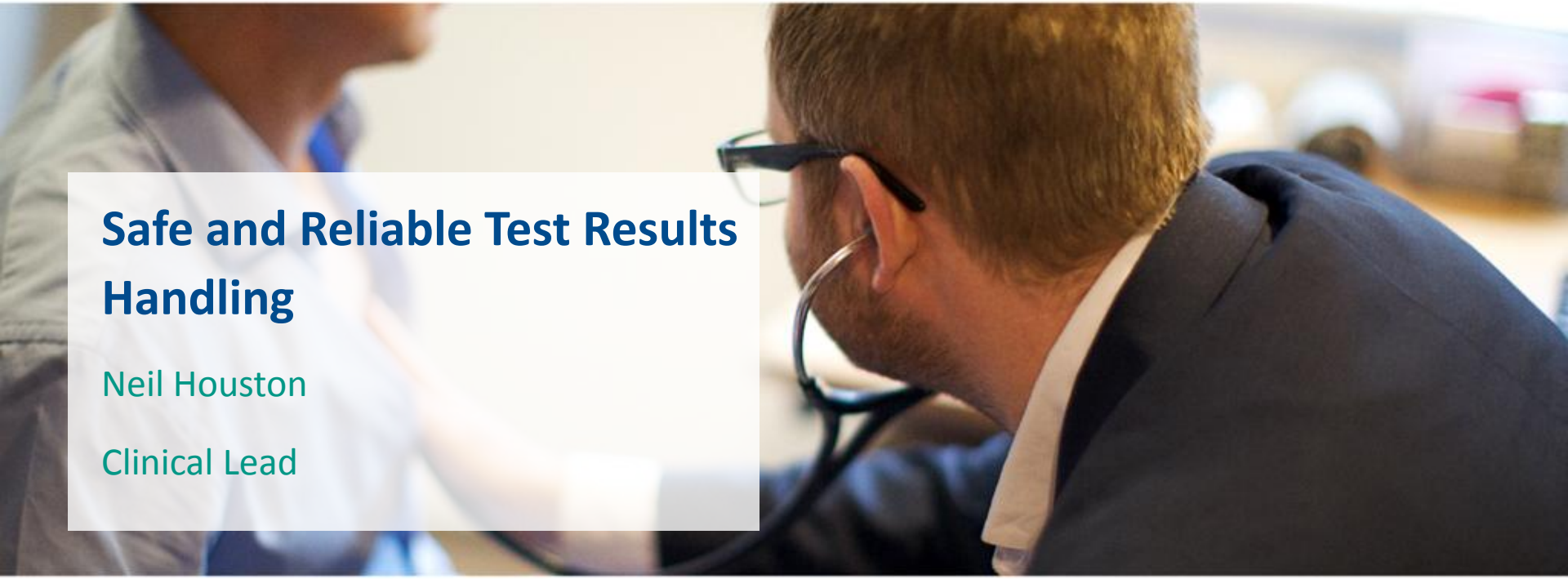

Safe and Reliable Test Results Handling

Neil Houston

Clinical Lead

The World Health Organization identified that the rates of test follow-up remain 'suboptimal', resulting in serious lapses in patient care, delays to treatment and litigation

Summary of the evidence on patient safety: Implications for research. World alliance for patient safety: WHO :2008

EVERY PERSON EVERY TIME

SCOTTISH PATIENT SAFETY PROGRAMME

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Impact on patients and relatives

- Avoidable harm and unnecessary distress
- Sub-optimal clinical management
- Delayed diagnosis and treatments
- Poor experience of, and dissatisfaction, with care
- Inconvenience of return appointments, repeating blood tests

Significant Event Analyses (SEA) in general practice in Scotland - 19.2% of SEAs related to results handling systems

John McKay*1, Nick Bradley2, Murray Lough2 and Paul Bowie2 A review of significant events analysed in general practice: implications for the quality and safety of patient care BMC Family Practice 2009, 10:61 doi:10.1186/1471-2296-10-61


