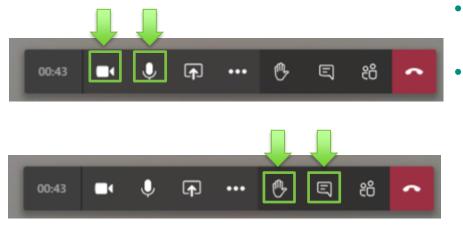# Meeting participation

- During the meeting please have your microphone on mute and video turned off
- To take part in discussions use the chat box or raise your hand and wait to be invited to speak, please then:

  - unmute your mic

  - turn on your video (if you are happy to do so)

  - after speaking please re-mute and turn your video off

Trouble shooting

Any technical issues, please contact:

Sara

- MS Teams chat or
- Email: his.acutecare@nhs.scot

Aims

- Share learning from NHS Fife, NHS Lothian and NHS Lanarkshire who have taken different approaches to electronic observations

- Explore and discuss the benefits and challenges of using eObservations in NHS Scotland

Agenda

Healthcare Improvement Scotland | Scottish Patient Safety Programme

Time	Topic	Lead
14:00	**Welcome, aims & introductions**	**Dr Gregor McNeill**, SPSP Acute Adult National Clinical Lead, Healthcare Improvement Scotland
14:10	**Benefits & challenges of implementing eObs in NHS Scotland – reflections on Dublin**	**Dr Gregor McNeill**, SPSP Acute Adult National Clinical Lead, Healthcare Improvement Scotland
14:15	**eObs reflections from NHS Fife**	**Dr Gavin Simpson,** Consultant in Intensive Care Medicine, NHS Fife
14:30	**Developing a new eObs system within an existing Electronic Patient Record - the Lothian experience**	**Dr Nicola Maran**, Anaesthetist and Associate Medical Director for Patient Safety, NHS Lothian
14:45	**Comfort break**	
14:50	**eObs in NHS Lanarkshire: Our learning**	**Karen Goudie,** Chief Nurse, NHS Lanarkshire
15:05	**Q&A**	**All**
15:20	**Next Steps**	**Dr Gregor McNeill,** SPSP Acute Adult National Clinical Lead, Healthcare Improvement Scotland
15:30	**Close**	

Benefits & challenges

A Systems Approach to the Clinically Deteriorating Patient

TUESDAY, 14 JUNE 2022

The Inaugural Deteriorating Patient Improvement Programme (DPIP) Conference

@NationalQPS
#DPIPCONFERENCE2022
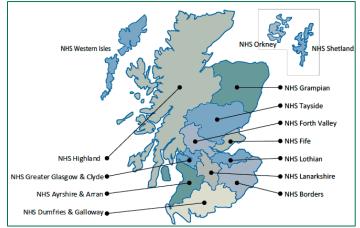
Benefits & challenges

eObs reflections from NHS Fife

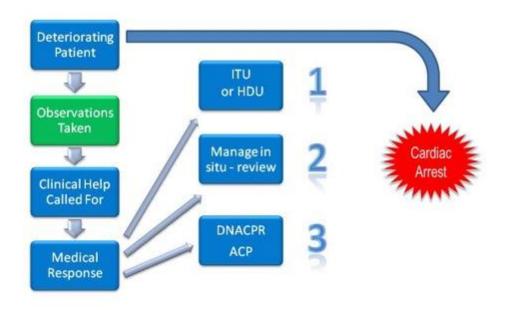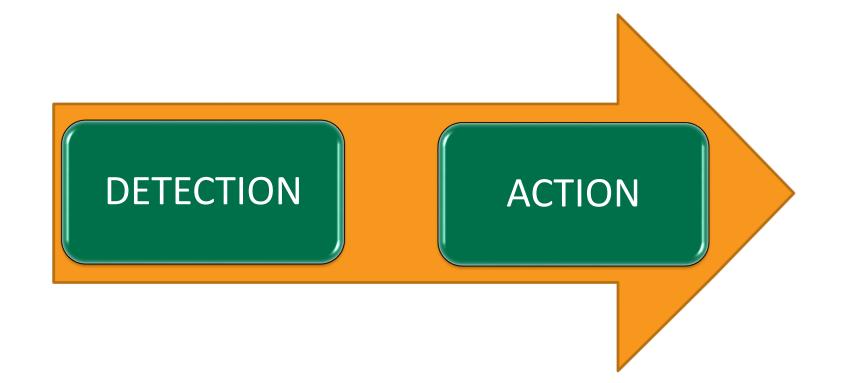**Dr Gavin Simpson**
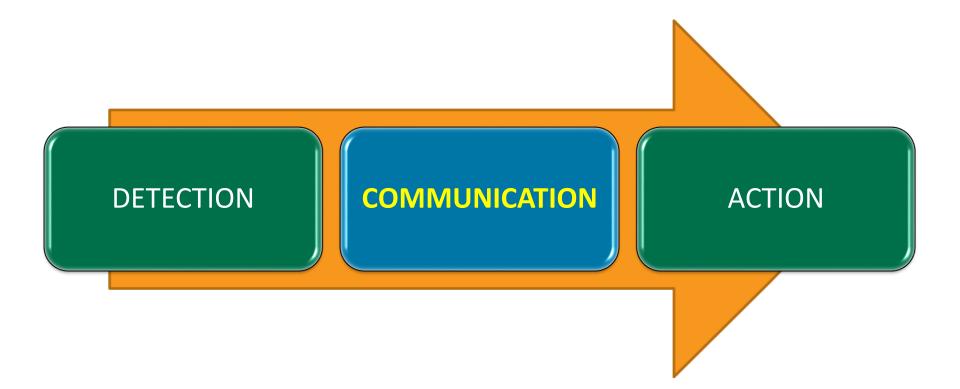Consultant in Intensive Care Medicine
NHS Fife

