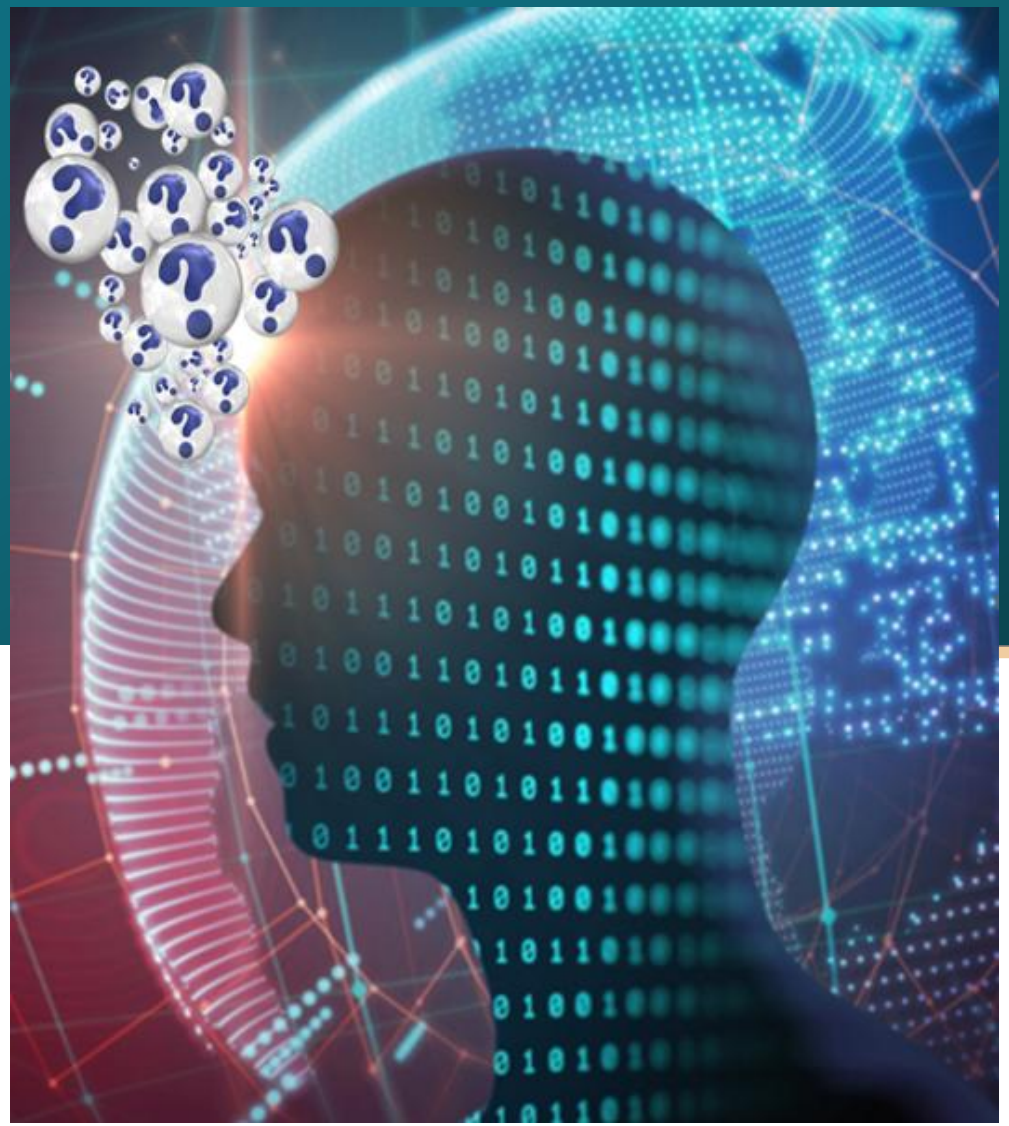
- ❑ AHP's
- ❑ Pharmacists
- ❑ Radiographers
- ❑ Operational Department Practioner
- ❑ Nurses

Our role evolves around the technology in use, for example blood gas machines – interfaces into systems

- ➢ Clinical decision-making tools i.e. sepsis.
- ➢ We adhere to the NHS England clinical risk management standards when introducing new clinical systems/Artificial Intelligence into the clinical areas across the Trust.