DANGER!
RISK OF
WORKLOAD
AVALANCHE

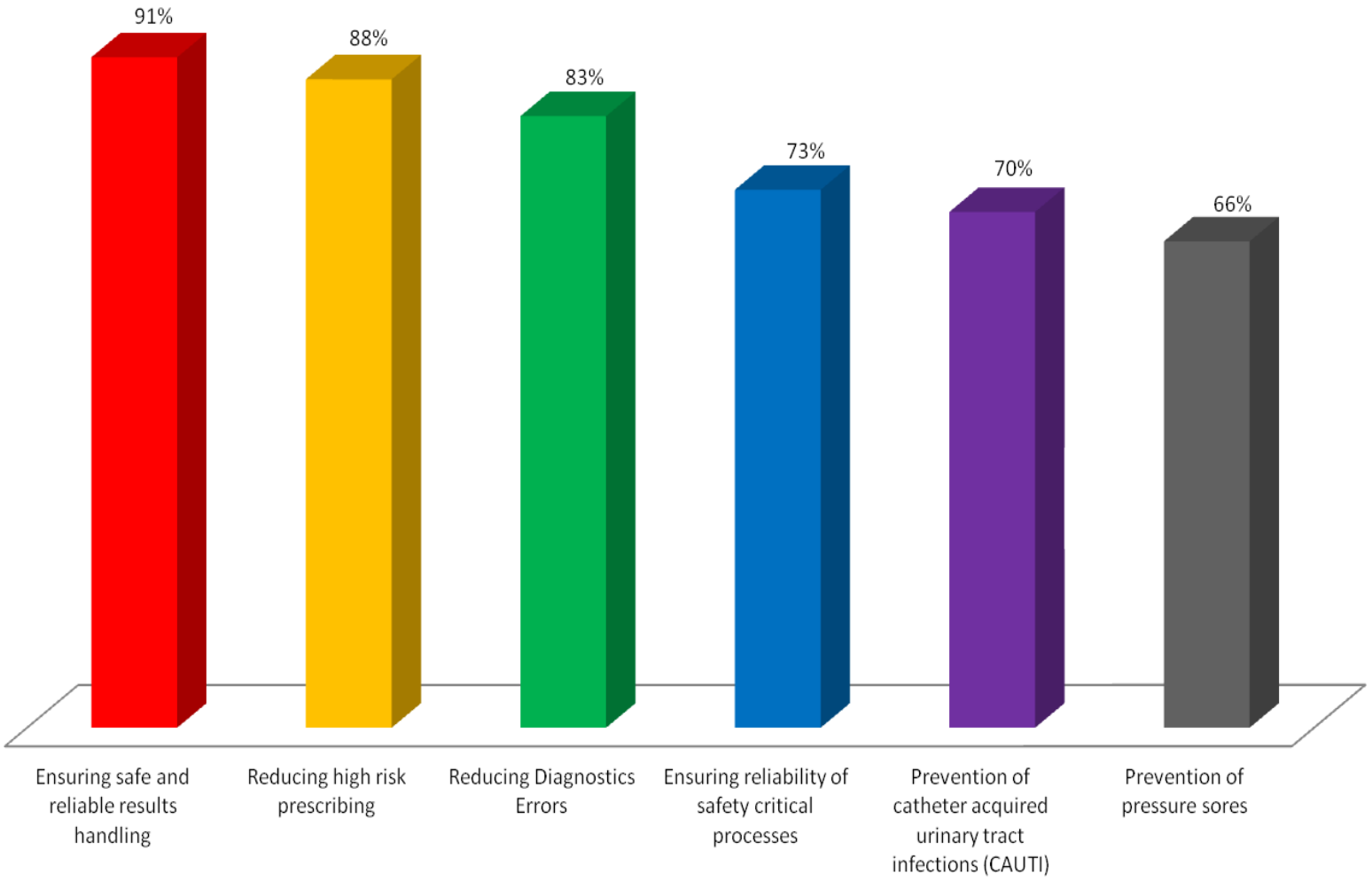
Impact on the Practice

Poor results handling is costly:

- Staff time chasing results rectifying errors
- Problem-solving system
- Repeating work tasks
- Leads to stress on staff
- Bad publicity /poor reputation

SPSP-PC Priorities - Survey Results

Priority for clinicians



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Comprehensive search of electronic health care databases led to identification & review of 55 relevant studies

Ethnographic Study of the results handling systems in 4 general practices

4 exploratory workshops with multi-disciplinary GP staff groups (n=62)

Observational Task Analysis of different results handling systems conducted in 6 general practices

Consensus Building on 'Good Practice' Statements to inform Safe Systems

4 focus groups of patients with a chronic disease or taking high risk medications (n=19)