#spspDetPat

Process
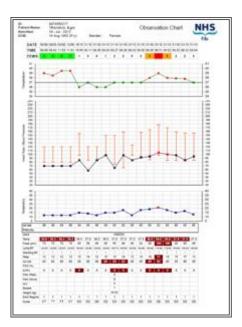
Communication

- View charts anywhere

- Alerting

- Virtual wards

- Handover + Huddles

- Next OBS due

- Flags

- Patient specific

PATIENTRACK

- OBS on time

- OBS complete

- Chain length

- How unwell?

- Where unwell?

Developing a new eObs system within an existing Electronic Patient Record
- the Lothian experience

Dr Nicola Maran
Anaesthetist and Associate Medical Director for Patient Safety
NHS Lothian

Why eObs?

- Inaccurate or incomplete NEWS scoring

- Missed obs / frequency incorrect for given NEWS score

- Unreliable documentation of escalation

- Unreliable documentation of special instructions

- Lack of shared oversight of sickest patients at ward, department, site level.

Integrated to EPR

Reflects current NEWS chart functionality

Prompts for Escalation and Action linked to NEWS

Documentation of Escalation into Clinical Notes

No current facility for automated track and trigger

NEWS integrated to ward floorplan

Integrated Overview board

EPR	Name	CHI	Current Ward	Parent Ward	NEWS	NEWS change	NEWS date and time	Special Instructions	Escalation status	Escalation date and time	Treatment Escalation Plan
Clear			Mears Ward AAH, Ward 8A SJH Winter Beds	ALL ▾	ALL ▾						
EPR	**Alpha Naik**		Mears Ward AAH		**15**	↑	09/06/2022 13:07	📖	🔴	18/07/2022 08:41	🔴 T
EPR	**Forth Naik**		Mears Ward AAH		**15**	↓	11/08/2022 15:53		⚫	13/06/2022 10:24	🟡 T
EPR	**R MacKtest**		Mears Ward AAH		**10**	↑	12/08/2022 09:25	📖	🔴	23/06/2022 15:28	🟢 T

Searchable within TRAK

Deteriorating Patients Overview Board
Last updated on 12/08/2022 11:23:45

Reload table

Search: naik

EPR	Name	CHI	Current Ward	Parent Ward	NEWS	NEWS change	NEWS date and time	Special Instructions	Escalation status	Escalation date and time	Treatment Escalation Plan	Specialty	Care Provider	Hospital	Bed	Planned Discharge Date	Risk Assessment Lapsed
Clear			ALL ▾		ALL ▾							ALL ▾	ALL ▾	ALL ▾			
EPR	**Alpha Naik**		Mears Ward AAH		**15**	↑	09/06/2022 13:07			18/07/2022 08:41	T	General Surgery		AAH	07	02/06/2022	
EPR	**Forth Naik**		Mears Ward AAH		**15**	↓	11/08/2022 15:53			13/06/2022 10:24	T	General Medicine		AAH	06	13/06/2022	

Showing 1 to 2 of 2 entries (filtered from 29 total entries)