TRANSFORMATION

Clinical informatics has transformed healthcare delivery in several ways



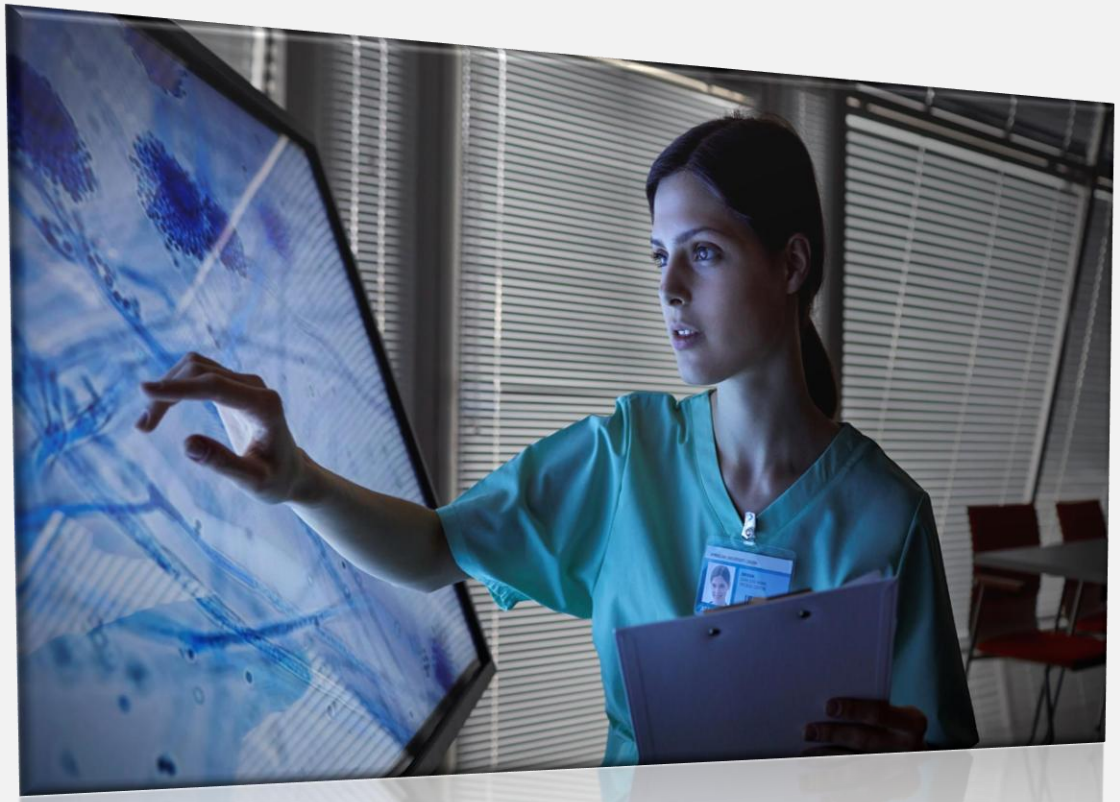
- Improved Patient Safety
- Reduced medication errors through electronic prescribing & administration
- Enhanced communication among healthcare providers
- Enhanced Clinical Decision-Making
- Access to up-to-date medical knowledge and guidelines
- Real-time data analysis for informed decision-making
- Streamlined Workflows
- Automated administrative tasks

- Improved efficiency in healthcare processes
- Better Patient Engagement
- Patient portals for accessing health information
- Telemedicine and remote monitoring capabilities

CHALLENGES
TECHNOLOGY & HEALTHCARE

- Interoperability
- Ensuring seamless data exchange between different systems and providers
- Data Privacy and Security
- Protecting sensitive patient information from breaches and unauthorised access
- User Adoption and Training
- Ensuring healthcare professionals are proficient in using informatics tools
- Ethical Considerations
- Addressing concerns related to AI and machine learning in healthcare decision-making

CONCLUSION



Get involved!

Clinical informatics is shaping the future of medicine by using technology to

- ❑ improve patient care
- ❑ enhance decision-making
- ❑ Streamlining healthcare processes

As the field continues to evolve, it will play an increasingly crucial role in addressing healthcare challenges and improving outcomes for patients worldwide.

THANK YOU FOR LISTENING

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HSJ DIGITAL AWARDS 2023

WE ARE PROUD TO BE HIGHLY COMMENDED

Digital Literacy, Education and Upskilling Award