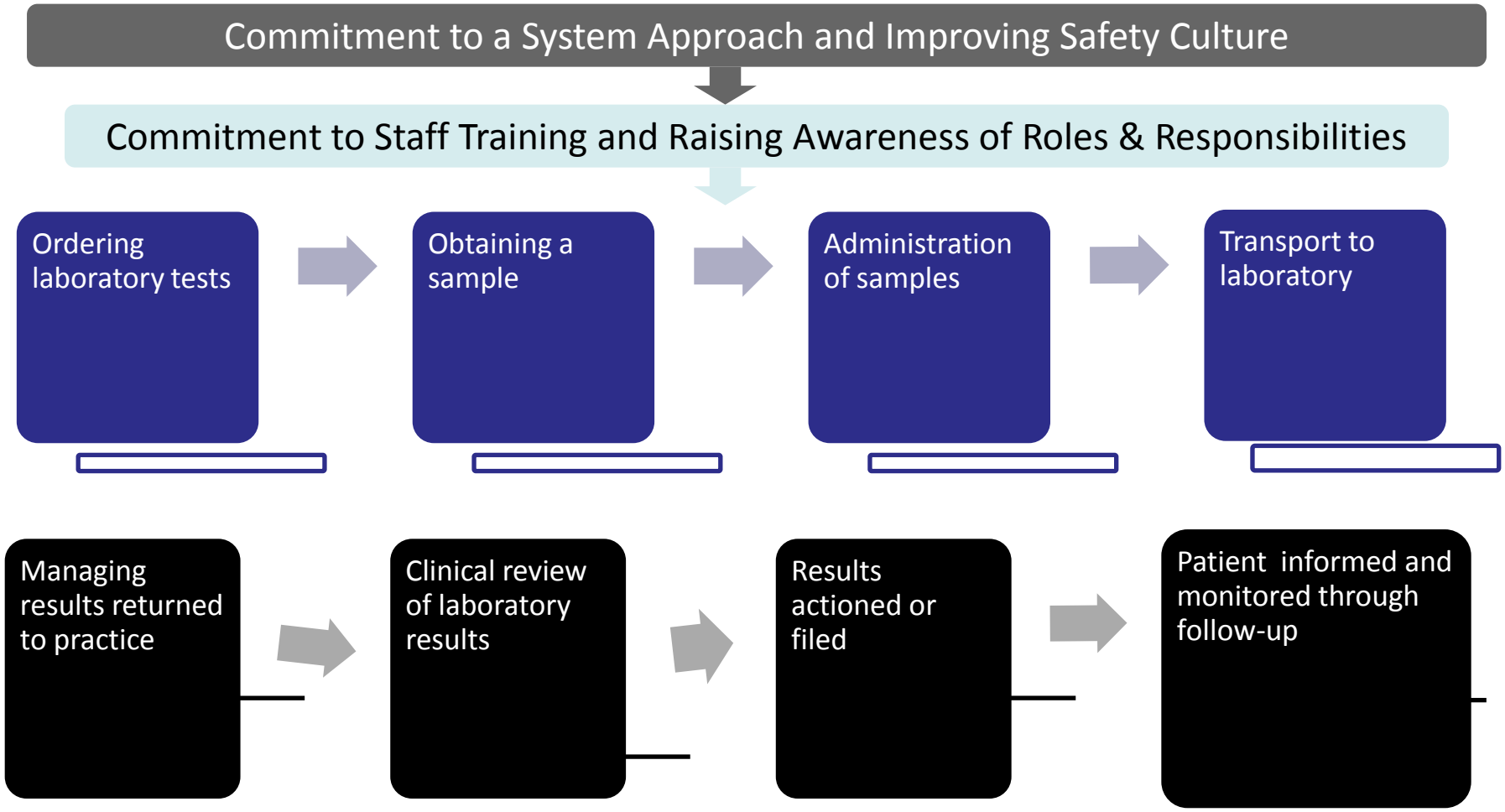
Delphi Group Meeting and Content Validity Index (CVI) exercise with 10 international experts

Medical indemnity database analysis uncovered 49 risk categories associated with results handling systems

5 focus groups with GP Administrative Staff & Health Care Assistants (n=40)

Aim to identify, develop and build consensus on 'good practice' guidance statements

PATIENT SAFETY IN PRIMARY CARE: Safe Laboratory Test Ordering and Results Management Systems



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Results Handling Resources

- Questions to prompt practice discussion around systems for results
- Care bundle, guidance and measurement plan
- Examples of communication
- Patient questionnaire and information leaflet

Sample of 20 patients per month who have had any of the following blood tests

On the day of the data collection each month randomly select 20 patients who had one or more of the blood tests taken 3 weeks previously

- Full Blood Count (FBC)
- Urea and Electrolytes (U&Es)
- Thyroid Function Test (TFT)
- Liver Function Tests (LFTs)

Excel spreadsheet and paper version available

Care Bundle Measures

- Are ALL the individual blood test(s) **requested** by the clinician clearly recorded?
- Are ALL the individual blood test(s) **taken** clearly recorded?
- Have ALL the results of the blood tests ordered been returned to the practice?
- Were ALL the test(s) results forwarded to a practice clinician for review within 2 working days of being received by the practice?
- Was a definitive decision recorded by a practice clinician on ALL test results within 7 calendar days of being received by the practice?
- Have the decisions for ALL test results been 'actioned' by the practice, including the patient being informed if required?