Development & governance

- Part of 'Model Ward' project led by Gillian McAuley, Acute Nurse Director

- Multiprofessional team
  - E-health, nursing, medical, QI, LACAS

- Regular weekly / fortnightly meetings

- Review findings, adapt to challenges identified

- Identify and respond to risks

- Develop measurement plan

- Reporting & approval via Acute CMG

Challenges
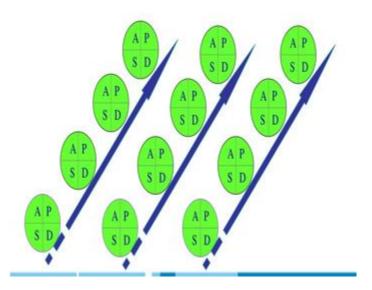
- Software glitches

- Interface – hardware

- Use of current SOPS

- Early 'adopters'!

Test, test, test

- Development environment on TRA
- Desktop, low &mid fidelity simulation
- Ward based simulation
- Wide engagement
  - >150 nurses, docs, CSW's, AHPs
  - Multiple specialities, sites & contexts
- Training materials
- Contingency plans

Next steps

- Implementation plan

  Community sites ➡ MH ➡ Acute

- Hardware interface options appraisal and testing

- Review current escalation SOP

- Regular review, revision and testing

Acknowledgements

- Gillian McAuley – Acute Nurse Director
- Gill Webb, Kiran Naik & all of the E-health team
- Carolyn Swift & Quality Improvement Directorate team
- Lorna Turner, Laura Thompson & LACAS team
- Kenzie Smith & all the NHS Lothian staff who have given their time to help us develop and test the system

THANK YOU!

Comfort break

Drivers
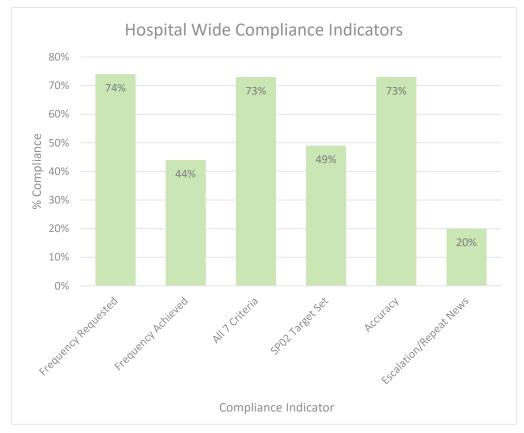
Scotland's first Digital Hospital

Why eObs

Hospital Wide Compliance Indicators

Chart: % Compliance (y-axis) vs Compliance Indicator (x-axis)
- Frequency Requested: 74%
- Frequency Achieved: 44%
- All 7 Criteria: 73%
- SP02 Target Set: 49%
- Accuracy: 73%
- Escalation/Repeat News: 20%

27% site compliance with the NEWS audit bundle CHAOS in our System

EWS system unreliable
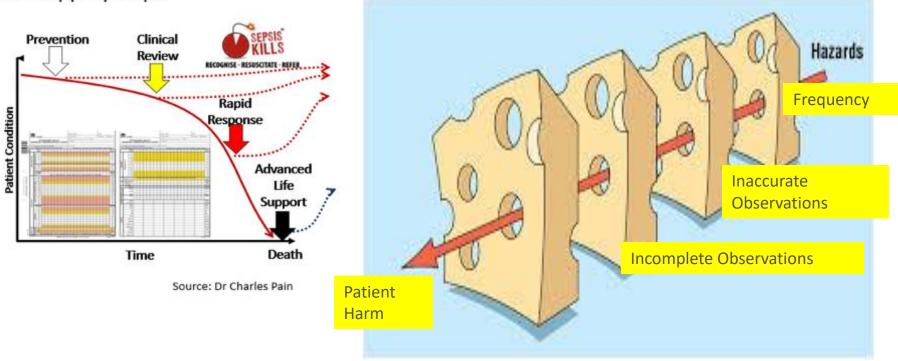
- Risk of not picking up deteriorating patients resulting in harm

- Reliant on human escalation via traditional methods

- Use of LANQUIP for current audit processes – no issues identified – false assurance provided via sample data collection

- No hospital-wide intelligence of deteriorating patients

- Requirement to test digital solutions as part of MRP
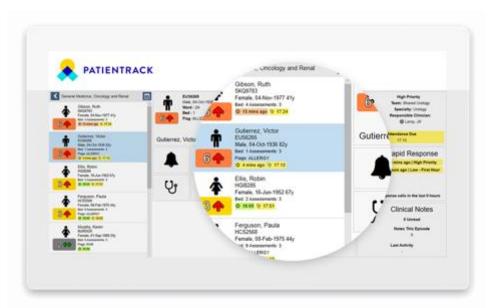
The 'slippery slope'