  (Where no actions are required record as Yes)
- Have all measures been met?

Reconciliation Measures

Have you carried out a process in the last 7 days to ensure all the FBC, U&Es, TFT and LFTs blood tests taken for ALL patients have been returned to the practice? (not just the sample of 20 patients)

If YES how many patients' results had not been returned to the practice?


RESEARCH
EXAMINE
PROBE
PROJECT
SCAN
SCIENCE
PROBE
KNOWLEDGE
PRACTICE
EXPERIMENTATION
FACTS
LINK
THINK
EXPERIMENT
PROOF
BOOK
SCIENCE
METHOD
TEACHING
LEARNING
SEARCH
CHECK
PROJECT
PROBE
EDUCATION
SOURCE
STOCK
LINK
SCIENCE
EXAMINE

Measure 1	Are the ALL individual blood test(s) requested by the clinician **clearly** recorded?
Rationale	Errors associated with test ordering include failure to order the test and ordering an incorrect test. When a clinician makes a decision to obtain a test this should be clearly communicated to the appropriate personnel, preferably through appropriate computer software, where available.
Source	Wians FH. Clinical Laboratory Tests: Which, Why, and What Do the Results Means? Labmedicine 2009;40(2):105-113 Elder NC, McEwan TR, Flach JM, Gallimore JJ. Management of Test Results in Family Medicine Offices Ann Fam Med 2009;7:343-351 Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press)

Measure 2	Are ALL the individual blood test(s) **taken** clearly recorded
Rationale	Errors relating to test implementation include tests not carried out, specimens improperly collected and specimens lost. There is a risk that patients do not attend for their blood tests. It is important that when blood tests are taken they are recorded in the clinical system to allow tracking and reconciling of the tests taken and to identify patients who have not attended.
Source	Hickner J, Graham DG, Elder NC, Brandt E et al. Testing process errors and their harms and consequences reported from family medicine practices: a study of the American Academy of Family Physicians National Research Network Qual Saf Health Care 2008;17:194-200 Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press)

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Measure 3	Have ALL the results of the blood test ordered been returned to the practice?
Rationale	The reconciliation should be done on a regular basis i.e. weekly to ensure all abnormal results are returned to the practice in a timely manner to ensure prompt action.
Source	Hickner J, Graham DG, Elder NC, Brandt E et al. Testing process errors and their harms and consequences reported from family medicine practices: a study of the American Academy of Family Physicians National Research Network Qual Saf Health Care 2008;17:194-200 Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press)

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Measure 4	Were ALL the test(s) results forwarded to a practice clinician for review within 2 working days of being received by the practice?
Rationale	Errors can occur from a failure to forward the results to a clinician by administrative staff or failure/delay of the clinician to respond to abnormal results. It is important the results are forwarded to a clinician within a short timescale to identify those which require prompt action.
Source	Wians FH. Clinical Laboratory Tests: Which, Why, and What Do the Results Means? Labmedicine 2009;40(2):105-113 Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press)

Measure 5	Was a definitive decision recorded by a practice clinician on ALL test results within 7 calendar days of being received by the practice?
Rationale	Risks exist around this stage in the results handling process including variability in how clinicians acknowledge receipt of results and respond to results. Unclear or ambiguous test result communication by doctors can lead to uncertainty amongst other team members about what action needs to take place and what should be communicated to patients. Practices need to create a process for reviewing results within clinically appropriate timescales agreed within the practice.
Source	Bowie P, Halley L & McKay J. Laboratory test ordering and results management systems: a qualitative study of safety risks identified by administrators in general practice. BMJ Open 2014: 6; 4(2):e004245 (10) Hickner J, Graham DG, Elder NC, Brandt E et al. Testing process errors and their harms and consequences reported from family medicine practices: a study of the American Academy of Family Physicians National Research Network Qual Saf Health Care 2008;17:194-200 (17) Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press) (13)