Prevention

Clinical Review

SEPSIS KILLS
RECOGNISE · RESUSCITATE · REFER

Rapid Response

Advanced Life Support

Patient Condition

Time

Death

Source: Dr Charles Pain

Hazards

Frequency

Inaccurate Observations

Incomplete Observations

Patient Harm

Whole System intellegience

Patientrack

Automation releasing time to care

Wireless connectivity – automatic upload of 6 NEWS parameters

- Monitor that performs readings and automatically interfaces with Patientrack on iPad, automatically producing NEWS score

- Removes need for human entry and transcription error

- Potential for remote monitoring

- Respiratory Rate technology
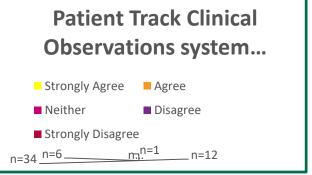
Research – releasing time for quality of care

- Extrapolation of these data into the 56,000 sets of vital signs collected during the *twelve week (four ward) study period*, equated to 28,000 minutes saved, (467 hours, 12.4 weeks whole time equivalent RN (if RN recording), time released to care for our patients.

- Further extrapolation of these data University Hospital Monklands wide could be illustrated as follows:

- <u>Pilot data</u> - Time saving per ward = 467 hours (12 weeks) / four wards (pilot wards in the study)

- = 116.5 hours per ward over 12 weeks

-     **= 116.5 hours / 12 weeks**

- <u>= 9.7 hours per ward per week</u>

- University Hospital Monklands has seventeen "general" wards that would adopt patienttrack and the wireless recording of vital signs. Data could be illustrated hospital wide as follows:

- <u>Potential</u> Time saving per ward UHM

- = 9.7 hours per week x 52 weeks (p.a.)

-     = 504.4 hours p.a. per ward

- <u>Potential</u> Time saving hospital wide

- = 17 (wards UHM) x 504.4 hours p.a. (per ward)

-     = 8,574.8 hours hospital wide / 37.5 hours

    <u>= 228.65 whole time equivalent nursing weeks</u>

Patient Track Clinical Observations system…

- ◻ Strongly Agree   ◻ Agree
- ◻ Neither   ◻ Disagree
- ◻ Strongly Disagree

n=34   n=6   m.n=1   n=12

Digital and insitu teaching

INNOVATION

Nurses' experiences of recording vital signs electronically: a pilot study

18 JANUARY, 2021

A patient's National Early Warning Score is calculated based on their vital signs. A study trialled a system called Patientrack that records vital signs electronically; this article discusses the results for patients and feedback from staff

"Electronic recording of vital signs did not replace critical thinking and clinical assessment when dealing with a deteriorating patient"
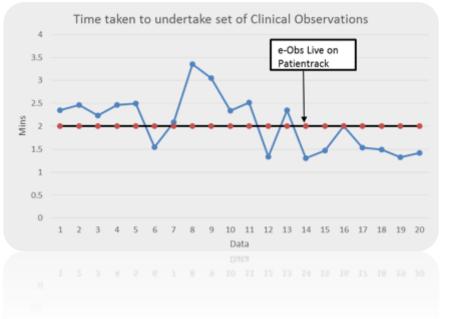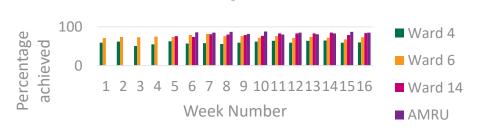
- Programme of training & with nursing staff through bedside teaching in collaboration with HECT Team

- 1:1 training with nursing staff on Patientrack system

- Ward level information displayed on Ward view screens giving 'at a glance' ward level insight for team

- Access and visibility anywhere in hospital and remotely via device

- Whole hospital Huddle sickest patients **First**

Outcomes

Time taken to undertake set of Clinical Observations

e-Obs Live on Patientrack

- Reduced variation in the time taken to undertake a set of observations

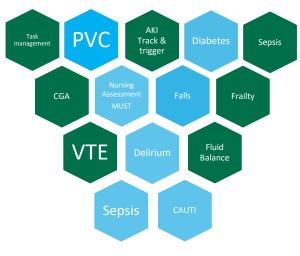- Estimated 30 second reduction in time taken per set of observations

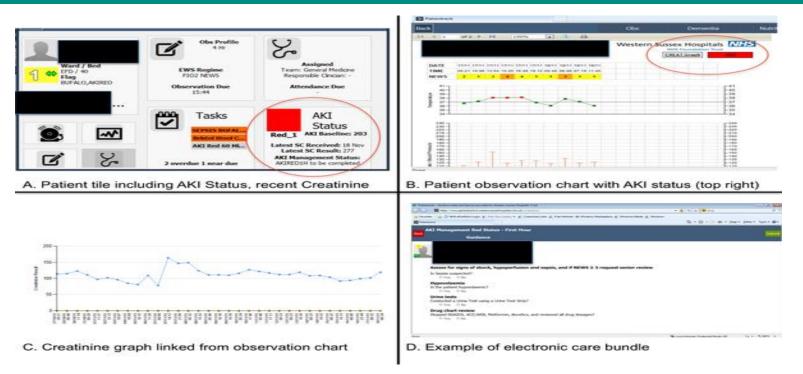- Compliance increased from 27% to 72% against the NEWS audit bundle

OBS Completed on time

Percentage achieved

Week Number

- Ward 4
- Ward 6
- Ward 14
- AMRU

All deterioration - AKi

A. Patient tile including AKI Status, recent Creatinine

B. Patient observation chart with AKI status (top right)

C. Creatinine graph linked from observation chart

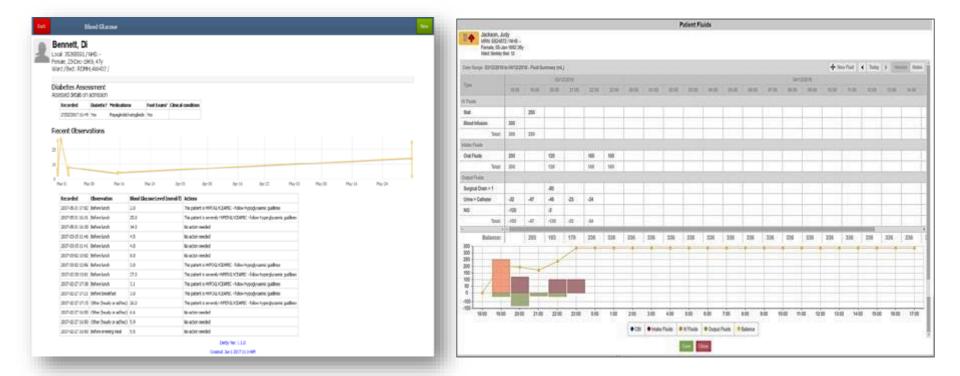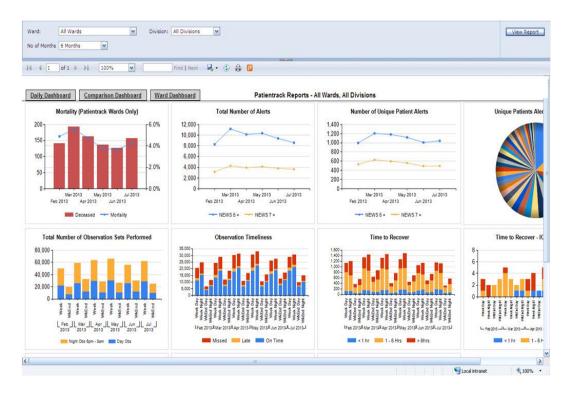D. Example of electronic care bundle

Hodgson LE, Roderick PJ, Venn RM, Yao GL, Dimitrov BD, et al. (2018) The ICE-AKI study: Impact analysis of a Clinical prediction rule and Electronic AKI alert in general medical patients. PLOS ONE 13(8): e0200584. https://doi.org/10.1371/journal.pone.0200584
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0200584

Cover for conditions

Big Data …whole system intelligence

- Digitalisation of patient observations helps improve patient safety
- Needs co-ordinated and committed effort to implement and sustain
- Opportunity to adapt to service needs – Sepsis tile/ New Stroke bundle tile
- Robust IT Infrastructure required Involve staff in the process from conception

SPSP National Learning Event:

Creating the Conditions for Safe Care, 27th September,

- [For virtual attendance Register here](#)
- SPSP leads coordinating in-person attendance

Related Resources

- Principles of Structured Response to deterioration [resource](#)
  - [Mapping tool](#) and [simulation exercise](#)
- Identifying and learning from cardiac arrests [resource](#)

Keep in touch

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