Measure 6	Have the decisions for ALL test results been 'actioned' by the practice, including the patient being informed if required? (Where no actions are required record as Yes)
Rationale	There is a risk when patients have limited knowledge of the results handling processes involved. Practices should have a clear process for contacting patients if an action is required after a test is taken and agree on the nature of wording used to communicate test results to the patient If patients can be provided with specific information they can be active participants in improving safety.
Source	Cunningham D, McNab D, Bowie P. Quality and safety issues highlighted by patients in the handling of laboratory test results: a qualitative study. BMC Health Services Research 2014; 14: 206

Laboratory Test Reconciliation	Have you reconciled **ALL** care bundle blood tests (not just the sample of 20 patients) taken and results returned to the practice in the previous week? If YES how many patients' results were missing?
Rationale	The reconciliation should be done on a regular basis i.e. weekly to ensure all abnormal results are returned to the practice in a timely manner to ensure prompt action. This enables practices to see how reliable the lab system is in processing and returning blood test results: information they can feedback to the lab system.
Source	Hickner J, Graham DG, Elder NC, Brandt E et al. Testing process errors and their harms and consequences reported from family medicine practices: a study of the American Academy of Family Physicians National Research Network Qual Saf Health Care 2008;17:194-200 Bowie P, Forrest E, Price J, Halley L, Cunningham D, Kelly M, McKay J. Expert consensus on safe laboratory test ordering and results management systems in European primary care. European Journal of General Practice (In Press)

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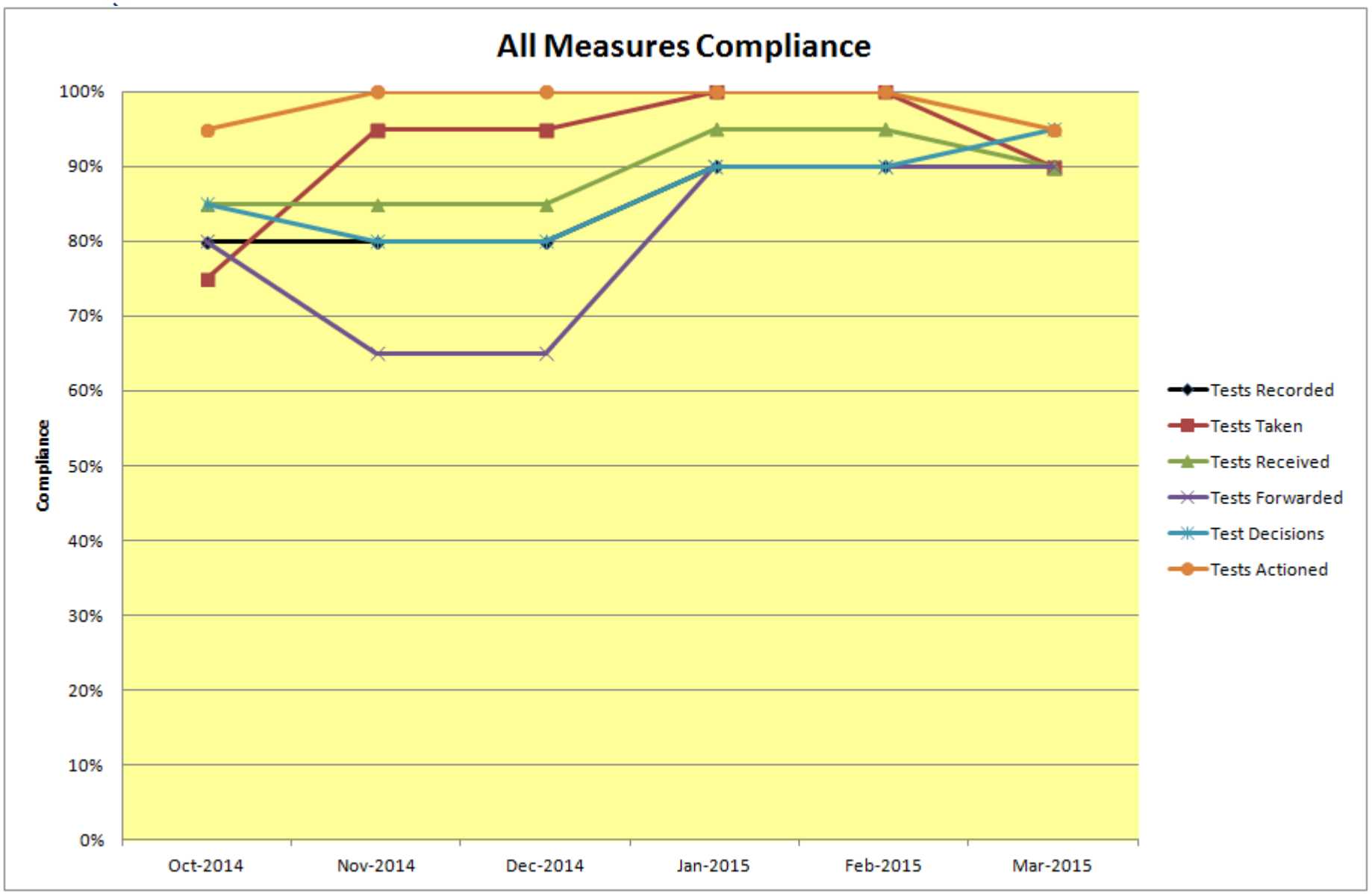

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Discussion and teamwork - a systems approach

Discussion Points

Systems

- Do we have agreed standards for reviewing results in a timely manner?

Tracking

- What is our practice's tracking system for reconciling samples out with results returned and ensure appropriate clinical follow up?

Communication

- Does our practice – including non-clinical staff – have agreed wording for communicating test results to patients? (see examples of communication)

Training

- How are staff, including locums, trained in the results handling system?

Patient involvement

- How does our practice help patients understand the results handling system – and when and how to access their test results? (see sample patient information leaflet)

Improving Communication

Admin Staff – Safety risks

Systems for tracking and reconciling are variable, problematic and require improvement

Communication from doctors can lack clarity causing frustration and unnecessary workload

" they don't really give us enough information to pass it onto the patient"

Communication

- Unclear or ambiguous test result communication by doctors on reviewing results can lead to uncertainty about what action needs to take place and what should be communicated to patients

- It is suggested that all staff ensure they fully understand an **agreed set** of practice-wide terms, words and abbreviations related to the results handling process

Example of Communication

Examples of comments that REQUIRE action		
Add/Change Medication	Contact patient and inform them	Make an appointment for bloods
Kidney function slightly abnormal – repeat in 1 week – phone patient	Make an appointment for fasting bloods	No action today – workflow to usual GP to advise
Repeat test(s)	Prescription required	Prescription issued
Inform Pharmacy	Tried to contact patient – failed please try again	Inform patient acceptable
Please repeat in xxxxx weeks	Repeat as per DMARDs protocol	
Make URGENT in person / telephone appointment with DOCTOR		
Make NON URGENT in person / telephone appointment with a DOCTOR		
Make in person / telephone appointment with PRACTICE NURSE		

How could you improve communication of test results in your practice ?

Examples of comments that DO NOT require action (or action has taken place)		
Results are normal	Normal see task	Continue on current prescription
Inform patient when they phone in	Patient has been informed	Noted reduced kidney function – no action needs to be taken
Review already organised	Document has been seen – no action required	Results slightly out with normal range but acceptable and no further action is needed
GP has spoken to patient	Nurse has already spoken to patient	


NOT
It's Mandatory


Patient's
Voice

Patient Focus Groups

Publication highlighted lack of awareness of the results handling process

"If there's something wrong with you I would have thought that would come straight form the doctor not the receptionist?"

"If there's something wrong they will contact you."

Or will they ?? Patients roles and responsibilities

Cunningham D, McNab D, Bowie P. Quality and safety issues highlighted by patients in the handling of laboratory test results: a qualitative study. BMC Health Services Research 2014; 14: 206

Sample patient information leaflet:

I've had a blood test taken so what happens now?

How long will I have to wait to get my test result?

How do I get my test result?

Example of questions to learn about your patients' experience of care

1.What went well with your experience of having a blood test and receiving your result?

2.What did not go well with your experience of having a blood test and receiving your result?

3.How could your experience of having a blood test and receiving your result be improved?

4.What matters to you most when you have blood tests taken and receive your results?

NORDIC EDGE SUPPORT

STEP BY STEP GUIDES

Next Steps

- Continue to collect your monthly data - display it so staff can see it
- Review your data, the changes you have tested and decide on further improvements
- Explore patients' experience of your results handling
- Discuss how you can help patients understand the system, possibly adapting the sample patient leaflet to suit your own practice
- During staff meetings review and discuss your data on a regular basis and consider getting patient feedback and decide on further improvements as required

- Expectations- what are practices expected to do
- Next steps
- Local learning sets
- What else do practices need?